FORM 10-K405

Annual report pursuant to section 13 and 15(d), Regulation S-K Item 405

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FILER

GENZYME CORP

CIK:**732485**| IRS No.: **061047163** | State of Incorp.:**MA** | Fiscal Year End: **1231**
Type: **10-K405** | Act: **34** | File No.: **000-14680** | Film No.: **99582093**
SIC: **2836** Biological products, (no disgnostic substances)

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

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

FOR THE FISCAL YEAR ENDED DECEMBER 31, 1998
COMMISSION FILE NO. 0-14680

GENZYME CORPORATION
(Exact name of Registrant as specified in its charter)

<TABLE>
<S> <C>

MASSACHUSETTS	06-1047163
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
ONE KENDALL SQUARE	02139
CAMBRIDGE, MASSACHUSETTS	(Zip Code)
(Address of principal executive offices)	

</TABLE>

(617) 252-7500
(Registrant's telephone number, including area code)

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

Securities registered pursuant to Section 12(g) of the Act:
GENZYME GENERAL DIVISION COMMON STOCK, $0.01 PAR VALUE ("GGD STOCK")
GENZYME TISSUE REPAIR DIVISION COMMON STOCK, $0.01 PAR VALUE ("GTR STOCK")
GENZYME MOLECULAR ONCOLOGY DIVISION COMMON STOCK, $0.01 PAR VALUE ("GMO STOCK")
GGD STOCK PURCHASE RIGHTS
GTR STOCK PURCHASE RIGHTS
GMO STOCK PURCHASE RIGHTS

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 twelve months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes [X] No [ ]

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

Aggregate market value of voting stock held by non-affiliates of the Registrant as of March 1, 1999: $3,872,522,549

Number of shares of the Registrant's GGD Stock outstanding as of March 1, 1999: 81,953,196
Number of shares of the Registrant's GTR Stock outstanding as of March 1, 1999: 22,292,811
Number of shares of the Registrant's GMO Stock outstanding as of March 1, 1999: 12,668,989

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the 1998 Genzyme General, Genzyme Tissue Repair and Genzyme Molecular Oncology Annual Reports are incorporated by reference into Parts I and II of this Form 10-K. Portions of the Registrant's Proxy Statement for the Annual Meeting of Stockholders to be held May 26, 1999 are incorporated by reference into Part III of this Form 10-K.

NOTE REGARDING FORWARD-LOOKING STATEMENTS:

This Annual Report on Form 10-K for Genzyme Corporation ("Genzyme" or the "Company") contains forward-looking statements concerning, among other things, the Company's expected future revenues, operations and expenditures, estimates of the potential markets for the Company's products and services, assessments of competitors and potential competitors, projected timetables for the preclinical and clinical development, regulatory approval and market introduction of the Company's products and services and estimates of the capacity of manufacturing and other facilities to support such products and services and plans to create a new division and to transfer the Company's interest in Diacrin/Genzyme LLC from its General Division to its Tissue Repair Division. All such forward-looking statements are necessarily only estimates of future results and the actual results achieved by the Company may differ materially from these projections due to a number of factors, including (i) the Company's ability to successfully complete preclinical and clinical development and obtain timely regulatory approval and patent and other proprietary rights protection of its products and services, (ii) the content and timing of decisions made by the U.S. Food and Drug Administration (the "FDA") and other agencies regarding the indications for which the Company's products may be approved, (iii) the accuracy of the Company's estimates of the size and characteristics of markets to be addressed by the Company's products and services, (iv) market acceptance of the Company's products and services, (v) the Company's ability to obtain reimbursement for its products from third-party payers, where appropriate, (vi) the accuracy of the Company's information concerning the products and resources of competitors and potential competitors and (vii) the ability of the Company to obtain requisite corporate approvals concerning the creation of the new division and the transfer of the interest in Diacrin/Genzyme LLC. See also "Factors Affecting Future Operating Results" under the headings (x) "Management's Discussion and Analysis of Genzyme General's Financial Condition and Results of Operations" and "Management's Discussion and Analysis of Genzyme Corporation and Subsidiaries' Financial Condition and Results of Operations" in the Genzyme General Annual Report for the fiscal year ended December 31, 1998 (the "1998 Genzyme General Annual Report"), (y) "Management's Discussion and Analysis of Genzyme Tissue Repair's Financial Condition and Results of Operations" in the Genzyme Tissue Repair Annual Report for the fiscal year ended December 31, 1998 (the "1998 GTR Annual Report") and (z) "Management's Discussion and Analysis of Genzyme Molecular Oncology's Financial Condition and Results of Operations" in the Genzyme Molecular Oncology Annual Report for the fiscal year ended December 31, 1998 (the "1998 GMO Annual Report") set forth in Exhibits 13.1, 13.2 and 13.3, respectively, to this Annual Report on Form 10-K.

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PART I

ITEM 1. BUSINESS

INTRODUCTION

Genzyme is a biotechnology company that develops innovative products and services for significant unmet medical needs. Genzyme currently has three divisions, each with its own outstanding series of common stock that is intended to reflect the value and track the performance the division.

- Genzyme General develops and markets therapeutic and surgical products and diagnostic services and products. Genzyme General Division Common Stock ("GGD Stock") is listed on the Nasdaq National Market under the symbol "GENZ."

- Genzyme Tissue Repair develops and markets biological products and devices for orthopedic injuries, and severe burns. Genzyme Tissue Repair Division Common Stock ("GTR Stock") is listed on the Nasdaq National Market under the symbol "GZTR."

- Genzyme Molecular Oncology is developing cancer products, with a focus on therapeutic vaccines and angiogenesis inhibitors. Genzyme Molecular Oncology Division Common Stock ("GMO Stock") is listed on the Nasdaq National Market under the symbol "GZMO."

For purposes of financial statement presentation, all of Genzyme's programs, products, assets and liabilities are allocated to Genzyme General, Genzyme Tissue Repair or Genzyme Molecular Oncology. Notwithstanding this allocation, Genzyme continues to hold title to all of the assets and is responsible for all of the liabilities allocated to each of the divisions. Holders of the outstanding common stock have no specific claim against the assets attributed to the division whose performance is associated with the series of stock they hold. Liabilities or contingencies of any division that affect Genzyme's resources or financial condition could affect the financial condition or results of operations of all three divisions.

Cerezyme(R), Ceredase(R), Thyrogen(R), Seprafilm(R), Pleur-evac(R), Thora-Klex(R), Tevdek(R), Polydek(R), InSight(R), MASDA(R) and Carticel(R) are registered trademarks of Genzyme. Sepracoat(TM), Sepragel(TM), Sepramesh(TM), Sahara(TM), Cohn Cardiac Stabilizer(TM), Diamond-Line(TM), Diamond-Flex(TM), Diamond-Touch(TM), N-geneous LDL(TM), N-geneous HDL(TM), Contrast(TM), Epicel(TM), GlyPro(TM) and SAGE(TM) are trademarks and Renagel(R) is a registered trademark of GelTex Pharmaceuticals, Inc. NeuroCell(TM)-PD and NeuroCell(TM)-HD are trademarks of Diacrin, Inc. Provisc(R) is a registered trademark of Alcon Laboratories, Inc. Pulmozyme(R) is a registered trademark of Genentech, Inc. AVONEX(R) is a registered trademark of Biogen, Inc.

Recent Developments

In March 1999, Genzyme announced its plans to create a new division for its existing surgical products business with its own series of common stock. The surgical products business is currently a unit of Genzyme General. Genzyme also announced its intention to transfer its ownership interest in Diacrin/Genzyme LLC from Genzyme Tissue Repair to Genzyme General. Diacrin/Genzyme LLC is a joint venture formed by Genzyme and Diacrin to develop and commercialize the NeuroCell(TM) products. The transfer is related to Genzyme Tissue Repair's effort to redefine its focus on orthopedics and burn care and away from neurodegenerative diseases. Genzyme General believes that the NeuroCell(TM)

products complement its specialty therapeutics product portfolio. Both of these transactions are expected to be completed by the third quarter of 1999.

GENZYME GENERAL -- PRODUCTS AND DEVELOPMENT PROGRAMS

Therapeutics

Cerezyme(R) Enzyme/Ceredase(R) Enzyme. Treatment with Cerezyme(R) enzyme or Ceredase(R) enzyme replacement therapy currently represents the only safe and effective treatment for Type I Gaucher disease, a

seriously debilitating, sometimes fatal, genetic disorder caused by a deficiency in an important enzyme in the body called glucocerebrosidase ("GCR"). Gaucher disease is one of a family of approximately 40 genetic diseases known as lysosomal storage diseases. Ceredase(R) enzyme is a modified form of human GCR in which glycoprotein remodeling technology has been used to target GCR to the cells where the lipid accumulation occurs. Cerezyme(R) enzyme is a recombinant form of GCR that has been remodeled in a similar manner. Genzyme General produced Ceredase(R) enzyme from an extract of human placental tissue. Historically, the supply available was not sufficient to produce enough Ceredase(R) enzyme to treat all known patients. To address supply constraints, Genzyme developed Cerezyme(R) enzyme and received approval from the FDA in October 1996 to manufacture Cerezyme(R) enzyme in Boston, Massachusetts. Nearly all patients have been converted from Ceredase(R) enzyme to Cerezyme(R) enzyme. Genzyme General determined that its existing supply of finished goods of Ceredase(R) enzyme was sufficient to meet patient needs and, therefore, stopped producing Ceredase(R) enzyme in 1998.

Genzyme General is marketing these products directly to physicians, hospitals and treatment centers worldwide through a highly trained sales force. This marketing effort is directed at identifying and initiating treatment for the estimated 5,000 Gaucher patients Genzyme General believes exist worldwide. Currently, approximately 50% of these patients are receiving treatment. Cerezyme(R) enzyme and Ceredase(R) enzyme, together, are available in approximately 50 countries worldwide. Cerezyme(R) enzyme has received marketing approval in eight countries as well as the 15 countries forming the European Union ("EU"). Ceredase(R) enzyme has received marketing approval in 13 countries. Genzyme's results of operations are highly dependent on sales of these products, which totaled approximately $411.1 million in 1998.

Renagel(R) Capsules. In October 1998, the FDA granted marketing approval for Renagel(R) Capsules for the reduction of serum phosphorus in patients with end-stage renal disease. There are an estimated 220,000 end-stage renal failure patients in the U.S., approximately 95% of whom receive a phosphate control product, and an estimated 180,000 end-stage renal failure patients in Europe. Genzyme and GelTex formed a joint venture in 1997 for the commercialization of Renagel(R) Capsules worldwide, excluding Japan and Pacific Rim countries. Genzyme General's dedicated 42 person Renagel(R) sales force began marketing the product on behalf of the joint venture to nephrologists, renal dieticians and payors in January 1999. Applications for marketing authorization were submitted in Europe and Canada in 1998. Renagel(R) Capsules have received "Part B" status from the European Medicines Evaluation Agency. See Note I., "Investments" to the Genzyme Corporation and Subsidiaries Consolidated Financial Statements (the "Consolidated Financial Statements") for a description of the joint venture between Genzyme and GelTex.

Thyrogen(R) Hormone. In November 1998, the FDA granted marketing approval for Thyrogen(R) hormone for use as an adjunctive tool in follow-up screening of patients who have been treated for thyroid cancer. Thyrogen(R) hormone, which was developed by Genzyme, is designed to allow patients to continue taking their

thyroid hormone supplements while they are being screened for metastases, thereby allowing patients to avoid the debilitating effects of hypothyroidism. Thyrogen(R) hormone may also be used to enhance the results of thyroglobulin testing. Thyrogen(R) hormone is being co-marketed in the United States under an agreement with Knoll Pharmaceutical Company. Knoll's 80 person endocrine and metabolic sales force began selling Thyrogen(R) hormone in January 1999 in collaboration with Genzyme's team of clinical specialists. Genzyme General filed a marketing authorization application for Thyrogen(R) hormone in Europe in December 1997.

Synthetic Phospholipids. Genzyme General has developed proprietary technology for the large scale manufacture of synthetic phospholipids with high purity and consistency and currently produces and sells synthetic phospholipids to pharmaceutical and biotechnology companies for use in the formulation and delivery of certain of their products.

Synthetic Peptides and Amino Acid Derivatives. Genzyme General is a commercial scale contract manufacturer for third parties of synthetic peptides for many applications, such as use as active drug compounds and in final dosage form preparations. Amino acid derivatives are the materials used in the

production of synthetic peptides. In addition to producing these materials for use in its own peptide manufacturing processes, Genzyme General sells amino acid derivatives to the pharmaceutical industry.

Alpha-L-Iduronidase. In September 1998, Genzyme formed a joint venture with BioMarin Pharmaceutical, Inc. to develop and commercialize alpha-L-iduronidase, a recombinant enzyme designed to treat a family of lysosomal storage diseases known as Mucopolysaccharidosis I ("MPS I"). Approximately 2,000-3,000 people in the developed world have been diagnosed with MPS I. In October 1998, the companies announced results of a pivotal clinical trial that showed that patients with MPS I showed improvement in clinical signs and symptoms when treated with alpha-L-iduronidase. The companies expect to apply for FDA marketing approval for alpha-L-iduronidase in mid-1999. See Note I., "Investments" to the Consolidated Financial Statements for a description of the joint venture between Genzyme and BioMarin.

Alpha-Galactosidase. Genzyme General is developing a recombinant form of the human enzyme alpha-galactosidase as a treatment for Fabry disease, a usually fatal inherited disorder of lipid metabolism. Fabry disease is a lysosomal storage disease that is estimated to affect 1 in 40,000 males worldwide, with an estimated 2,000 patients in the United States. Genzyme General expects to complete a Phase III trial of alpha-galactosidase by the end of 1999.

Alpha-Glucosidase. Through a joint venture formed by Genzyme and Pharming Group N.V. in October 1998, the companies are developing transgenically produced alpha-glucosidase for the treatment of Pompe disease. Pompe disease is a lysosomal storage disease that affects an estimated 5,000-10,000 people in the Western world. The companies have initiated a Phase II pilot clinical trial in Europe. This trial will be followed by two larger Phase II/III clinical trials in Europe and the United States, which are expected to begin in mid-1999. See Note I., "Investments" to the Consolidated Financial Statements for a description of the joint venture between Genzyme and Pharming.

AVONEX(R) (Interferon-beta 1a). In September 1998, Genzyme entered into an agreement with Biogen under which Genzyme General will seek regulatory approval and commercialize and exclusively distribute AVONEX(R) in Japan. AVONEX(R) is Biogen's treatment for relapsing forms of multiple sclerosis. Genzyme General estimates that there are at least 5,000 multiple sclerosis patients in Japan.

Antithrombin III. Antithrombin III is a plasma protein that helps regulate blood clotting. Genzyme and Genzyme Transgenics Corporation formed a joint venture in 1998 for the development and commercialization of transgenically produced recombinant human antithrombin III ("ATIII"). The companies initiated three Phase III clinical trials of ATIII in May 1998. Two identical trials are underway to evaluate the safety and efficacy of transgenic ATIII in patients scheduled for coronary artery bypass graft surgery who fail to adequately respond to the anti-coagulant heparin. The third trial is designed to compare transgenic ATIII to plasma-derived ATIII. Subject to the receipt of regulatory approvals, Genzyme General will market ATIII worldwide, excluding Asia, on behalf of the joint venture. Genzyme owns approximately 40% of the outstanding shares of Genzyme Transgenics common stock. See Note I., "Investments" to the Consolidated Financial Statements for a description of the relationship between Genzyme and Genzyme Transgenics, including the joint venture.

Other Development Programs. In addition to the products and programs described above, Genzyme General has several therapeutic products in various stages of research and development, including the following:

PRODUCT/PROGRAM	DESCRIPTION
CFTR	Genzyme General is developing gene therapy approaches using lipid-DNA complexes as vectors and adenovirus vectors to correct the basic defect in cystic fibrosis cells, whereby the mutant genes are augmented with genes that would enable the patient's cells to produce normal cystic fibrosis transmembrane conductance regulator ("CFTR") protein.
Ex vivo stem cells/ retrovirus vector	Through its collaborations with the University of Pittsburgh and IntroGene B.V., Genzyme General is developing a hematopoietic stem cell gene therapy for Gaucher disease.
Prolactin	Genzyme General is developing a recombinant form of the human hormone prolactin for use as an immune and/or hematopoietic stimulant.

Surgical Products

Genzyme General's surgical products business primarily consists of three product lines: cardiovascular surgery, general surgery and plastic surgery. Genzyme General's sales force markets products directly to cardiac, general, colon and rectal surgeons and hospital purchasing departments throughout the U.S. and Europe.

Certain products and product candidates designed to be used in surgical procedures primarily to limit the incidence and severity of postoperative adhesions (the "Sepra Products") are being developed by Genzyme General on behalf of Genzyme Development Partners, L.P. ("GDP"). Under the terms of various agreements between GDP and Genzyme, Genzyme has the exclusive right to sell the Sepra Products in the U.S. and Canada on behalf of a joint venture (the "Joint Venture") between and Genzyme and GDP. Genzyme has the exclusive right to sell these products outside the U.S. and Canada for its own benefit, subject to a royalty on European sales under certain circumstances. In March 1997, Genzyme and the Joint Venture entered into an exclusive marketing and distribution agreement whereby Genzyme acts as the sole distributor of the Sepra Products on behalf of the Joint Venture in the U.S. and Canada. Genzyme General is focusing on high-risk colorectal surgeries, where adhesions are a particular concern.

Genzyme has also entered into agreements with Fresenius A.G. for the distribution and sale of the Sepra Products in Luxembourg, Germany, Austria and Switzerland and with Kaken Pharmaceutical Co., Ltd. for the distribution and sale of Seprafilm(R) Bioresorbable Membrane in Japan.

Cardiovascular Surgery. Genzyme General's cardiovascular surgery product line consists of a comprehensive portfolio of products, including chest drainage and fluid management systems, sutures, cardiovascular instruments, and instruments designed for use in minimally invasive cardiovascular surgery. Genzyme General's line of fluid management systems consists primarily of self-contained, disposable chest drainage devices used to drain blood from the chest cavity following open heart surgery, other surgical procedures and trauma. Genzyme General also sells autotransfusion devices that allow the collection of blood shed by the patient and its reinfusion postoperatively, thus eliminating the risks associated with blood transfusions. Genzyme General's self-contained, disposable Pleur-evac(R) chest drainage unit was introduced in 1967 and is the market leader in chest drainage devices. Genzyme General also sells a line of dry suction-controlled chest drainage and autotransfusion devices under the Sahara(TM) and Thora-Klex(R) brand names.

Sutures, including Tevdek(R) and Polydek(R) sutures, are sold in packs consisting of suture/needle combinations. Genzyme General emphasizes high quality specialty sutures for cardiovascular and plastic

surgery, utilizing special materials, advanced metallurgy and packaging innovations. Genzyme General also sells cardiovascular punches, which are used during coronary artery bypass surgery to make cleanly cut holes, and hand-held, reusable instruments such as needleholders, scissors, forceps, graspers, dissectors and retractors.

Genzyme General recently introduced two new products for beating heart surgery: its system for the procedure known as minimally invasive direct coronary bypass ("MIDCAB"), and its system for the procedure known as off-pump coronary artery bypass ("OPCAB"). The MIDCAB system for single-vessel coronary artery bypass and the OPCAB system for multi-vessel coronary artery bypass surgery combine reusable retractors, clamps and surgical instruments with disposable devices such as stabilizers, sutures, electrodes and punches. Genzyme General also launched the Cohn Cardiac Stabilizer(TM) device, developed with Dr. William Cohn of Beth Israel Deaconess Hospital, Boston, Massachusetts, which allows stable ateriotomy and anastomosis of the coronary artery on a beating heart. In addition, Genzyme General has introduced minimally invasive saphenous vein harvest and valve replacement instruments.

In addition to the products described above, Genzyme General has several cardiovascular surgery products in various stages of research and development.

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PROGRAM	DESCRIPTION
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Biomaterials	Genzyme General expects to initiate a clinical trial of Seprafilm(R) II Adhesion Barrier in cardiac surgery in the second quarter of 1999. It is also developing Sepracoat(TM) Coating Solution to reduce the incidence of postoperative atrial fibrillation and plans to initiate a pilot clinical trial in the second quarter of 1999.
Gene Therapies	Genzyme General is developing gene therapy approaches to treating ischemic heart disease, peripheral vascular disease, congestive heart failure and restenosis.

Cell Therapies	Through a collaboration with a research group at the Toronto Hospital, Genzyme General is developing cell therapy approaches to treating ischemic heart disease and congestive heart failure.

</TABLE>

General Surgery. Genzyme Surgical Products has established a growing presence in the general surgery market through its biomaterials and endoscopic instruments. Its lead product in this market is Seprafilm(R) Bioresorbable Membrane. During the third quarter of 1996, the FDA granted approval to market Seprafilm(R) Bioresorbable Membrane for use for the reduction of the incidence and extent or adhesions in any open abdominal or pelvic surgery. Genzyme launched sales of Seprafilm(R) Bioresorbable Membrane in Europe in 1996, in Canada and Israel in 1997, and in Japan in 1998. Genzyme General is also marketing Sepracoat(TM) Coating Solution and Seprafilm(R) II Adhesion Barrier, a second generation Seprafilm(R) product designed to have increased plasticity, as adhesion prevention products in Europe.

Genzyme General carries an extensive line of high-quality endoscopic instruments for general surgery. Its Diamond-Line(TM) technology extends to a full portfolio of retractors, forceps, scissors, needle-holders, graspers and clamps. The leading products in the portfolio are its Diamond-Flex(TM) and Diamond-Touch(TM) instruments. Diamond-Flex(TM) retractors and forceps are the only reusable instruments on the market with articulating heads that allow gentle repositioning of organs and tissue at varying angles. The Diamond-Touch(TM) instruments provide ergonomically designed contoured handles for superior positioning, comfort and control.

In addition to the products described above, Genzyme General has several general surgery products in various stages of research and development, including the following:

<TABLE>
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PRODUCT/PROGRAM	DESCRIPTION
<S>	<C>
Seprafilm(R) II Adhesion Barrier	Genzyme General plans to initiate clinical efficacy trials for Seprafilm(R) II Adhesion Barrier for abdominal surgery in the U.S. in the second quarter of 1999.
Sepracoat(TM) Coating Solution	Genzyme General is conducting pilot studies of the product to determine whether it helps restore bowel function more quickly after colorectal surgery.
Sepragel(TM) Bioresorbable Gel	Genzyme General plans to initiate clinical trials of an alternative formulation of the Sepragel(TM) product in the fourth quarter of 1999.
Sepramesh(TM) product	Genzyme General is developing a mesh product that is coated with sodium hyaluronate for use in hernia repairs and other soft tissue repairs such as bladder neck suspensions. Genzyme General expects to receive 510(k) approval from the FDA for this product in late 1999.
Seprafilm(R) Applicator	Genzyme General is developing a device to help deliver Seprafilm(R) II Adhesion Barrier into areas of the body that are difficult to reach.

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Plastic Surgery. Genzyme General's plastic surgery product line consists of a distinct product line of hand-held instruments, endoscopic plastic surgery equipment, sutures and surgical compression garments.

Bulk and Pharmaceutical Grade Hyaluronic Acid ("HA"). Genzyme General currently produces and sells bulk HA for a number of applications. Under an agreement with Alcon, Genzyme General supplies pharmaceutical grade HA powder to Alcon for incorporation into Provisc(R), an HA-based ophthalmic surgical aid product. Genzyme General also receives a royalty based on Alcon's product sales. In addition, HA is sold to a number of customers for various research and development applications.

Diagnostics

Genetic Diagnostic Services

Genzyme General applies advanced biotechnology to develop and provide high quality, sophisticated genetic diagnostic services to physicians, hospitals, universities, medical centers, clinical laboratories, genetic centers and managed care organizations in the U.S. and internationally through a national network of laboratories and a direct sales force. Genzyme General offers three types of genetic diagnostic services: biochemical testing, classical and molecular cytogenetic testing, and DNA testing. Biochemical testing services consist primarily of a widely used screening test (AFP3) to determine if further prenatal genetic testing is appropriate. Classical and molecular cytogenetic testing involves the analysis of fetal cells obtained through amniocentesis or chorionic villi sampling ("CVS") to evaluate chromosomal abnormalities. DNA testing is performed to determine the likelihood that the subject has, or is a carrier for, a specific genetic disorder, such as cystic fibrosis, Fragile X syndrome, Huntington's disease, spinal muscular atrophy, polycystic kidney disease, sickle cell anemia, hemophilia and Gaucher disease. Genzyme General employs over 70 board certified genetics professionals who interpret results and provide genetic counseling and support services to medical practitioners and their patients.

InSight(R) Test. Genzyme General's InSight(R) test is a faster cytogenetic test based on in situ hybridization of chromosome-specific DNA probes. This technology permits identification of the most frequently occurring chromosomal abnormalities within 48 hours, as compared to the one to three weeks required to perform classical cytogenetic testing (karyotyping). The InSight(R) analysis is provided in conjunction with a complete karyotype.

MASDA(R) Service. Genzyme General's patented Multiplex Allele-Specific Diagnostic Assay (the "MASDA(R) Service") can analyze in a single assay up to 500 DNA samples simultaneously for over 100 known gene mutations. The MASDA(R) Service not only analyzes different patient samples for different disease indications in a single assay, it also identifies multiple mutations in one or more genes in a single patient's DNA sample. Genzyme General is pursuing a number of commercialization strategies for the MASDA(R) Service. In February 1997, Genzyme General launched a 70-mutation cystic fibrosis test, called the "CF-70" test.

Development Programs. Genzyme General is developing additional platforms for complex mutational analysis and conducts major research and development programs in such areas as genomics and rare cell separation and analysis methods. For example, Genzyme General is developing a technology called ligation/ amplification-mismatch protection, or "LAMP," to detect and identify unknown mutations in genes.

Diagnostic Products

Genzyme General is a primary supplier of diagnostic components (enzymes, substrates, antibodies and antigens), bulk reagents and devices to manufacturers of clinical diagnostic reagents and kits as well as directly to clinical

reference laboratories. It also manufactures and sells a broad line of antibody and antigen-based ELISA test kits. In addition, Genzyme General has developed manufacturing expertise in enzyme fermentation, purification, reagent formulation and immunoassay test development. In July 1998, Genzyme General sold the primary assets of its research products business to TECHNE Corporation ("TECHNE"). Genzyme General receives royalties on TECHNE's biotechnology group sales.

Cardiovascular Products. Genzyme General sells devices and reagents for the quantification of low-density lipoprotein ("LDL") and high-density lipoprotein ("HDL") cholesterol levels. Genzyme General's N-geneous LDL(TM) and N-geneous HDL(TM) tests accurately measure cholesterol levels that are present in a patient's serum or plasma directly without the labor intensive pretreatment steps that were needed previously and are easily adaptable to automated chemistry analyzers. Both tests are being distributed in the U.S. by Genzyme General under a worldwide agreement with the manufacturer of the tests, Daiichi Pure Chemicals Co., Ltd., of Tokyo. In addition to the U.S., Genzyme General is also the exclusive marketing partner for the N-geneous LDL(TM) and N-geneous HDL(TM) tests in Europe and the rest of the world, with the exception of Asia, where Genzyme holds co-exclusive distribution rights.

Diagnostic Intermediates. Genzyme General produces and sells intermediates such as diagnostic enzymes, substrates and reagents for use in diagnostic kits used for blood analysis in clinical chemistry laboratories. One area of emphasis is pancreatic function, where Genzyme General provides enzymes, substrates, bulk reagents and patented methodologies for amylase and lipase determination to diagnostic kit manufacturers. Genzyme General is also a primary supplier of cholesterol enzymes used in testing for coronary heart disease. Sales of its diagnostic intermediates are made to over 200 manufacturers and users of diagnostic kits worldwide through its own technical sales representatives in the U.S. and Europe and through distributors in Japan.

ELISA Test Kits and Rapid Tests. Genzyme General manufactures and sells a broad range of ELISA test kits for infectious disease and endocrinology determinations. In addition, it supplies monoclonal and polyclonal antibodies plus other immunoassay raw materials to immunodiagnostic kit manufacturers. Patented Contrast(TM) rapid tests for pregnancy, Strep A and infectious mononucleosis determination are also becoming key contributors to Genzyme Generals' product portfolio. Genzyme General also introduced the first combination rapid test for the two most common causes of parasitic intestinal disease.

GlyPro(TM) Assay. In 1998, Genzyme General received 510(k) clearance from the FDA for GlyPro(TM) assay, an improved tool for monitoring diabetes. The GlyPro(TM) assay measures blood sugar levels over several weeks, which is a valuable resource for reducing diabetes-related complications. Genzyme General is developing a family of diabetes-related tests.

GENZYME TISSUE REPAIR -- PRODUCTS AND DEVELOPMENT PRODUCTS

Genzyme Tissue Repair is a leading developer of biological products and devices for the treatment of orthopedic injuries and severe burns. Its strategy is to focus its business on orthopedics and burn care. Genzyme Tissue Repair no longer intends to develop products for neurodegenerative diseases. It intends to transfer the NeuroCell(TM) products to Genzyme General if the holders of GTR Stock approve the transfer, and is exploring partnering alternatives for its diabetic foot ulcer product, recombinant Transforming Growth Factor Beta(2) ("TGF-Beta(2)").

Carticel(R) Autologous Cultured Chondrocytes ("Carticel(R) AuCC"). Genzyme

Tissue Repair's lead product, Carticel(R) AuCC, is used to treat damaged articular knee cartilage. Genzyme Tissue Repair employs a proprietary process to grow a patient's own ("autologous") cartilage cells for use in repairing damaged knee cartilage. In August 1997, the FDA granted Genzyme Tissue Repair a biologics license (a "BLA") for the manufacture of Carticel(R) AuCC for use in repairing clinically significant cartilage defects of the femoral condyle. Carticel(R) AuCC is not indicated for the treatment of cartilage damage associated with osteoarthritis. Genzyme Tissue Repair is making a substantial effort to establish the procedure known as autologous chondrocyte implantation ("ACI") using Carticel(R) AuCC as the new standard of care for repair of cartilage damage to the femoral condyle.

Genzyme Tissue Repair believes that successful commercialization of Carticel(R) AuCC is dependent on its being accepted by and incorporated into routine use by a large number of orthopedic surgeons. Genzyme Tissue Repair markets Carticel(R) AuCC to orthopedic surgeons in the U.S. and Europe directly and through distributors. Genzyme Tissue Repair also trains orthopedic surgeons, collects and analyzes outcomes data, and assists physicians and patients in obtaining reimbursements from third party payors. Genzyme Tissue Repair also believes that the commercial success of Carticel(R) AuCC will depend on its ability to increase the approval rate for reimbursement of the product from third party payors. For this reason, approximately one-third of its 59-person U.S. sales and reimbursement staff is involved directly in claims processing and educating insurers about the appropriate uses of the Carticel(R) AuCC. Genzyme Tissue Repair expects that its revenues from the sale of Carticel(R) AuCC may be lower in the summer months as fewer operative procedures are typically performed during those months.

Genzyme Tissue Repair is required by the FDA to conduct two confirmatory post-marketing studies to gain a better understanding of the role of implanted cells in ACI and to assess longer term clinical results. Each of these studies is required to demonstrate that Carticel(R) AuCC is superior to the alternatives studied. The first, a five year, randomized study, will compare outcomes of patients treated with Carticel(R) AuCC to those of patients treated with abrasion and microfracture -- two common alternative treatments for articular cartilage defects. The second study is a smaller scale study in which patients will undergo the ACI biopsy and implantation procedure, but will randomly be assigned to receive either Carticel(R) AuCC or a placebo. This study is targeted to last three to five years, not including a 36-month follow-up.

Epicel(TM) Skin Grafts. Genzyme Tissue Repair's Epicel(TM) skin grafts, which are cultured autologous skin cells used as permanent skin replacement for patients with severe burns, were first introduced in 1988. These epidermal grafts are grown from a patient's own skin cells and, therefore, are not rejected by the patient's immune system. Starting with a patient biopsy about the size of a postage stamp, Genzyme Tissue Repair can grow enough skin grafts in three to four weeks to cover a patient's entire body surface area.

Most burn wounds involving less than 60% body surface area are covered with conventional skin grafts within the three to four weeks it currently takes to grow Epicel(TM) skin grafts. Therefore, Genzyme Tissue Repair believes that the primary candidates for Epicel(TM) skin grafts are the approximately 400 patients each year in the U.S. who survive burn injuries covering more than 60% of their body surface area. Genzyme Tissue Repair markets Epicel(TM) skin grafts to burn centers in the U.S. and parts of Europe through its own direct sales force and in Japan through a distributor.

Photoactive Tissue Welding Technology. In September 1998, Genzyme licensed proprietary photoactive tissue welding technology from PhotoBioMed Corp. for all orthopedic purposes. Initially, Genzyme Tissue

Repair is investigating the use of this technology for applications for meniscal repair.

NeuroCell(TM)-PD and NeuroCell(TM)-HD. Genzyme Tissue Repair, through a joint venture with Diacrin, is developing NeuroCell(TM)-PD for the treatment of advanced cases of Parkinson's disease and NeuroCell(TM)-HD for the treatment of Huntington's disease. Genzyme Tissue Repair estimates that the patient population with advanced Parkinson's disease ranges from 115,000-155,000 in the U.S., and that the U.S. patient population with Huntington's disease is approximately 25,000. Both of the NeuroCell(TM) products involve the implantation of fetal porcine brain cells into patients to replace damaged brain tissue. With both of the NeuroCell(TM) products, it is believed that rejection of the porcine cells can be prevented with cyclosporine, the commonly used immunosuppressive drug. The companies are also using patented antibody masking technology licensed from Massachusetts General Hospital in the production of the NeuroCell(TM) products. The companies believe that the use of this technology may protect the NeuroCell(TM) products from the patient's immune system without the need for chronic, lifetime administration of immunosuppressive drugs.

Safety and efficacy data for NeuroCell(TM)-PD is being collected for up to three years under a Phase I clinical study protocol, and for an additional two years under an extension protocol. All 11 patients enrolled in the study will be followed for safety in a life-long registry. Based on the early results of the Phase I clinical trial, the companies initiated two Phase II clinical trials of NeuroCell(TM)-PD. One Phase II clinical trial is designed to evaluate the safety and efficacy of NeuroCell(TM)-PD in patients receiving cyclosporine compared to a control group in which patients undergo surgery but do not receive NeuroCell(TM)-PD is ongoing and will last up to 12 months for each patient. The other Phase II clinical trial was initiated in early 1999 and is designed to evaluate the safety and efficacy of NeuroCell(TM)-PD using the antibody masking method to manufacture the product. Both Phase II clinical trials are bilateral studies (involving implantation of cells in both sides of the brain) and involve higher dose levels than those used in the Phase I clinical study. If satisfactory results are obtained from the Phase II clinical trials, a single product (either NeuroCell(TM)-PD administered with cyclosporine or NeuroCell(TM)-PD manufactured using the antibody masking method) will be selected for the pivotal trial.

Enrollment of 12 patients in a Phase I clinical trial of NeuroCell(TM)-HD has been completed. Safety and efficacy data is being collected for up to three years under this protocol. The results at 12 months showed no improvement in symptoms and there was some evidence of worsening in motor scores. All 12 Phase I patients were implanted with 24 million cells each by March 1997 and are being followed for three years by clinical ratings and two kinds of PET scans. No striking benefit has emerged to date. To date there have been no serious adverse affects related to NeuroCell(TM)-HD. It is likely that a bilateral study (implantation on both sides of the brain) will be required to test whether a higher cell dose can affect disease progression. Demonstrating prevention of progression of the disease may require large, long-term studies.

TGF-Beta(2) Genzyme Tissue Repair completed a 177 patient phase II clinical study with TGF-Beta(2) in the treatment of diabetic foot ulcers in the fall of 1998. Genzyme Tissue Repair believes the results of this study warrant final clinical development of this growth factor-based product. Genzyme Tissue Repair is in the process of identifying a corporate partner that will participate in the final development and commercialization of this product candidate.

Other Development Programs. Genzyme Tissue Repair has a number of ongoing development programs supporting Carticel(R) AuCC. Genzyme Tissue Repair is conducting basic research and development into the biology of cartilage and the cartilage repair process. The objective of this research is to identify biologic

materials that promote more rapid regeneration of articular cartilage, to develop new methods for the repair of arthritic joints and large surface area cartilage defects and to enable the ACI procedure to be performed less invasively. Genzyme Tissue Repair is also committing resources to meet requirements specified by the FDA for validation of certain product manufacturing parameters.

GENZYME MOLECULAR ONCOLOGY -- PRODUCTS AND DEVELOPMENT PROGRAMS

Genzyme Molecular Oncology is developing a new generation of cancer products with an emphasis on cancer vaccines and angiogenesis inhibitors. Genzyme Molecular Oncology's products and services include: a

genomics service business based on its patented Serial Analysis of Gene Expression, or "SAGE(TM)", technology, and therapeutic product candidates in various stages of development, including gene immunotherapies, angiogenesis inhibitors and cancer pathway regulators, which utilize Genzyme's capabilities in gene discovery, gene therapy, small molecule drug discovery, protein therapeutic and genetic diagnostic efforts.

SAGE(TM) Technology and Services

SAGE(TM) technology is a high throughput, high efficiency method of simultaneously detecting and measuring the expression level of most, and possibly all, genes expressed in a cell at a given time. Differential gene expression is the comparison of how, when and in what amounts genes are expressed in a given tissue or cell line versus another (e.g., cancer tissue versus normal tissue). Genzyme Molecular Oncology believes that an understanding of differential gene expression will accelerate the development of more effective cancer and other therapeutics and diagnostics. Potential uses of the SAGE(TM) technology in evaluating therapeutic targets include comparison of diseased tissue with normal tissue, comparison of genes expressed at different stages of disease, elucidation of disease pathways and measurement of response to drug candidates. SAGE(TM) technology may also be used to develop diagnostics (by identifying tumor or other biological markers), discover novel genes, map the genetic profiles of model organisms or optimize and monitor production methods. Genzyme Molecular Oncology has entered into several commercial agreements for the provision of SAGE(TM) services and SAGE(TM) sublicenses, including agreements with Bayer Corporation, Ontogeny, Inc., Parke-Davis, a division of Warner-Lambert Company, and Reprogen, Inc.

Genzyme Molecular Oncology has a research agreement with Johns Hopkins University School of Medicine ("JHU") and Dr. Kenneth Kinzler under which Genzyme Molecular Oncology provides funding for Dr. Kinzler's SAGE(TM)-related research at JHU through 2000 in exchange for an option to obtain an exclusive worldwide license to technology developed as a part of that research. Under this agreement, Genzyme Molecular Oncology will be obligated to make milestone payments upon the fulfillment of research objectives. Genzyme Molecular Oncology also has the rights to SAGE(TM) data generated in Dr. Kinzler's laboratory and an option to license diagnostic and therapeutic rights to discoveries using the SAGE(TM) technology that are further developed in Dr. Kinzler's laboratory.

Immunotherapy

Cancer Vaccines. Under its collaborative research and development agreement with the National Cancer Institute, Genzyme Molecular Oncology has completed two Phase I cancer vaccine trials in melanoma. These studies demonstrated that treatment with either the Melan-A/MART-1 or the gp100 antigen was safe and well-tolerated. In March 1999, Genzyme Molecular Oncology initiated a Phase I/II clinical trial to assess the safety, efficacy, and potency of a

cancer vaccine for melanoma. This trial utilizes dendritic cells and combines the Melan-A/MART-1 and gp100 antigens.

Genzyme Molecular Oncology has an option from the Dana-Farber Cancer Institute to exclusively license novel fusion cell technology developed by researchers at Dana-Farber. Fusion cell therapy relies on dendritic cells, which are fused with tumor cells, to activate the immune system to attack cells that contain the same type of antigen found in the tumor cells. Genzyme Molecular Oncology plans to use this technology in its research efforts to identify tumor antigens and to initiate two investigator-sponsored Phase I clinical trials employing dendritic/tumor cell fusions in 1999 -- one in breast cancer and one in ovarian cancer.

Stress Genes. Genzyme Molecular Oncology, StressGen Biotechnologies Corporation ("StressGen") and the Canadian Medical Discoveries Fund Inc. ("CMDF") formed a joint venture in 1997 to combine StressGen's proprietary stress genes with Genzyme's gene delivery technology. Stress genes could be used as stand-alone therapies or in conjunction with other cancer vaccines to stimulate an immune response. The companies are initially focusing on the use of mycobacterial stress genes that have been licensed exclusively to the joint venture in the field of cancer. See Note I., "Investments" to the Consolidated Financial Statements for a description of the joint venture between Genzyme, StressGen and CMDF.

Antiangiogenesis

Genzyme Molecular Oncology has a multidisciplinary antiangiogenesis research program that includes proteins, small molecules and genes. In February 1999, it licensed from Children's Hospital Medical Center an angiogenesis inhibitor that was identified in the laboratory of Judah Folkman, M.D., director of the Surgical Research Laboratories at Children's Hospital. Over the next year, Genzyme Molecular Oncology will conduct confirmatory efficacy and other preclinical studies of the protein and develop a manufacturing process to produce the protein. If these efforts are successful, Genzyme Molecular Oncology anticipates beginning Phase I clinical trials in 2000. In exchange for the exclusive, worldwide license, Genzyme Molecular Oncology paid Children's Hospital an up-front fee and will make product development milestone payments and royalty payments on product sales.

Cancer Pathways

Genzyme Molecular Oncology believes that drugs specifically targeting disease-related cellular level pathways will make attractive product candidates for cancer therapy. Genzyme Molecular Oncology is developing small molecule drugs that target three types of cancer pathways -- those involved in cell death, proliferation and metastasis. This program combines robotically-driven combinatorial chemistry, high-throughput screens and a diverse library of over 1.5 million compounds. Genzyme Molecular Oncology currently has over 20 cancer-directed assays running or in development. Several of the product candidates in this program have been optimized and are currently in in vivo studies. Additional preclinical safety and efficacy studies are planned for 1999, with the goal of identifying clinical candidates.

In addition to its internal research and development efforts, Genzyme Molecular Oncology is working with leading academic and commercial collaborators to accelerate the development of cancer pathway therapies.

Schering-Plough Corporation. In September 1998, Genzyme Molecular Oncology granted a worldwide license under its patent rights to Schering-Plough to develop and commercialize gene therapy products using the p53 gene.

Schering-Plough is currently conducting Phase II clinical trials with its p53 gene therapy using its adenoviral delivery system. Under terms of the agreement, Genzyme Molecular Oncology has received a $5 million up-front payment and a $5 million milestone payment, and could receive up to an additional $30 million in patent, product development and sales milestone fees, in addition to royalties on product sales. Schering-Plough and Genzyme Molecular Oncology have conducted research with Genzyme Molecular Oncology's proprietary lipid gene delivery systems to develop gene therapy products with several of Schering-Plough's proprietary genes, including the p53 tumor suppressor gene. Schering-Plough and Genzyme Molecular Oncology have chosen not to pursue further research with this lipid gene delivery system at this time and Schering-Plough has allowed its option to license this technology to expire.

Merck & Co., Inc. In January 1998, Genzyme Molecular Oncology non-exclusively licensed patent rights to Merck relating to methods for identifying small molecules that interfere with the binding of the MDM2 protein with the p53 protein. Genzyme Molecular Oncology received an up-front license fee and could receive additional milestone payments if certain defined development milestones are achieved by Merck for a product developed by a method licensed from Genzyme Molecular Oncology or covered by Genzyme Molecular Oncology patent rights. In addition, Genzyme Molecular Oncology would receive royalties on worldwide sales of any such product.

Isis Pharmaceuticals Inc. In December 1998, Genzyme Molecular Oncology granted a non-exclusive license to Isis Pharmaceuticals under patent rights relating to antisense compounds that interfere with the expression of a cancer-related gene, methods for treating cancerous cells with these compounds, and methods for identifying such compounds. Isis Pharmaceuticals licensed these rights in order to facilitate the development of compounds it will be working on under its agreement with Zeneca, Inc. Genzyme Molecular Oncology received an up-front payment from Isis Pharmaceuticals. If Isis Pharmaceuticals and Zeneca successfully develop therapeutic products through the use of these rights, Genzyme Molecular Oncology will receive milestone and royalty payments.

COMPETITION

Genzyme is engaged in a segment of the human health care products industry that is extremely competitive. Competitors in the U.S. and elsewhere are numerous and include major pharmaceutical, chemical, surgical device and biotechnology companies, many of which have substantially greater financial and human resources, more experience in research, preclinical and clinical development, and obtaining regulatory approvals and more extensive production and marketing infrastructure than Genzyme. These companies may succeed in developing products that are more effective than any that have been or may be developed by Genzyme and may also prove to be more successful than Genzyme in producing and marketing their products.

Each of Genzyme's products and services faces different competitive challenges:

Cerezyme(R) Enzyme and Ceredase(R) Enzyme. Although Genzyme General is not aware of any current effective alternative to its products for the treatment for Gaucher disease, competition potentially could come from other protein replacement therapies, gene therapy or therapies based on small molecules. Genzyme General believes that its proprietary production techniques, exclusive raw material source for Ceredase(R) enzyme and, to a certain extent, the orphan drug status of its products give it a number of advantages over potential competitors using protein replacement therapy for the treatment of Gaucher disease. Gene therapy techniques are still in experimental stages. Genzyme General believes that the principal factors that will affect competition for

Cerezyme(R) enzyme and Ceredase(R) enzyme will be clinical effectiveness and absence of adverse side effects.

Renagel(R) Capsules. Phosphate binders are currently the only available treatment for hyperphosphatemia. There are several phosphate binders available or under development. A prescription calcium acetate preparation is currently the only product approved in the U.S. for the control of elevated phosphorus levels in patients with chronic kidney failure. Other products used as phosphate binders include over-the-counter calcium- and aluminum-based antacids and dietary calcium supplements. Calcium acetate and calcium carbonate, the most commonly used agents, must be taken at sufficient doses to achieve adequate reductions in phosphate absorption, which can lead to constipation and patient noncompliance. In addition, calcium therapy requires frequent monitoring because its use can cause hypercalcemia. Aluminum hydroxide is more effective at lower doses than calcium acetate or calcium carbonate, but it is infrequently used because aluminum absorbed from the intestinal tract accumulates in the tissues of patients with chronic kidney failure, causing aluminum-related osteomalacia, anemia and dialysis dementia. Renagel(R) phosphate binder binds dietary phosphate without the use of either calcium or aluminum and, therefore, will not cause hypercalcemia or aluminum toxicities. Genzyme believes that Renagel(R) Capsules will effectively compete with existing phosphate binders by offering an excellent tolerability profile and a more palatable formulation than those of currently available phosphate binders.

Cystic Fibrosis. There are a number of organizations, both academic and commercial, engaged in developing therapies to treat either the symptoms of cystic fibrosis or the cause of the disease. Several groups are developing gene therapy approaches to the disease and also have received approval from the FDA and the Recombinant DNA Advisory Committee ("RAC") to initiate limited human studies of cystic fibrosis gene therapy. In addition, other organizations are investigating pharmacological and biological agents that would treat cystic fibrosis. One such product, Pulmozyme(R), which was developed by Genentech, Inc., is currently on the market. These groups may succeed in developing gene therapy products before Genzyme General, in obtaining patent protection that may effectively block Genzyme General from commercializing its gene therapy products or in developing other drug therapies that relieve the symptoms of cystic fibrosis and, thus, compete with products under development by Genzyme General.

Sepra Products. Genzyme General believes that its expertise in developing proprietary fermentation processes and its access to proprietary strains of micro-organisms used in its HA production process will give it a competitive advantage in the marketing of the Sepra Products. Its anti-adhesion products may face significant competition, however, from other HA-based products, from non-HA-based products and from changes in surgical techniques that would obviate the use of HA. Genzyme General believes that the principal factor that will affect competition in this area is acceptance of the product by surgeons, which depends, in large part, upon product performance, safety and price. There are several companies that produce HA using

two principal processes: extraction from natural sources and fermentation. Although several companies are pursuing fermentation as a method of producing HA. Genzyme General believes that it's proprietary fermentation production process and its ability to create chemically modified forms of HA give it a competitive advantage in the marketing of HA-based products for surgery.

Other Surgical Products. The principal methods by which Genzyme General's surgical products business unit competes are continued innovative product development, the performance and breadth of its product lines, brand name recognition, sales force training and educational services, including sponsorship of training programs in advanced surgical techniques. Genzyme

General's key product in the cardiovascular fluid management category is the Pleur-evac(R) chest drainage product. Genzyme General believes that it leads the chest drainage category and that this position is sustainable due to a broad product line possessing patented features and brand name recognition. The surgical closure category is dominated by Ethicon, a division of Johnson & Johnson, and Tyco/U.S. Surgical Corporation. Genzyme General had focused on the cardiovascular suture market within this category and believes that favorable demographics such as the aging population and lengthening life expectancies will provide continued growth in this market. Competition within the surgical instruments category varies by segment, such as cardiovascular, endoscopic and plastic surgery instruments, with no one company dominating the entire category. Unique features and product innovation within its surgical instruments line have allowed Genzyme General to compete effectively across this category. Genzyme General faces several competitors in the minimally invasive cardiovascular surgery field. Cardiothoracic Systems Inc. is the leader in the both the MIDCAB and OPCAB markets. Several major surgical products companies have entered the minimally invasive cardiovascular surgery market. These companies have the advantages of name recognition, contracting power and sales force size but may not be as focused on the minimally invasive cardiovascular surgery market as Genzyme General.

Genetic Diagnostic Services. The U.S. market for prenatal cytogenetic and biochemical testing is divided among approximately 500 laboratories, many of which offer both types of testing. Of this total group, less than 20 laboratories market their services nationally. Genzyme General believes that the industry as a whole is still quite fragmented, with the top 20 laboratories accounting for approximately 50% of market revenues, and with no individual company accounting for more than 18% of the total other than Genzyme, which accounts for approximately 22% of the total. Genzyme General believes, however, that the industry will experience increasing consolidation, as smaller laboratories face the challenges of more complex and stringent regulation. Competitive factors in the genetic diagnostics services business generally include reputation of the laboratory, range of services offered, pricing, convenience of sample collection and pick-up, quality of analysis and reporting and timeliness of delivery of completed reports. Genzyme General believes that its research and development program, which has enabled it to develop and introduce testing services based on new technology, and its active sales and marketing force have played significant roles in the growth of its genetic diagnostics services business. In addition to Genzyme General, several companies and academic groups are attempting to develop fetal cell separation techniques. Genzyme General believes that its combination of separation and analytical technologies will give it a competitive advantage.

Diagnostic Products. Genzyme General acts as a primary supplier of enzymes and substrates, and generally does not compete with its customers in the sale of complete diagnostic kits. The market in the diagnostic products industry is mature and competition is based on price, reliability of supply and the purity and specific activity of products.

Carticel(R) AuCC. Genzyme Tissue Repair is aware of one other company, Verigen, Inc., that is culturing autologous chondrocytes for cartilage repair in Europe. In addition to Verigen, Genzyme Tissue Repair knows of three other companies, Advanced Tissue Sciences, Inc. ("ATS"), in conjunction with Smith & Nephew PLC, Integra LifeSciences Corp. ("Integra") and LifeCell Corp., that are engaged in research on cultured cartilage products. In addition, a surgical technique known as osteochondral grafting may be competitive to Carticel(R) AuCC. This procedure, which can be performed arthroscopically, involves transferring plugs of low weight bearing cartilage and bone to the area of a defect. Smith & Nephew, Arthrex, Inc. and Innovasive Devices, Inc. are known to have programs relating to this procedure. However, current practice suggests that osteochondral grafting is best used in a subset of patients with lesions that are smaller than those appropriate for treatment with Carticel(R) AuCC.

NeuroCell(TM) -PD and NeuroCell(TM) -HD. While there are currently no effective long-term therapies for advanced Parkinson's disease and no effective treatments for Huntington's disease, Genzyme Tissue Repair is aware of other companies and institutions pursuing research and development of alternative treatments for the diseases. Experimental therapies under development for Parkinson's disease include surgical destruction of certain portions of the brain (pallidotomy), gene therapy, deep brain stimulation, the use of growth factors and neuroprotectant therapy.

Epicel(TM) Skin Grafts. Genzyme Tissue Repair is the only commercial provider of cultured skin grafts that have been shown to provide permanent skin replacement for burn patients in the U.S. However, Genzyme Tissue Repair may face competition from companies using other approaches to culture skin tissue. Integra is marketing a collagen-based dermal replacement product for severely burned patients. This product will still require a skin graft from the patient or the Epicel(TM) skin grafts to close a full-thickness wound, however, and therefore will not compete directly with Epicel(TM) skin grafts. ATS also has received approval for a temporary wound covering for burns. Organogenesis, Inc. has submitted a PMA for a product to be used for the closure of venous stasis ulcers. LifeCell Corp. currently has freeze-dried enzymatically processed human cadaver dermis on the market.

TGF-Beta(2). The use of growth factors for treatment of chronic skin ulcers is an emerging treatment modality. Johnson & Johnson received approval in 1997 for the use of recombinant human platelet-derived growth factor ("PDGF") for treatment of diabetic foot ulcers based on a 10-15% improvement of frequency of patients with healed ulcers as compared to placebo and standard of care control groups in several clinical trials. Allogeneic cell-based therapies for treatment chronic skin ulcers are also being developed by Advanced Tissue Sciences and Organogenesis and will likely compete with growth factor strategies for stimulating cutaneous ulcer repair.

Cancer. Competition in the field of cancer therapeutics and diagnostics is significant. Genzyme Molecular Oncology faces, and will continue to face, significant competition from organizations such as large pharmaceutical and biotechnology companies, universities, government agencies and other research institutions in each of these fields. Genzyme Molecular Oncology also relies on its collaborators for support in some of its cancer research and development programs. Competition may arise from the use of the same or similar technologies as those currently used or contemplated to be used by Genzyme Molecular Oncology, as well as from existing therapeutics and diagnostics, any or all of which may be more effective or less expensive than those developed by Genzyme Molecular Oncology. In addition, certain of its collaborators are conducting multiple product development programs in fields similar to those that are the subject of the partner's alliance with Genzyme Molecular Oncology.

PATENTS AND PROPRIETARY TECHNOLOGY

In general, Genzyme pursues a policy of obtaining patent protection both in the U.S. and in selected foreign countries for subject matter considered patentable and important to its business. In addition, a portion of Genzyme's proprietary position is based upon patents that Genzyme has licensed from others. These license agreements generally require Genzyme to pay royalties upon commercialization of products covered by the licensed technology. Generally, patents issued in the United States are effective for a period of 17 years. However, the GATT legislation changed this period to twenty years from the filing date for patent applications filed after June 8, 1995. The duration of foreign patents varies in accordance with applicable local law. Genzyme also relies on trade secrets, proprietary know-how and continuing technological innovation to develop and maintain a competitive position in its product areas. Genzyme's employees, consultants and corporate partners who have access to its proprietary information have signed confidentiality agreements. Genzyme's patent

position and proprietary technology are subject to certain risks and uncertainties. The information set forth under the subheading "Factors Affecting Future Operating Results -- Uncertainty Regarding Patents and Protection of Proprietary Technology" under (i) "Management's Discussion and Analysis of Genzyme Corporation and Subsidiaries' Financial Condition and Results of Operations" in the 1998 Genzyme General Annual Report, (ii) "Management's Discussion and Analysis of Genzyme Tissue Repair's Financial Condition and Results of Operations" in the 1998 Genzyme Tissue Repair Annual Report and (iii) "Management's Discussion and Analysis of Genzyme Molecular Oncology's Financial Condition and

Results of Operations" in the 1998 Genzyme Molecular Oncology Annual Report is incorporated herein by reference.

Genzyme's registered trademarks Cerezyme(R), Ceredase(R), Thyrogen(R), Seprafilm(R), Pleur-evac(R), Thora-Klex(R), Tevdek(R), Polydek(R), InSight(R), MASDA(R), and Carticel(R) together with its trademarks Cohn Cardiac Stablizer(TM), Diamond-Line(TM), Diamond-Flex(TM), Diamond-Touch(TM), Sepragel(TM), Sepracoat(TM), Sepramesh(TM), N-geneous LDL(TM), N-geneous HDL(TM), Contrast(TM), GlyPro(TM), Epicel(TM) and SAGE(TM), in the aggregate are considered to be of material importance to Genzyme.

GOVERNMENT REGULATION

Governmental regulation, in the U.S. and other countries, is a significant factor in the production and marketing of many of Genzyme's products and in its ongoing research and development activities.

FDA Regulation

In the U.S., products that do not achieve their principal intended purpose through chemical action within or on the body and which are not dependent upon being metabolized by the patient's body in order to be effective are classified by the FDA as "devices" while other products are classified as "drugs" or "biologics." Cerezyme(R) enzyme and Ceredase(R) enzyme are regulated in the U.S. as drugs, as are Thyrogen(R) hormone and Renagel(R) Capsules. ATIII, alpha-L-iduronidase, alpha-galactosidase, alpha-glucosidase, prolactin and Genzyme's gene therapy products are regulated as biologics. The Sepra Products and Genzyme's other surgical products are regulated as devices. The N-geneous LDL(TM) and N-geneous HDL(TM) cholesterol tests are classified as in vitro diagnostic devices.

The activities required before drugs or biologics may be marketed in the U.S. include (i) preclinical laboratory tests, in vitro and in vivo preclinical studies and formulation and stability studies, (ii) the submission to the FDA and approval of an application for human clinical testing (an "IND"), (iii) adequate and well controlled human clinical trials to prove the safety and effectiveness of the drug or biologic, (iv) the submission of an NDA for a drug or a Product License Application ("PLA") for a biologic or a BLA for biologics identified by the FDA as "Specified Biologics" and (v) the approval by the FDA of the NDA, BLA or PLA.

In addition to product approval, the manufacturer of the product may have to obtain an establishment license (for a biologic that is not considered well characterized) or a pre-approval Good Manufacturing Practices ("GMP") inspection (for a drug or well-characterized biologic) from the FDA. Since any license granted by the FDA is both site and process specific, any material change by a company in the manufacturing process, equipment or location necessitates additional FDA review and approval.

Products that are classified as devices also require FDA approval prior to

marketing. Devices are classified as Class I, II or III, depending upon the information available to assure their safety and effectiveness. In general, Class I and Class II devices are devices whose safety and effectiveness can reasonably be assured through general or specific controls, respectively. Class III devices are life sustaining, life supporting or implantable devices or new devices which have been found not to be substantially equivalent to legally marketed devices. The steps required for approval of a Class III device include (i) preclinical laboratory tests and in vitro and in vivo preclinical studies, (ii) the submission to the FDA and approval of an investigational device exemption (an "IDE") to allow initiation of clinical testing, (iii) human clinical studies to prove safety and effectiveness of the device, (iv) the submission of a PMA and (v) the approval by the FDA of the PMA. Typically, clinical testing of devices involves initial testing to evaluate safety and feasibility and expanded trials to collect sufficient data to prove safety and effectiveness. In addition, the procedures and the facilities used to manufacture the device are subject to review and approval by the FDA.

A device (other than a Class III device) which is proved to be substantially equivalent to a device marketed prior to May 28, 1976, when government regulations for devices were first introduced, can be marketed after approval of a 510(k) application rather than the filing of an IDE and a PMA. The 510(k) application must contain a description of the device, its methods of manufacture and quality control

procedures and the results of testing to demonstrate that the device is substantially equivalent to the device already marketed.

In May 1996, the FDA published a new guidance document that provided for the regulation of products such as Carticel(R) AuCC that use manipulated autologous structural cells. Under these regulations, companies that are not currently marketing autologous cultured chondrocytes would likely be required to provide a prospective randomized blinded control study comparing the treatment to alternative treatments. Genzyme Tissue Repair estimates that it could take eight years for any competitor to complete a study of this nature that would demonstrate the clinical efficacy of its proposed treatment. In August 1997, the FDA granted Genzyme Tissue Repair a BLA under these regulations for Carticel(R) AuCC. Genzyme Tissue Repair has initiated discussions with the FDA regarding an application for Epicel(TM) skin grafts, which has been on the market as an unregulated medical device. Genzyme Tissue Repair expects that the FDA will permit Epicel(TM) skin grafts to remain on the market until its regulatory status is resolved.

The time and expense required to perform the clinical testing necessary to obtain FDA approval can far exceed the time and expense of the research and development initially required to create the product. Even after initial FDA approval has been obtained, further studies may be required to provide additional data on safety or to gain approval for the use of a product as a treatment for clinical indications other than those initially targeted. In addition, use of these products during testing and after marketing approval has been obtained could reveal side effects which, if serious, could delay, impede or prevent marketing approval, limit uses, force a recall of the product or expose Genzyme to product liability claims.

Regulation Outside the U.S.

For marketing outside the U.S., Genzyme is subject to foreign regulatory requirements governing human clinical testing and marketing approval for its products. These requirements vary by jurisdiction, differ from those in the U.S. and may necessitate additional preclinical or clinical testing whether or not FDA approval has been obtained.

Generally, Genzyme's initial focus for obtaining marketing approval outside the U.S. is Europe. EU Directives ("EU regulations") generally classify products either as medicinal products or devices. For medicinal products, like those produced by Genzyme, marketing approval may be sought using either the centralized procedure of the European Medicines Evaluation Agency ("EMA") or the decentralized (mutual recognition) process. The centralized procedure of the EMEA results in a recommendation in all member states, while the EU multi-state process involves country by country approval. EU regulations for products classified as devices have been implemented for some devices. Devices such as Genzyme's Sepra Products must receive market approval through a centralized procedure, where the device receives a CE Mark, allowing distribution to all member states of the EU. For those devices where EU regulations have not been implemented, marketing approval must be obtained on a country by country basis. The CE mark certification requires Genzyme to receive International Standards Organization ("ISO") certification for each facility involved in the manufacture or distribution of the device. This certification only comes after the development of an all inclusive quality system, which is reviewed for compliance to International Quality Standards by a licensed "Notified Body" working within the EU. After certification is received a product dossier is reviewed which attests to the product's compliance with EU directive 93/42/EEC for medical devices. Only after this point is a CE Mark granted. Ceredase(R) enzyme has been registered for sale in the EU through an earlier version of the centralized procedure called the concentration procedure. Genzyme expects alpha-L-iduronidase, alpha-galactosidase, alpha-glucosidase, prolactin and the gene therapy products also will be regulated through the centralized procedure. Seprafilm(R) Bioresorbable Membrane and Sepracoat(TM) Coating Solution have been granted the CE Mark. Genzyme currently intends to apply for a CE Mark for all of its other surgical products. EU regulations do not currently permit the sale of xenotransplanted products in Europe.

Autologous products are specifically exempt from the European Device Directive and Pharmaceutical Directive promulgated by the EU. Therefore, each European country is free to impose its own regulations on the marketing of such products. To date, Genzyme Tissue Repair has not encountered any local registration

requirements for market introduction of Carticel(R) AuCC. During September 1997, the Spanish national health system approved Carticel(R) AuCC for use by public hospitals, representing the first broad approval of the product by a reimbursement authority in Europe. Genzyme Tissue Repair is currently assessing the regulatory requirements for commercialization of Carticel(R) AuCC in Japan.

Other Government Regulation

Orphan Drug Act. The Orphan Drug Act provides incentives to manufacturers to develop and market drugs for rare diseases and conditions affecting fewer than 200,000 persons in the U.S. at the time of application for orphan drug designation. The first developer to receive FDA marketing approval for an orphan drug is entitled to a seven-year exclusive marketing period in the U.S. for that product. However, a drug that is considered by the FDA to be clinically superior to or different from another approved orphan drug, even though for the same indication, is not barred from sale in the U.S. during the seven-year exclusive marketing period. Genzyme has been accorded orphan drug status for Cerezyme(R) enzyme, Ceredase(R) enzyme and Thyrogen(R) hormone and has received orphan drug designation for a number of other products currently under development, including its alpha-glucosidase, alpha-L-iduronidase, gene therapy products MART-1 and gp100, NeuroCell(TM)-PD and NeuroCell(TM)-HD. Legislation has been proposed in the European Union that, if enacted, would provide similar incentives as the Orphan Drug Act.

Legislation has been periodically introduced in recent years, however, to amend the Orphan Drug Act. Such legislation has generally been directed to shortening the period of automatic market exclusivity and granting certain marketing rights to simultaneous developers of a drug. The effect on Genzyme of any amendments ultimately adopted cannot be assessed at this time. It believes that the commercial success of these products, including Cerezyme(R) enzyme and Ceredase(R) enzyme, will depend more significantly on the associated safety and efficacy profile and on the price relative to competitive or alternative treatments and other marketing characteristics of each product than on the exclusivity afforded by the Orphan Drug Act. Additionally, these products may be protected by patents, exclusive raw material supply contracts and other means.

Regulation of Diagnostic Services. The Clinical Laboratories Improvement Act ("CLIA") provides for the regulation of clinical laboratories by the U.S. Department of Health and Human Services. Regulations promulgated under CLIA affect the genetics laboratories of Genzyme.

Regulation of Gene Therapy Products. In addition to FDA requirements, the National Institutes of Health ("NIH") has established guidelines providing that transfers of recombinant DNA into human subjects at NIH laboratories or with NIH funds must be approved by the NIH Director. The NIH has established RAC to review gene therapy protocols. Genzyme expects that all of its gene therapy protocols will be subject to RAC review. In the U.K., Genzyme's gene therapy protocols will be subject to review by the Gene Therapy Advisory Committee.

Tissue and Organ Bank Laws. A federal criminal statute that prohibits the transfer of any human organ for valuable consideration for use in human transplantation, but which permits recovery of reasonable costs associated with such activities, has not been applied to Carticel(R) AuCC or Epicel(TM) skin grafts. Certain states have laws requiring the licensure of tissue and organ banks and laws governing the sale of human organs and the safety and efficacy of drugs, devices and biologics, including skin, all of which could be interpreted to apply to Genzyme Tissue Repair's production and distribution of cultured tissue products. Provisions in certain states' statutes prohibit the receipt of valuable consideration in connection with the sale of human tissue by a tissue bank but permit licensed tissue banks, including companies, to recover their reasonable costs associated with such sales. The application of these or other regulations to Genzyme Tissue Repair could result in significant expense to Genzyme Tissue Repair, limit Genzyme's reimbursement for its services and otherwise materially adversely affect Genzyme Tissue Repair's results of operations.

Other Laws and Regulations. Genzyme's operations are or may be also subject to various federal, state and local laws, regulations and recommendations relating to safe working conditions, laboratory and manufacturing practices and the purchase, storage, movement, use and disposal of hazardous or potentially hazardous substances used in connection with Genzyme's research work and manufacturing operations,

including radioactive compounds and infectious disease agents. Although Genzyme believes that its safety procedures comply with the standards prescribed by federal, state and local regulations, the risk of contamination, injury or other accidental harm cannot be completely eliminated. In the event of such an accident, Genzyme could be held liable for any damages that result and any liabilities could exceed Genzyme's resources.

EMPLOYEES OF THE REGISTRANT

As of December 31, 1998, Genzyme (including all consolidated subsidiaries and excluding Genzyme Transgenics) had approximately 3,500 employees. None of

Genzyme's employees are covered by collective bargaining agreements. Genzyme considers its employee relations to be excellent.

RESEARCH AND DEVELOPMENT COSTS

The information required by Item 101(c)(xi) of Regulation S-K is incorporated by reference from the information set forth in Part II, Item 8 "Consolidated Financial Statements and Supplementary Schedules" and specifically in the Genzyme Corporation and Subsidiaries Consolidated Statements of Operations and in Note M., "Research and Development Agreements" to the Consolidated Financial Statements in the 1998 Genzyme General Annual Report set forth in Exhibit 13.1 to this Annual Report on Form 10-K.

SALES BY GEOGRAPHIC AREA, SIGNIFICANT CUSTOMERS AND PRODUCTS

The information required by Items 101(c)(1)(i) and (vii) and 101(d) of Regulation S-K is incorporated by reference from the information set forth in the 1998 Genzyme General Annual Report under the heading "Management's Discussion and Analysis of Genzyme Corporation and Subsidiaries' Financial Condition and Results of Operations" and in Note Q., "Segment Information" to the Consolidated Financial Statements set forth in Exhibit 13.1 to this Annual Report on Form 10-K.

ITEM 1A. EXECUTIVE OFFICERS OF THE REGISTRANT

The current executive officers of the Company are as follows:

<TABLE>
<CAPTION>

NAME	AGE	TITLE
<S>	<C>	<C>
Henri A. Termeer.....	53	Chairman of the Board, President and Chief Executive Officer
Russell J. Campanello.....	43	Senior Vice President, Human Resources
Earl M. Collier, Jr.....	52	Executive Vice President, Health Systems and Surgical Products
David D. Fleming.....	50	Group Senior Vice President, Diagnostic Products and Genetics
John V. Heffernan.....	60	Senior Vice President
David J. McLachlan.....	60	Chief Financial Officer; Executive Vice President, Finance
Richard A. Moscicki, M.D....	47	Chief Medical Officer; Senior Vice President, Clinical, Medical and Regulatory Affairs
Alan E. Smith, Ph.D.....	54	Chief Scientific Officer; Senior Vice President, Research
G. Jan van Heek.....	49	Executive Vice President, Therapeutics and Tissue Repair
Peter Wirth.....	48	Chief Legal Officer; Executive Vice President; Clerk
Michael S. Wyzga.....	44	Chief Accounting Officer; Senior Vice President, Corporate Controller

</TABLE>

Each officer's term of office extends until the meeting of the Board of Directors following the next annual meeting of stockholders and until a successor is elected and qualified or until his earlier resignation or removal.

Mr. Termeer has served as President and a Director of the Company since October 1983, as Chief Executive Officer since December 1985 and as Chairman of the Board since May 1988. For ten years prior to joining the Company, Mr. Termeer worked for Baxter Travenol Laboratories, Inc., a manufacturer of human health care products. Mr. Termeer is a director of ABIOMED, Inc., AutoImmune Inc., Diacrin, GelTex and

Genzyme Transgenics Corporation and a trustee of Hambrecht & Quist Healthcare Investors and Hambrecht & Quist Life Sciences Investors.

Mr. Campanello joined Genzyme in March 1998 as Senior Vice President, Human Resources. Prior to joining Genzyme, from March 1996 to March 1998, Mr. Campanello served as Vice President of Nets Incorporated, an internet-based marketing company, and from June 1987 to February 1996 he served as Vice President, Human Resources of Lotus Development Corp. ("Lotus"), a computer software company. Mr. Campanello is a director of Restrac, Inc., a provider of human resource staffing software and related services. Nets, Incorporated filed for Chapter 11 bankruptcy protection in May 1997.

Mr. Collier joined Genzyme in January 1997 as Senior Vice President, Health Systems and has served as Executive Vice President, Surgical Products and Health Systems since July 1997. Mr. Collier is responsible for Genzyme's surgical products business unit. Prior to joining Genzyme, Mr. Collier was President of Vitas HealthCare Corporation (formerly Hospice Care Incorporated), a provider of health care services, from October 1991 until August 1995. Prior to that, Mr. Collier was a partner in the Washington, D.C. law firm of Hogan & Hartson, which he joined in 1981.

Mr. Fleming joined the Company in April 1984 and has served as Group Senior Vice President, Diagnostic Products and Genetics since September 1996. Prior to that date, he served as President of Genzyme's diagnostics business unit since January 1989 and has been a Senior Vice President of the Company since August 1989. For 11 years prior to joining the Company, he worked for Baxter Travenol Laboratories, Inc.

Mr. Heffernan joined the Company as Vice President, Human Resources in October 1989, served as Senior Vice President, Human Resources from May 1992 until March 1998 and currently serves as a Senior Vice President. Prior to joining the Company, he served for more than five years as Vice President, Human Resources Corporate Staff of GTE Corporation, a diversified communications and electronics company.

Mr. McLachlan joined the Company in December 1989 and has served as Executive Vice President, Finance, since September 1996. He served as Senior Vice President, Finance, from December 1989 to September 1996 and has served as Chief Financial Officer since 1989. Prior to joining the Company, he served for more than five years as Chief Financial Officer for Adams-Russell Electronics Inc., a defense electronics manufacturer, and Adams-Russell Co., Inc., a cable television company. Mr. McLachlan is a director of HearX, Ltd., a company providing products and services to the hearing impaired.

Dr. Moscicki joined the Company in March 1992 as Medical Director, became Vice President, Medical Affairs in early 1993 and was named Vice President, Clinical, Medical and Regulatory Affairs in December 1993. In September 1996 he became Senior Vice President, Clinical, Medical and Regulatory Affairs and Chief Medical Officer. Since 1979, he has also been a physician staff member at the Massachusetts General Hospital and a faculty member at the Harvard Medical School.

Dr. Smith joined the Company in August 1989 as Senior Vice President, Research and became Chief Scientific Officer in September 1996. Prior to joining the Company, he served as Vice President-Scientific Director of Integrated Genetics, Inc., from November 1984 until its acquisition by the Company in August 1989. From October 1980 to October 1984, Dr. Smith was head of the Biochemistry Division of the National Institute for Medical Research, Mill Hill, London, England and from 1972 to October 1980, he was a member of the scientific staff at the Imperial Cancer Research Fund in London, England. Dr. Smith also serves as a director of GTC.

Mr. van Heek joined the Company in September 1991 as General Manager of its wholly-owned subsidiary, Genzyme, B.V., and became a Genzyme Vice President and President of Genzyme's therapeutics business unit in December 1993. From September 1996 through July 1997, he served as Group Senior Vice President, Therapeutics and since July 1997 has served as Executive Vice President, Therapeutics and Tissue Repair, with responsibility for Genzyme's therapeutics business unit, Genzyme Tissue Repair and international operations. Prior to joining the Company, he was, since 1988, Vice President/General Manager of the Fenwal Division of Baxter Healthcare Corporation. Mr. van Heek also served as President and Treasurer of Neozyme II Corporation from March 1992 to January 1996.

Mr. Wirth joined the Company in January 1996 and has served as Executive Vice President and Chief Legal Officer since September 1996. Mr. Wirth has responsibility for Genzyme's corporate development and legal activities, and the molecular oncology and pharmaceuticals business units. From January 1996 to September 1996, Mr. Wirth served as Senior Vice President and General Counsel of Genzyme. Mr. Wirth was a partner of Palmer & Dodge LLP, a Boston, Massachusetts law firm, from 1982 through September 1996. Mr. Wirth remains of counsel to Palmer & Dodge LLP, and is a director of Transkaryotic Therapies, Inc., a gene therapy company.

Mr. Wyzga joined Genzyme in February 1998 as Vice President and Corporate Controller and has served as Senior Vice President, Corporate Controller and Chief Accounting Officer since January 1999. Prior to joining Genzyme, from February 1997 to February 1998 Mr. Wyzga served as Chief Financial Officer of Sovereign Hill Software, Inc., a software company. From November 1995 to February 1997 he served as Vice President of Finance and Chief Financial Officer of CACHELINK Corporation, a client/server software company. From October 1994 to November 1995 Mr. Wyzga served as Vice President of Finance for Lotus, and he also served from August 1993 to October 1994 as Director of Plans and Controls and from April 1991 to August 1993 as Manager of Plans and Controls for Lotus.

ITEM 2. PROPERTIES

Genzyme's operations are conducted in manufacturing, warehousing, pilot plant, clinical laboratories, and research and office facilities principally in the United States, United Kingdom, Netherlands, Switzerland and Germany. All properties are leased except for certain properties in Haverhill and West Malling, England, Coventry, Connecticut, Fall River, Massachusetts, Framingham, Massachusetts, Allston, Massachusetts and Santa Fe, New Mexico. Genzyme's principal properties are, for Genzyme General, its manufacturing facilities for the large scale production of its therapeutic proteins, biomaterials, diagnostic products and its genetic diagnostic facilities and, for Genzyme Tissue Repair, its cell processing facilities for Carticel(R) AuCC and Epicel(TM) skin grafts.

Genzyme General

Therapeutics

In October 1996, the Company received FDA approval to manufacture Cerezyme(R) enzyme at its multi-product manufacturing facility at Allston Landing in Boston, Massachusetts which contains extensive sterile filling capacity. The facility, which is owned by the Company, is built on land held under a 60 year lease.

Genzyme and RenaGel LLC (the joint venture between Genzyme and GelTex) have entered into a Contract Manufacturing Agreement dated January 1, 1998 under which Genzyme will manufacture a portion of RenaGel LLC's minimum supply requirements for Renagel(R) Capsules in Genzyme's facilities in Haverhill, England, upon receipt of necessary regulatory approvals.

Thyrogen(R) hormone is manufactured under GMP conditions in the Company's small-scale manufacturing facility in Framingham, Massachusetts.

A multi-use pharmaceutical facility in Liestal, Switzerland is used to produce peptides.

Surgical Products

Genzyme has manufacturing capacity at two UK facilities to produce commercial quantities of HA powder for the Sepra Products currently under development on behalf of GDP. Seprafilm(R) Bioresorbable Membrane is produced at commercial scale from the HA powder in the Company's manufacturing facility in Framingham, Massachusetts.

In July 1996, the Company acquired or assumed the leases for certain office, laboratory and manufacturing facilities in Fall River, Massachusetts, Coventry, Connecticut, Tucker, Georgia and Germany for use in manufacturing and warehousing its surgical products.

Diagnostics

Immunobiological products, diagnostic test kits and reagents are produced in manufacturing facilities in San Carlos, California, Cambridge, Massachusetts and Russelsheim, Germany.

Diagnostic enzymes and other fermentation products are produced in a multi-purpose fermentation facility in Maidstone, England and a protein purification plant in West Malling, England.

In 1997, the Company completed construction of a new fermentation facility and warehousing facility in West Malling, England.

The Company's genetic testing business primarily conducts operations in clinical laboratory and administrative facilities which the Company owns in Framingham, Massachusetts and Santa Fe, New Mexico.

Genzyme Tissue Repair

Production for Carticel(R) AuCC and Epicel(TM) skin grafts currently occurs primarily in the Company's cell processing facilities in Cambridge, Massachusetts. The facility has the capacity to provide Carticel(R) AuCC to approximately 5,000 patients per year. In 1996, the Company established a surgeon training center at its facility in the Netherlands in conjunction with the Carticel(R) AuCC program.

Selling and marketing activities are concentrated at facilities leased by the Company in Cambridge, Massachusetts and the Netherlands. The Company conducts its research and development activities primarily at its laboratory facilities in the United States.

Leases for the Company's facilities contain typical commercial lease provisions including renewal options, rent escalators and tenant responsibility for operating expenses. The Company believes that it has or is in the process of developing adequate manufacturing capacity to support its requirements for the next several years.

ITEM 3. LEGAL PROCEEDINGS

As of the filing date of this Form 10-K, there are no pending legal

proceedings deemed material by the Company to which Genzyme or any of its subsidiaries is a party or to which any of their property is subject.

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

No matter was submitted to a vote of security holders during the fourth quarter of the fiscal year ended December 31, 1998.

PART II

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

The Company has three series of common stock: GGD Stock, GTR Stock and GMO Stock. The GGD Stock, GTR Stock and GMO Stock are intended to reflect the value and track the performance of Genzyme General, Genzyme Tissue Repair and Genzyme Molecular Oncology, respectively. The stocks are traded on the over-the-counter market and prices are quoted on the Nasdaq National Market under the symbols GENZ, GZTR and GZMO, respectively. On November 16, 1998, the Company distributed to the holders of record of GGD Stock on November 2, 1998, .10805 shares of GMO Stock for each share of GGD Stock held. The GMO Stock commenced trading on November 16, 1998. As of March 2, 1999, there were 2,468, 5,623 and 2,330 stockholders of record of GGD Stock, GTR Stock and GMO Stock, respectively.

The following table sets forth, for the periods indicated, the high and low sale prices for the GGD Stock, GTR Stock and GMO Stock as reported by the Nasdaq National Market.

<TABLE>
<CAPTION>

	HIGH	LOW
<S>	<C>	<C>
GGD Stock		
1998:		
First Quarter	$34	$25 3/8
Second Quarter	33	23 1/2
Third Quarter	36 1/4	23 3/4
Fourth Quarter	50	29 11/16
1997:		
First Quarter	28 7/8	22 1/8
Second Quarter	27 7/8	20 3/4
Third Quarter	33	25
Fourth Quarter	31 7/8	23 3/8
GTR Stock		
1998:		
First Quarter	$ 9 1/4	$ 6 1/2
Second Quarter	9 3/16	5
Third Quarter	7 1/8	2 3/8
Fourth Quarter	3 3/4	2 1/32
1997:		
First Quarter	14 7/8	7
Second Quarter	13	8 1/2
Third Quarter	12 1/3	9
Fourth Quarter	10 3/4	6 3/8
GMO Stock		
1998:		
Fourth Quarter	$15	$ 2

</TABLE>

No cash dividends have been paid to date on any series of common stock and the Company does not anticipate paying cash dividends in the foreseeable future.

ITEM 6. SELECTED FINANCIAL DATA

Incorporated by reference from (i) the 1998 Genzyme General Annual Report under the headings "Genzyme General -- Selected Financial Data" and "Genzyme Corporation -- Selected Financial Data", (ii) the 1998 GTR Annual Report under the heading "Genzyme Tissue Repair -- Selected Financial Data" and (iii) the 1998 GMO Annual Report under the heading "Genzyme Molecular Oncology -- Selected Financial Data".

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

Incorporated by reference from (i) the 1998 Genzyme General Annual Report under the headings "Management's Discussion and Analysis of Financial Condition and Results of Operations -- Genzyme General" and "Management's Discussion and Analysis of Financial Condition and Results of Operations for Genzyme Corporation and Subsidiaries", (ii) the 1998 GTR Annual Report under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations -- Genzyme Tissue Repair" and (iii) the 1998 GMO Annual Report under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations -- Genzyme Molecular Oncology."

ITEM 7A. QUANTITATIVE & QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The section entitled "Management's Discussion and Analysis of Genzyme Corporation and Subsidiaries' Financial Condition and Results of Operation -- New Accounting Pronouncements, Euro, Year 2000 and Market Risk" in the 1998 Genzyme General Annual Report is hereby incorporated by reference.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY SCHEDULES

The financial statements filed as part of this Annual Report on Form 10-K are incorporated by reference from (i) the 1998 Genzyme General Annual Report under the headings "Genzyme General -- Combined Financial Statements" and notes thereto and "Genzyme Corporation and Subsidiaries Consolidated Financial Statements" and notes thereto, (ii) the 1998 GTR Annual Report under the heading "Genzyme Tissue Repair Combined Financial Statements" and notes thereto and the 1998 GMO Annual Report under the heading "Genzyme Molecular Oncology Combined Financial Statements" and notes thereto and are listed under Item 14 below.

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

During the period from January 1, 1998 to the filing date of this Form 10-K, no independent accountant who was previously engaged as the principal accountant to audit Genzyme's financial statements has resigned, indicated it has declined to stand for re-election after completion of the current audit or was dismissed.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The response to this item is contained in part under the caption "Executive Officers of the Registrant" in Part I, Item 1A hereof and the remainder is

incorporated herein by reference from the discussion responsive thereto under the captions "Election of Directors" and "Section 16(a) Beneficial Ownership Reporting Compliance" in the Company's Proxy Statement relating to the 1999 Annual Meeting of Stockholders.

ITEM 11. EXECUTIVE COMPENSATION

The response to this item is incorporated herein by reference from the discussion responsive thereto under the following captions in the Company's Proxy Statement relating to the 1999 Annual Meeting of Stockholders: "Election of Directors -- Director Compensation" and "Executive Compensation."

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The response to this item is incorporated herein by reference from the discussion responsive thereto under the caption "Share Ownership" in the Company's Proxy Statement relating to the 1999 Annual Meeting of Stockholders.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The response to this item is incorporated herein by reference from the discussion responsive thereto under the caption "Certain Transactions" in the Company's Proxy Statement relating to the 1999 Annual Meeting of Stockholders.

PART IV

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

(A) 1. FINANCIAL STATEMENTS

The following financial statements (and related notes) of Genzyme General and Genzyme Corporation and subsidiaries are incorporated by reference from the 1998 Genzyme General Annual Report:

<TABLE>
<CAPTION>

</TABLE>

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* References are to page numbers in the 1998 Genzyme General Annual Report. The financial statements (and related notes) are incorporated by reference from the 1998 Genzyme General Annual Report.

The following financial statements (and related notes) of GTR are incorporated by reference from the 1998 GTR Annual Report:

<TABLE>
<CAPTION>

	PAGE*
<S>	<C>
Combined Statements of Operations -- For the Years Ended December 31, 1998, 1997 and 1996	103
Combined Balance Sheets -- December 31, 1998 and 1997	104
Combined Statements of Cash Flows -- For the Years Ended December 31, 1998, 1997 and 1996	105
Notes to Combined Financial Statements	106
Report of Independent Accountants	115

</TABLE>

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* References are to page numbers in the 1998 GTR Annual Report. The financial statements (and related notes) are incorporated by reference from the 1998 GTR Annual Report.

The following financial statements (and related notes) of GMO are incorporated by reference from the 1998 GMO Annual Report:

<TABLE>
<CAPTION>

	PAGE*
<S>	<C>
Combined Statements of Operations -- For the Years Ended December 31, 1998, 1997 and 1996	127
Combined Balance Sheets -- December 31, 1998 and 1997	128
Combined Statements of Cash Flows -- For the Years Ended December 31, 1998, 1997 and 1996	129
Notes to Combined Financial Statements	130
Report of Independent Accountants	140

</TABLE>

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* References are to page numbers in the 1998 GMO Annual Report. The financial statements (and related notes) are incorporated by reference from the 1998 GMO Annual Report.

2. FINANCIAL STATEMENT SCHEDULES

The schedules listed below for Genzyme General, GTR, GMO and Genzyme Corporation and Subsidiaries are filed as part of this Annual Report on Form 10-K:

<TABLE>

<CAPTION>

</TABLE>

All other schedules are omitted as the information required is inapplicable or the information is presented in (i) the Genzyme General Combined Financial Statements or notes thereto, (ii) the GTR Combined Financial Statements or notes thereto, (iii) the GMO Combined Financial Statements or notes thereto or (iv) the Genzyme Corporation and Subsidiaries Consolidated Financials or notes thereto.

3. EXHIBITS

The exhibits are listed below under Part IV, Item 14(c) of this report.

(B) REPORTS ON FORM 8-K

On October 27, 1998, Genzyme Corporation filed a Current Report on Form 8-K to announce the dividend of shares of GMO Stock to holders of GGD Stock, the release from escrow of shares of GMO Stock held by the former stockholders of PharmaGenics, and the listing of the GMO Stock on the Nasdaq National Market.

On March 17, 1999, Genzyme Corporation filed a Current Report on Form 8-K to announce that the Genzyme Board had authorized the renewal of Genzyme's shareholder rights plan, which became effective on March 28, which was the date on which the previous rights plan expired.

(C) EXHIBITS

<TABLE>
<CAPTION>

EXHIBIT NO.		DESCRIPTION
<S>	<C>	<C>
*3.1	--	Restated Articles of Organization of Genzyme, as amended. Filed as Exhibit 1 to Genzyme's Registration Statement on Form 8-A dated June 18, 1997
*3.2	--	By-laws of Genzyme. Filed as Exhibit 3.2 to Genzyme's Form 8-K dated December 31, 1991
*4.1	--	Series Designation for Genzyme Molecular Oncology Division Common Stock, $.01 par value. Filed as Exhibit 2 to Genzyme's Registration Statement on Form 8-A dated June 18, 1997
*4.2	--	Series Designation for Genzyme Series A, Series B and Series C Junior Participating Preferred Stock, $.01 par value. Filed as Exhibit 3 to Genzyme's Registration Statement on Form 8-A dated June 18, 1997
*4.3	--	Renewed Rights Agreement dated as of March 16, 1999 between Genzyme and American Stock Transfer & Trust Company. Filed

		as Exhibit 4 to Genzyme's Current Report on Form 8-K dated March 17, 1999
*4.4	--	Warrant issued to Richard Warren, Ph.D. Filed as Exhibit 4 to the Form 8-K of IG Laboratories, Inc. dated October 11, 1990 (File No. 0-18439)
*4.5	--	Genzyme Common Stock Purchase Warrant No. A-1 dated July 31, 1997 issued to Canadian Medical Discoveries Fund, Inc. ("CMDF"). Filed as Exhibit 10.2 to Genzyme's Form 10-Q for the quarter ended September 30, 1997
*4.6	--	Genzyme Common Stock Purchase Warrant No. A-2 dated July 31, 1997 issued to CMDF. Filed as Exhibit 10.3 to Genzyme's Form 10-Q for the quarter ended September 30, 1997
*4.7	--	Genzyme Common Stock Purchase Warrant No. A-3 dated July 31, 1997 issued to CMDF. Filed as Exhibit 10.3 to Genzyme's Form 10-Q for the quarter ended September 30, 1997
*4.8	--	Registration Rights Agreement dated as of July 31, 1997 by and between Genzyme and CMDF. Filed as Exhibit 10.1 to Genzyme's Form 10-Q for the quarter ended September 30, 1997
*4.9	--	Form of Genzyme General Division Convertible Debenture. Filed as Exhibit 10.7 to Genzyme's Form 10-Q for the quarter ended September 30, 1997
*4.10	--	Registration Rights Agreement dated as of August 29, 1997 by and among Genzyme and the entities listed on the signature pages thereto. Filed as Exhibit 10.8 to Genzyme's Form 10-Q for the quarter ended September 30, 1997
*4.11	--	Warrant Agreement between Genzyme and Comdisco, Inc. Filed as Exhibit 10.22 to a Form 10 of PharmaGenics, Inc. ("PharmaGenics") (File No. 0-20138)

</TABLE>

<TABLE>
<CAPTION>

EXHIBIT NO.		DESCRIPTION
<S>	<C>	<C>
*4.12	--	Form of Genzyme Corporation Convertible Note dated February 28, 1997 issued to Credit Suisse First Boston (Hong Kong) Ltd. ("CSFB"). Filed as Exhibit 4.14 to Genzyme's Form 10-K/A for 1997
*4.13	--	Indenture, dated as of May 22, 1998, between Genzyme and State Street Bank and Trust Company, as Trustee, including the form of Note. Filed as Exhibit 4.3 to Genzyme's Registration Statement on Form S-3 (File No. 333-59513)
*4.14	--	Registration Rights Agreement, dated as of May 19, 1998, among Genzyme, Credit Suisse First Boston Corporation, Goldman, Sachs & Co. and Cowen & Company. Filed as Exhibit 4.4 to Genzyme's Registration Statement on Form S-3 (File No. 333-59513)
*4.15	--	Purchase Agreement, dated as of May 19, 1998, among Genzyme, Credit Suisse First Boston Corporation, Goldman, Sachs & Co. and Cowen & Company. Filed as Exhibit 4.5 to Genzyme's Registration Statement on Form S-3 (File No. 333-59513)
*10.1	--	Leases by Whatman Reeve Angel Limited to Whatman Biochemicals Limited dated May 1, 1981. Filed as Exhibit 10.12 to Genzyme's Registration Statement on Form S-1 (File No. 33-4904)
*10.2	--	Lease dated as of September 15, 1989 for 95-111 Binney Street, Cambridge, Massachusetts between Genzyme and the Trustees of the Cambridge East Trust. Filed as Exhibit 10.2

		to Genzyme's Form 10-K for 1992. First amendment of lease dated February 28, 1994. Filed as Exhibit 10.2 to Genzyme's Form 10-K for 1993
*10.3	--	Lease dated December 20, 1988 for Building 1400, One Kendall Square, Cambridge, Massachusetts between Genzyme and the Trustees of Old Binney Realty Trust, as amended by letters dated December 20, 1988, January 19, 1989 and January 31, 1989. Filed as Exhibit 10.18 to Genzyme's Form 10-K for 1988. Addendum dated September 20, 1991 to Lease for Building 1400, One Kendall Square, Cambridge, Massachusetts. Filed as Exhibit 19.1 to Genzyme's Form 10-Q for the quarter ended September 30, 1991. Addenda dated August 2, 1990 and April 6, 1993 to Lease for Building 1400, One Kendall Square, Cambridge, Massachusetts. Filed as Exhibit 10.3 to Genzyme's Form 10-K for 1993
*10.4	--	Lease dated December 20, 1988 for Building 700, One Kendall Square, Cambridge, Massachusetts between Genzyme and Trustees of Old Kendall Realty Trust, as amended by letters dated December 20, 1988 and January 31, 1989. Filed as Exhibit 10.19 to Genzyme's Form 10-K for 1988
*10.5	--	Lease dated September 30, 1985 for 51 New York Avenue, Framingham, Massachusetts. Filed as Exhibit 10.8 to Genzyme's Form 10-K for 1990. Amendment No. 1, dated October 11, 1990, and Amendment No. 2, dated May 12, 1993, to lease for 51 New York Avenue, Framingham, Massachusetts. Filed as Exhibit 10.5 to Genzyme's Form 10-K for 1993
*10.6	--	Lease dated April 30, 1990 for 64 Sidney Street, Cambridge, Massachusetts between BioSurface Technology, Inc. ("BioSurface") and Forest City 64 Sidney Street, Inc. Filed as Exhibit 10.22 to BioSurface's Registration Statement on Form S-1 (File No. 33-55874)
*10.7	--	Sublease Lease dated May 22, 1992 for three buildings at 74-84 New York Avenue, Framingham, Massachusetts between Genzyme and Prime Computer, Inc. Filed as Exhibit 10.7 to Genzyme's Form 10-K for 1993
*10.8	--	Lease dated May 22, 1992 for three buildings at 74-84 New York Avenue, Framingham, Massachusetts between Genzyme and Mark L. Fins, David J. Winstanley and Bruce A. Gurall, tenants in common. Filed as Exhibit 10.8 to Genzyme's Form 10-K for 1993
*10.9	--	Lease dated June 1, 1992 for land at Allston Landing, Allston, Massachusetts between Allston Landing Limited Partnership and the Massachusetts Turnpike Authority. Filed as Exhibit 10.9 to Genzyme's Form 10-K for 1993

</TABLE>

<TABLE>
<CAPTION>

EXHIBIT NO.		DESCRIPTION
<S>	<C>	<C>
*10.10	--	Underlease for Block 13 building at Kings Hill Business Park West Malling Kent among Rouse and Associates Block 13 Limited, Genzyme (UK) Limited and Genzyme. Filed as Exhibit 10.11 to Genzyme's Registration Statement on Form 8-B dated December 31, 1991, filed on March 2, 1992
10.11	--	Lease dated November 12, 1998 for Metrowest Place, 15 Pleasant Street Connector, Framingham, Massachusetts, between Consolidated Group Service Company Limited

		Partnership and Genzyme. Filed herewith
*10.12	--	Agreement of Limited Partnership dated as of September 13, 1989 between Genzyme Development Corporation II ("GDC II"), as General Partner, and each of the Limited Partners named therein. Filed as Exhibit 10(aa) to Genzyme's Registration Statement on Form S-4 (File No. 33-32343)
*10.13	--	Cross License Agreement dated as of September 13, 1989 between Genzyme and Genzyme Development Partners, L.P. ("GDP"). Filed as Exhibit 10(bb) to Genzyme's Registration Statement on Form S-4 (File No. 33-32343)
*10.14	--	Development Agreement dated as of September 13, 1989 between Genzyme and GDP. Filed as Exhibit 10(cc) to Genzyme's Registration Statement on Form S-4 (File No. 33-32343)
*10.15	--	Amendment No. 1 dated January 4, 1994 to Development Agreement dated as of September 13, 1989 between Genzyme and GDP. Filed as Exhibit 10.14 to Genzyme's Form 10-K for 1993
*10.16	--	Partnership Purchase Option Agreement dated as of September 13, 1989 between Genzyme, GDC II, GDP, each Class A Limited Partner and the Class B Limited Partner. Filed as Exhibit 10(dd) to Genzyme's Registration Statement on Form S-4 (File No. 33-32343)
*10.17	--	Partnership Purchase Agreement, undated and unexecuted, between Genzyme Corporation, GDC II, GDP, each Class A Limited Partner and the Class B Limited Partner, as the case may be. Filed as Exhibit 10(ee) to Genzyme's Registration Statement on Form S-4 (File No. 33-32343)
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*10.20	--	Marketing and Distribution Agreement between Genzyme and Genzyme Ventures II. Filed as Exhibit 10.3 to GDP's Form 10-Q for the quarter ended March 31, 1997 (File No. 0-18554)
*10.21	--	Technology License and Supply Agreement dated as of September 8, 1989 between Imedex and Genzyme. Filed as Exhibit 10.30 to Genzyme's Form 10-K for 1990.**
10.22	--	1998 Director Stock Option Plan. Filed herewith
*10.23	--	1990 Equity Incentive Plan. Filed as Exhibit 99.1 to Genzyme's Form S-8 dated August 8, 1997 (File No. 333-33249)
*10.24	--	1990 Employee Stock Purchase Plan. Filed as Exhibit 99.1 to Genzyme's Form S-8 dated August 8, 1997 (File No. 333-33291)
*10.25	--	1996 Directors' Deferred Compensation Plan. Filed as Exhibit 99.1 to Genzyme's Form S-8 dated August 8, 1997 (File No. 333-33251)
*10.26	--	Executive Employment Agreement dated as of January 1, 1990 between Genzyme and Henri A. Termeer. Filed as Exhibit 10.32 to Genzyme's Form 10-K for 1990

</TABLE>

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<CAPTION>

EXHIBIT NO.		DESCRIPTION
<S>	<C>	<C>
*10.27	--	Form of Severance Agreement between Genzyme and certain senior executives, together with schedule identifying the provisions applicable to each executive. Filed as Exhibit

		10.33 to Genzyme's Form 10-K for 1990. Current schedule identifying the executives filed herewith
*10.28	--	Form of Indemnification Agreement between Genzyme and certain senior executives, together with schedule identifying the provisions applicable to each executive. Filed as Exhibit 10.34 to Genzyme's Form 10-K for 1990. Current schedule identifying the executives filed herewith
*10.29	--	Executive Employment Agreement dated as of January 1, 1996 between Genzyme and Peter Wirth. Filed as Exhibit 10.1 to Genzyme's Form 10-Q for the quarter ended March 31, 1996
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10.31	--	Consulting Agreement dated December 31, 1998 between Genzyme and Robert J. Carpenter. Filed herewith
10.32	--	Consulting Agreement dated July 1, 1998 between Genzyme and Henry E. Blair. Filed herewith
*10.33	--	Technology Transfer Agreement between Genzyme and Genzyme Transgenics Corporation ("GTC") dated as of May 1, 1993. Filed as Exhibit 2.1 to the Registration Statement on Form S-1 of GTC (File No. 33-62872)
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*10.38	--	Amended and Restated Operating Agreement of ATIII LLC dated as of January 1, 1998 by and among Genzyme and GTC. Filed as Exhibit 10.52.1 to GTC's Form 10-K for 1997 (File No. 0-21794)**
*10.39	--	Purchase Agreement dated as of January 1, 1998 by and between Genzyme and GTC. Filed as Exhibit 10.52.2 to GTC's Form 10-K for 1997 (File No. 0-21794)**
*10.40	--	Collaboration Agreement dated as of January 1, 1997 by and among Genzyme, GTC and ATIII LLC. Filed as Exhibit 10.52.3 to GTC's Form 10-K for 1997 (File No. 0-21794) and incorporated herein by reference**
*10.41	--	Common Stock Purchase Agreement between Argus Pharmaceuticals, Inc. and Genzyme Corporation dated as of September 10, 1993. Filed as Exhibit A to Schedule 13D filed by Genzyme on September 20, 1993**
*10.42	--	Agreement and Plan of Reorganization dated as of July 25, 1994, as amended, among Genzyme, Phoenix Acquisition Corporation and BioSurface. Filed as Annex X to Genzyme's Registration Statement on Form S-4 (File No. 33-83346)
*10.43	--	License and Development Agreement between Celtrix Pharmaceuticals, Inc. ("Celtrix") and Genzyme dated as of June 24, 1994. Filed as Exhibit 10.42 to Celtrix's Form 10-K for 1994**

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EXHIBIT NO.		DESCRIPTION
*10.44	--	Common Stock Purchase Agreement dated as of June 24, 1994 between Celtrix and Genzyme. Filed as Exhibit A to Schedule 13D filed by Genzyme on July 5, 1994
*10.45	--	Credit Agreement dated November 14, 1996 among Genzyme and those of its subsidiaries party thereto, Fleet National Bank, as Administrative Agent, and The First National Bank of Boston, as Documentation Agent. Filed as Exhibit 10.39 to Genzyme's Form 10-K for 1996
*10.46	--	First Amendment to Credit Agreement and Consent to Subordination Terms dated as of March 3, 1997 by and among Genzyme and those of its subsidiaries party thereto, Fleet National Bank, as Administrative Agent, The First National Bank of Boston, as Documentation Agent, and the lenders identified in the signature pages thereto. Filed as Exhibit 10.49 to Genzyme's Form 10-K/A for 1997
*10.47	--	Second Amendment to Credit Agreement dated as of April 15, 1998 by and among Genzyme and those of its subsidiaries party thereto, Fleet National Bank, as Administrative Agent, The First National Bank of Boston, as Documentation Agent, and the lenders identified in the signature pages thereto. Filed as Exhibit 10.1 to Genzyme's Form 10-Q for the quarter ended June 30, 1998
*10.48	--	Note Purchase Agreement by and between Genzyme and CSFB dated of February 27, 1997. Filed as Exhibit 10.50 to Genzyme's Form 10-K/A for 1997
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*10.50	--	Purchase Agreement dated as of June 17, 1997 by and between Genzyme and GelTex. Filed as Exhibit 10.19 to GelTex's Form 10-Q for the quarter ended June 30, 1997 (File No. 0-26872)**
*10.51	--	Operating Agreement of RenaGel LLC dated as of June 17, 1997 by and among Genzyme, GelTex and RenaGel, Inc. Filed as Exhibit 10.20 to GelTex's Form 10-Q for the quarter ended June 30, 1997 (File No. 0-26872)
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13.2	--	Portions of the 1998 Genzyme Tissue Repair Annual Report incorporated by reference into Parts I and II of this Form 10-K. Filed herewith
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23.2	--	Consent of Coopers & Lybrand L.L.P. relating to the Annual Report of Genzyme Corporation Retirement Savings Plan on Form 11-K. To be filed by amendment
27	--	Financial Data Schedule for Genzyme Corporation. Filed herewith
99.1	--	Management and Accounting Policies Governing the Relationship of Genzyme Divisions. Filed herewith

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* Indicates exhibit previously filed with the Securities and Exchange Commission and incorporated herein by reference. Exhibits filed with Forms 10-K, 10-Q, 8-K, 8-A or 8-B of Genzyme Corporation were filed under Commission File No. 0-14680.

** Confidential treatment has been granted for the deleted portions of Exhibits 10.21, 10.38-10.41, 10.43, 10.49 and 10.50.

EXECUTIVE COMPENSATION PLANS AND ARRANGEMENTS

Exhibits 10.22 through 10.32 above are management contracts or compensatory plans or arrangements in which the executive officers or directors of Genzyme participate.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

GENZYME CORPORATION

Dated: March 31, 1999

By: /s/ DAVID J. MCLACHLAN
DAVID J. MCLACHLAN
Executive Vice President, Finance

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

<TABLE>
<CAPTION>

SIGNATURES	TITLE	DATE
<C>	<S>	<C>
/s/ HENRI A. TERMEER HENRI A. TERMEER	Director and Principal Executive Officer	March 31, 1999
/s/ DAVID J. MCLACHLAN DAVID J. MCLACHLAN	Principal Financial Officer	March 31, 1999
/s/ MICHAEL S. WYZGA MICHAEL S. WYZGA	Principal Accounting Officer	March 31, 1999
/s/ CONSTANTINE E. ANAGNOSTOPOULOS CONSTANTINE E. ANAGNOSTOPOULOS	Director	March 31, 1999

/s/ DOUGLAS A. BERTHIAUME DOUGLAS A. BERTHIAUME	Director	March 31, 1999
/s/ HENRY E. BLAIR HENRY E. BLAIR	Director	March 31, 1999
/s/ ROBERT J. CARPENTER ROBERT J. CARPENTER	Director	March 31, 1999
/s/ CHARLES L. COONEY CHARLES L. COONEY	Director	March 31, 1999
HENRY R. LEWIS	Director	March , 1999

</TABLE>

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EXHIBIT INDEX

<TABLE>
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EXHIBIT NO.		DESCRIPTION	SEQUENTIALLY NUMBERED PAGES
<S>	<C>	<C>	<C>
*3.1	--	Restated Articles of Organization of Genzyme, as amended. Filed as Exhibit 1 to Genzyme's Registration Statement on Form 8-A dated June 18, 1997.....	
*3.2	--	By-laws of Genzyme. Filed as Exhibit 3.2 to Genzyme's Form 8-K dated December 31, 1991.....	
*4.1	--	Series Designation for Genzyme Molecular Oncology Division Common Stock, $.01 par value. Filed as Exhibit 2 to Genzyme's Registration Statement on Form 8-A dated June 18, 1997.....	
*4.2	--	Series Designation for Genzyme Series A, Series B and Series C Junior Participating Preferred Stock, $.01 par value. Filed as Exhibit 3 to Genzyme's Registration Statement on Form 8-A dated June 18, 1997.....	
*4.3	--	Renewed Rights Agreement dated as of March 16, 1999 between Genzyme and American Stock Transfer & Trust Company. Filed as Exhibit 4 to Genzyme's Current Report on Form 8-K dated March 17, 1999.....	
*4.4	--	Warrant issued to Richard Warren, Ph.D. Filed as Exhibit 4 to the Form 8-K of IG Laboratories, Inc. dated October 11, 1990 (File No. 0-18439).....	
*4.5	--	Genzyme Common Stock Purchase Warrant No. A-1 dated July 31, 1997 issued to Canadian Medical Discoveries Fund, Inc. ("CMDF"). Filed as Exhibit 10.2 to Genzyme's Form 10-Q for the quarter ended September 30, 1997.....	
*4.6	--	Genzyme Common Stock Purchase Warrant No. A-2 dated July 31, 1997 issued to CMDF. Filed as Exhibit 10.3 to Genzyme's Form 10-Q for the quarter ended September 30, 1997.....	
*4.7	--	Genzyme Common Stock Purchase Warrant No. A-3 dated July 31, 1997 issued to CMDF. Filed as Exhibit 10.3 to Genzyme's Form 10-Q for the quarter ended September 30, 1997.....	

*4.8	--	Registration Rights Agreement dated as of July 31, 1997 by and between Genzyme and CMDF. Filed as Exhibit 10.1 to Genzyme's Form 10-Q for the quarter ended September 30, 1997.....	
*4.9	--	Form of Genzyme General Division Convertible Debenture. Filed as Exhibit 10.7 to Genzyme's Form 10-Q for the quarter ended September 30, 1997.....	
*4.10	--	Registration Rights Agreement dated as of August 29, 1997 by and among Genzyme and the entities listed on the signature pages thereto. Filed as Exhibit 10.8 to Genzyme's Form 10-Q for the quarter ended September 30, 1997.....	
*4.11	--	Warrant Agreement between Genzyme and Comdisco, Inc. Filed as Exhibit 10.22 to a Form 10 of PharmaGenics, Inc. ("PharmaGenics") (File No. 0-20138).....	
*4.12	--	Form of Genzyme Corporation Convertible Note dated February 28, 1997 issued to Credit Suisse First Boston (Hong Kong) Ltd. ("CSFB"). Filed as Exhibit 4.14 to Genzyme's Form 10-K/A for 1997.....	
*4.13	--	Indenture, dated as of May 22, 1998, between Genzyme and State Street Bank and Trust Company, as Trustee, including the form of Note. Filed as Exhibit 4.3 to Genzyme's Registration Statement on Form S-3 (File No. 333-59513).....	

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EXHIBIT NO.		DESCRIPTION	SEQUENTIALLY NUMBERED PAGES
<S>	<C>	<C>	<C>
*4.14	--	Registration Rights Agreement, dated as of May 19, 1998, among Genzyme, Credit Suisse First Boston Corporation, Goldman, Sachs & Co. and Cowen & Company. Filed as Exhibit 4.4 to Genzyme's Registration Statement on Form S-3 (File No. 333-59513).....	
*4.15	--	Purchase Agreement, dated as of May 19, 1998, among Genzyme, Credit Suisse First Boston Corporation, Goldman, Sachs & Co. and Cowen & Company. Filed as Exhibit 4.5 to Genzyme's Registration Statement on Form S-3 (File No. 333-59513).....	
*10.1	--	Leases by Whatman Reeve Angel Limited to Whatman Biochemicals Limited dated May 1, 1981. Filed as Exhibit 10.12 to Genzyme's Registration Statement on Form S-1 (File No. 33-4904).....	
*10.2	--	Lease dated as of September 15, 1989 for 95-111 Binney Street, Cambridge, Massachusetts between Genzyme and the Trustees of the Cambridge East Trust. Filed as Exhibit 10.2 to Genzyme's Form 10-K for 1992. First amendment of lease dated February 28, 1994. Filed as Exhibit 10.2 to Genzyme's Form 10-K for 1993.....	
*10.3	--	Lease dated December 20, 1988 for Building 1400, One Kendall Square, Cambridge, Massachusetts between Genzyme and the Trustees of Old Binney Realty Trust, as amended by letters dated December 20, 1988, January 19, 1989 and January 31, 1989. Filed as Exhibit 10.18 to Genzyme's Form 10-K for 1988. Addendum dated September 20, 1991 to Lease for Building 1400, One Kendall Square, Cambridge, Massachusetts. Filed as Exhibit 19.1 to Genzyme's Form 10-Q for the quarter ended September 30, 1991. Addenda dated August 2, 1990 and April 6, 1993 to Lease for Building 1400, One Kendall Square, Cambridge, Massachusetts. Filed as Exhibit 10.3 to Genzyme's Form 10-K for 1993.....	

*10.4	--	Lease dated December 20, 1988 for Building 700, One Kendall Square, Cambridge, Massachusetts between Genzyme and Trustees of Old Kendall Realty Trust, as amended by letters dated December 20, 1988 and January 31, 1989. Filed as Exhibit 10.19 to Genzyme's Form 10-K for 1988.....	
*10.5	--	Lease dated September 30, 1985 for 51 New York Avenue, Framingham, Massachusetts. Filed as Exhibit 10.8 to Genzyme's Form 10-K for 1990. Amendment No. 1, dated October 11, 1990, and Amendment No. 2, dated May 12, 1993, to lease for 51 New York Avenue, Framingham, Massachusetts. Filed as Exhibit 10.5 to Genzyme's Form 10-K for 1993.....	
*10.6	--	Lease dated April 30, 1990 for 64 Sidney Street, Cambridge, Massachusetts between BioSurface Technology, Inc. ("BioSurface") and Forest City 64 Sidney Street, Inc. Filed as Exhibit 10.22 to BioSurface's Registration Statement on Form S-1 (File No. 33-55874).....	
*10.7	--	Sublease Lease dated May 22, 1992 for three buildings at 74-84 New York Avenue, Framingham, Massachusetts between Genzyme and Prime Computer, Inc. Filed as Exhibit 10.7 to Genzyme's Form 10-K for 1993.....	
*10.8	--	Lease dated May 22, 1992 for three buildings at 74-84 New York Avenue, Framingham, Massachusetts between Genzyme and Mark L. Fins, David J. Winstanley and Bruce A. Gurall, tenants in common. Filed as Exhibit 10.8 to Genzyme's Form 10-K for 1993.....	

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EXHIBIT NO.		DESCRIPTION	SEQUENTIALLY NUMBERED PAGES
<S>	<C>	<C>	<C>
*10.9	--	Lease dated June 1, 1992 for land at Allston Landing, Allston, Massachusetts between Allston Landing Limited Partnership and the Massachusetts Turnpike Authority. Filed as Exhibit 10.9 to Genzyme's Form 10-K for 1993.....	
*10.10	--	Underlease for Block 13 building at Kings Hill Business Park West Malling Kent among Rouse and Associates Block 13 Limited, Genzyme (UK) Limited and Genzyme. Filed as Exhibit 10.11 to Genzyme's Registration Statement on Form 8-B dated December 31, 1991, filed on March 2, 1992.....	
10.11	--	Lease dated November 12, 1998 for Metrowest Place, 15 Pleasant Street Connector, Framingham, Massachusetts, between Consolidated Group Service Company Limited Partnership and Genzyme. Filed herewith.....	
*10.12	--	Agreement of Limited Partnership dated as of September 13, 1989 between Genzyme Development Corporation II ("GDC II"), as General Partner, and each of the Limited Partners named therein. Filed as Exhibit 10(aa) to Genzyme's Registration Statement on Form S-4 (File No. 33-32343).....	
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*10.24	--	1990 Employee Stock Purchase Plan. Filed as Exhibit 99.1 to Genzyme's Form S-8 dated August 8, 1997 (File No. 333-33291).....	
*10.25	--	1996 Directors' Deferred Compensation Plan. Filed as Exhibit 99.1 to Genzyme's Form S-8 dated August 8, 1997 (File No. 333-33251).....	
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EXHIBIT 10.11

METROWEST PLACE

15 PLEASANT STREET CONNECTOR

FRAMINGHAM, MASSACHUSETTS

LEASE

BETWEEN

CONSOLIDATED GROUP SERVICE COMPANY
LIMITED PARTNERSHIP,

AS LANDLORD

AND

GENZYME CORPORATION,

AS TENANT

DATED: NOVEMBER 12, 1998

LEASE

THIS LEASE TOGETHER WITH ALL THE EXHIBITS HERETO, is dated as of this 12th day of November, 1998 (the "Execution Date") between the Landlord and the Tenant as identified in Article I below, and this Lease relates to certain Premises in the Building located as indicated in Article I below. The parties hereby agree as follows:

I. REFERENCE DATA

1.1 BASIC TERMS. All references in this Lease to any Exhibit

attached hereto are deemed to incorporate herein all the data and provisions stated in such Exhibit, including the attached Rules and Regulations, as they may be changed from time to time in the manner provided in this Lease.

Each reference in this Lease to any of the following basic terms shall be deemed to have the meanings for that term as stated below in this Article:

LANDLORD:	Consolidated Group Service Company Limited Partnership, a Massachusetts limited partnership
LANDLORD'S ADDRESS:	c/o Crosspoint Associates, Inc. 217 West Central Street Natick, Massachusetts 01760 Attn: John W. Hueber and James F. Carlin, III
TENANT:	Genzyme Corporation, a Massachusetts corporation
TENANT'S ADDRESS:	One Kendall Square Building 1400 Cambridge, Massachusetts 02139 Attn: Evan M. Lebson Vice President and Treasurer
TERM COMMENCEMENT DATE:	January 1, 1999 or such earlier date as may be permitted under Section 4.1 hereof.
TERM EXPIRATION DATE:	December 31, 2005 with one five (5) year option to extend the Term.

ANNUAL FIXED RENT:	As set forth in Section 3.1
ADDITIONAL	RENT: Tenant shall also pay such additional rent (as defined in Section 3.1), including without limitation, the Electricity Component as set forth in Section 3.1 as well as the Tax and Operating Expense Increases in excess of their respective base amounts as set forth in Sections 8.1 and 9.2.
BUILDING:	The building located on the parcel of land consisting of approximately 5.96 acres and which is commonly known as and numbered 15 Pleasant Street Connector, Framingham, Massachusetts (the "Land"). The Land and the location of the Building thereon are as shown on the Title Insurance Plan of Land in Framingham and Southborough, Massachusetts, dated March 4, 1996, as prepared by Rizzo Associates, Inc. (the "Site Plan"); however, Tenant acknowledges that Landlord has disclosed to Tenant that the parking areas shown on the Site Plan have been restriped and expanded and that certain other minor changes have been made to the site shown on

	the Site Plan.
TOTAL RENTABLE FLOOR AREA OF BUILDING:	92,591 square feet
PREMISES:	The Building.
PARKING:	379 parking spaces.
PERMITTED USE:	General office use, employee cafeteria use to the extent provided in Section 13.26, and any other uses permitted as of right or by special permit under applicable Framingham and

	Southborough zoning laws if Tenant obtains such special permit at its own expense and the grant of such special permit is final and not subject to further review or appeal.
EXPENSE REIMBURSEMENT:	No more than $10.00 per rentable square feet of the Premises for a total of $925,910.00
COMMERCIAL GENERAL LIABILITY INSURANCE:	$10,000,000.00
BROKER:	CB Richard Ellis Whittier Partners
PROPERTY:	The Building and Land, including without limitation all improvements on the Land, parking areas, garages, drives, walks, landscaped areas and other areas.
BASE REAL ESTATE TAXES:	$1.45 per square foot for the Total Rentable Floor Area of the Premises
BASE OPERATING EXPENSES:	$5.76 per square foot for the Total Rentable Floor Area of the Premises

1.2 EXHIBITS. The following is a list of Exhibits attached to this Lease.

Exhibit A:	Floor Plan of the Premises
Exhibit A-1:	Site Plan
Exhibit B:	Rules and Regulations
Exhibit C:	Schedule of Cleaning Services
Exhibit D:	Signage
Exhibit E:	Base Year Operating Expenses Budget
Exhibit F:	Required Capital Improvements
Exhibit G:	Term Commencement Letter

II. PREMISES AND APPURTENANT RIGHTS

2.1 LEASE OF PREMISES. Landlord hereby leases to Tenant and Tenant hereby accepts from Landlord, the Premises consisting of 92,591 square feet of rentable area consisting of the entire Building as described in EXHIBIT A, for the Term of this Lease and upon the terms and conditions hereinafter set forth. The Term of the Lease shall be for seven (7) years, commencing on the Term

Commencement Date and expiring at the close of business of the Term Expiration Date.

2.2 APPURTENANT RIGHTS.

(a) Tenant shall have, as appurtenant to the Premises, the exclusive right to use, and permit its invitees to use, parking areas, public or common lobbies, hallways, stairways and elevators and common walkways necessary for access to the Building, but such rights shall always be subject to reasonable Rules and Regulations as set forth in Exhibit B hereto and as issued pursuant to Section 13.5 hereof.

(b) Tenant agrees that Landlord shall have the right to place in, over and through the Land, but not the Building or that portion of the Land located underneath the Building unless the particular item is for the specific benefit of the Building (but to the extent reasonably possible so as to reduce to a minimum interference with Tenant's use of the Premises) utility lines, pipes, equipment and the like. In no event shall Landlord's exercise of this right reduce the number of parking spaces on the Land to less than 370. Any such exercise of its rights by Landlord shall be undertaken in such manner and at such times as to minimize any disruption to Tenant's business and use of the Premises; shall not diminish the useful life of the parking surface; nor cause any increase in Operating Expenses unless such exercise was undertaken for the benefit of the Premises. Following any such exercise, Landlord shall remove all construction materials and debris and restore the portion of the Land so affected to substantially the same condition it was in prior to Landlord's exercise.

III. ANNUAL TOTAL RENT

3.1 PAYMENT. Tenant agrees to pay to Landlord or to its Agent (as may be identified by Landlord by written notice to Tenant), or as otherwise directed by Landlord, Annual Fixed Rent for each year of the Term of the Lease which shall be for the amounts set forth below, without offset, abatement, deduction or demand except as expressly provided in this Lease, plus an Electricity Component of eighty cents ($0.80) per square foot per year for the Total Rentable Floor Area of the Premises:

<TABLE>
<CAPTION>

MONTHS	RENT/SQ.FT.	ANNUAL RENT	MONTHLY RENT
<S>	<C>	<C>	<C>
1-12	$19.00	$1,759,229.00	$146,602.42
13-24	$21.00	$1,944,411.00	$162,034.25
25-36	$22.00	$2,037,002.00	$169,750.17
37-48	$23.00	$2,129,593.00	$177,466.08
49-60	$23.50	$2,175,888.50	$181,324.04
61-72	$24.00	$2,222,184.00	$185,182.00
73-84	$24.50	$2,268,479.50	$189,039.96

</TABLE>

Tenant shall pay the Annual Fixed Rent plus the Electricity Component in equal monthly installments (and at that rate for a partial month), in advance, on or within five (5) business days after the first day of each and every calendar month during the Term of

this Lease, at Landlord's Address, or at such other place as Landlord shall from time to time designate by notice, in lawful money of the United States (Annual Fixed Rent does not include the amount representing Tenant's share of increases over Base Real Estate Taxes and Base Operating Expenses). Unless herein otherwise provided, the Rent Commencement Date shall be the Term Commencement Date; however, on the Execution Date the deposit paid by Tenant to Broker in connection with the Letter of Intent dated August 7, 1998 between Landlord and Tenant shall be released to Landlord and shall be applied to and deemed to constitute payment in full of the first month's rent. If any installment of Annual Fixed Rent is not paid when due or within any applicable grace periods, Tenant shall pay, in addition to any charges under Section 13.14, upon demand of Landlord, an administrative fee equal to five (5%) percent of the overdue payment. Tenant shall pay all other costs, charges and assessments as may be owed by it to Landlord under this Lease including, but not limited to, the Electricity Component and increases over Base Real Estate Taxes and Base Operating Expenses as additional rent ("Additional Rent"). Tenant's failure to make any payment of Additional Rent upon the terms and conditions described herein shall be treated as a default in the payment of Annual Fixed Rent, in which event Landlord shall have all rights and remedies provided herein for the non-payment of Annual Fixed Rent and for any other breach hereof.

IV. TERM COMMENCEMENT AND CONDITION

4.1 COMMENCEMENT DATE. The Term Commencement Date hereof shall be the earlier of (i) January 1, 1999 or (ii) the date Tenant's personnel shall (but only with the prior consent of Landlord) occupy all or any part of the Premises for the conduct of any aspect of its business. Tenant's permitted access to any part of the Premises for the purposes of installing wiring; constructing Tenant's build-out of the Premises; installing furniture, fixtures, equipment or personal property shall not in and of itself constitute occupying all or any part of the Premises for the conduct of its business. In the event that any of Tenant's personnel take occupancy prior to January 1, 1999, such occupancy shall be governed by the terms which apply to the first twelve (12) months of the Lease and shall be deemed to be part of the first twelve (12) months which shall expire as of December 31, 1999 regardless of when Tenant takes occupancy of the Premises; however, the Annual Fixed Rent due from Tenant for such period prior to January 1, 1999 shall be based only on that portion of the Premises then so occupied by Tenant. In no event shall the Term Expiration Date be earlier than December 31, 2005.

V. USE OF PREMISES

5.1 PERMITTED USE. Tenant agrees that during the entire Term of this Lease it shall use and occupy the Premises only for the Permitted Use specified in Section 1.1 hereof and for no other use. Landlord agrees that it shall, at Tenant's sole expense, cooperate with and support any efforts by Tenant to obtain any special permits which Tenant may reasonably seek to obtain under applicable Framingham and

Southborough zoning laws; such cooperation shall be consistent with Landlord's

obligations under Section 15.6 below and shall include, without limitation, the co-signing of required applications and providing any support required to be provided by the title holder in connection with hearings before any appropriate planning board , zoning board of appeals, or other permit granting authority. Landlord agrees that it shall not, without Tenant's approval, which is not to be unreasonably withheld, initiate or consent to any proposed changes of zoning laws that would adversely affect the Premises during the Lease Term. Landlord agrees, promptly upon Landlord's receipt thereof, to provide Tenant with a copy of all notices of any proposed zoning law changes and all notices of any proposed zoning petitions submitted by any abutter seeking any variances, special permits, site plan approvals or the like.

5.2 INSTALLATIONS AND ALTERATIONS BY TENANT

(a) Landlord and Tenant acknowledge that Tenant intends to make certain alterations and improvements to the Premises for Tenant's initial occupancy thereof as generally described in and governed by Section 15.2 below. Tenant shall make no alterations, additions (including, for the purposes hereof, wall-to-wall carpeting), or other improvements in or to the Premises without Landlord's prior written consent (which shall not be unreasonably withheld, conditioned or delayed) in each instance. Any such other alterations, additions or improvements shall (i) be in accordance with complete plans and specifications approved by Landlord within ten (10) days after receipt of such complete set of plans and specifications (ii) be performed in a good and workmanlike manner in compliance with all applicable laws, regulations, by-laws or ordinances, (iii) be made only by "Approved Contractors", as hereinafter defined., (iv) be made at Tenant's sole expense (but with the benefit of any improvement allowance provided by the Landlord) and (v) become part of the Premises and property of the Landlord unless Landlord and Tenant agree, at the time of Landlord's approval of the alterations and additions, that the same shall remain the property of, and shall be removable by, Tenant, in which event Tenant shall restore any damage to the finished character of the Premises created by such removal. If at any time the Tenant seeks Landlord's approval to build-out any portion of the Building for any use other than office use, the Tenant shall be obligated prior to the expiration or earlier termination of the Lease to restore said portion of the Building to a typical open-floor office layout unless Landlord and Tenant, at the time of Landlord's approval of that build-out, agree otherwise.

For Purposes of this Lease, an "Approved Contractor" shall mean a contractor or mechanic identified by Tenant in writing, who has been approved by Landlord (such approval not to be unreasonably withheld or delayed). Contractors may be approved in one of two ways. First, Tenant may submit to Landlord in writing from time to time a list (or a revised list) of contractors that Tenant anticipates using from time to time to make alterations, repairs and improvements to the Premises. Unless Landlord makes any reasonable objection to any of the contractors identified on such list within ten (10) days after receipt of such list from Tenant, all contractors identified on such list shall be deemed "Approved Contractors". Second, Tenant may submit to Landlord from time

to time requests for Landlord to approve specific contractors (not already on the list of Approved Contractors) for work in the Premises. Landlord shall have the right, upon written notice to Tenant to withdraw its approval of previously approved contractors at any time for any cause as determined in Landlord's reasonable judgment. A contractor's failure to provide or maintain adequate insurance levels shall be a reasonable basis for Landlord to withhold or withdraw approval unless Tenant notifies Landlord in writing that such contractor shall be covered by insurance then being maintained by Landlord and

if Tenant provides documentary evidence that said Contractor is covered and of the amount of coverage.

(b) All articles of personal property and all business fixtures, machinery and equipment and furniture owned or installed by Tenant solely at its expense in the Premises ("Tenant's Removable Property") shall remain the property of Tenant and may be removed by Tenant at any time during, and shall be removed prior to the expiration of this Lease, provided that Tenant, at its expense, shall repair any damage to Premises and the Building caused by any such installation or removal and provided that Tenant is not in default hereunder beyond any applicable notice, grace or cure period.

(c) In no event shall Landlord be liable for any labor or materials furnished or to be furnished to Tenant, and no mechanic's or other lien for any such labor or materials shall attach to or affect the reversion or other estate or interest of Landlord in or to the Premises. Whenever any mechanic's lien shall have been filed against the Property based upon any act or interest of Tenant or of anyone claiming through Tenant, Tenant shall within fifteen (15) days after Tenant receives notice or has reason to know of such filing take all such action, such as bonding, deposit or payment, as will result in the removal of such lien within the said 15 days. If said lien has not been removed upon the expiration of said fifteen days, Landlord may, but is not obligated to, remove or satisfy such lien at Tenant's sole cost and expense, and such cost or expense shall become part of the Additional Rent, payable by Tenant upon demand of Landlord.

5.3 COMPLIANCE WITH LAWS. In its use and occupancy of the Premises, Tenant shall comply with the requirements of all governmental laws, codes, ordinances, rules and regulations, ("Laws") and any and all directions, rules and regulations of Boards of Fire Underwriters, Rating Boards or the like (or successor agencies); and Tenant shall obtain and maintain all permits, licenses and the like, required by all applicable laws in respect of such use and occupancy. Landlord agrees that it shall, at Tenant's expense, cooperate with and support Tenant's applications for all such permits, licenses and the like in the manner set forth in Section 15.6 below. If compliance with any Laws enacted after the Execution Date requires alterations or improvements to the Premises, the cost of which would constitute a "Capital Expenditure" as defined in Section 9.1, such alterations and/or improvements shall start at the latest date permitted by such Laws and shall be made over the longest period of time permitted by such Laws unless Tenant elects an earlier and faster implementation schedule; and the cost of such alterations and/or improvements shall be treated and paid for as Capital Expenditure under Section 9.1. If, however, Landlord determines, in its reasonable judgement, that to make any particular alterations and/or improvements over

the "longest period of time permitted" would result in making the total cost of such particular alterations and/or improvements so significantly higher as to be commercially unreasonable under the circumstances, Landlord may elect to make such alterations and/or improvements over such earlier and faster implementation schedule as is consistent with spreading the costs thereof over the longest period commercially practicable. Promptly after Landlord makes any such determination, Landlord shall provide Tenant with a reasonably detailed statement describing such determination. Tenant shall have the right to raise any reasonable good faith objections to any such determination by giving Landlord notice of such objection within 15 days after receipt of the aforesaid detailed statement. Nothing in this paragraph shall prohibit the Landlord from making any such alterations or improvements when it deems appropriate; rather, the provisions of this paragraph are simply meant to govern the timing of the assignment of such costs to Tenant.

VI. ASSIGNMENT AND SUBLETTING

6.1 PROHIBITION.

(a) Notwithstanding anything to the contrary in the Lease contained, Tenant shall at all times and in all events be and remain primarily liable for its obligations under this Lease. Tenant covenants and agrees that, whether voluntarily, involuntarily, by operation of law or otherwise, neither this Lease nor the Term and estate hereby granted, nor any interest herein or therein, will be assigned, mortgaged, pledged, encumbered or otherwise transferred and that neither the Premises nor any part thereof will be encumbered in any manner by reason of any act or omission on the part of Tenant, or used or occupied or permitted to be used or occupied for any use other than the Permitted Use, or by anyone other than Tenant. Tenant further covenants and agrees not to sublet all or any part of the Premises (which term, without limitation, shall include granting of concessions, licenses and the like), or offer or advertise for assignment or subletting all or any part of the Premises without the prior written consent of the Landlord, which consent shall not be unreasonably withheld, conditioned or delayed. If any installations or alterations are necessary in connection with any such sublease or assignment, all such work shall be governed by the terms of Article V hereof, and if the fact of such a sublease or assignment triggers compliance of any aspect of the Property with Laws the cost of such compliance shall be borne by Tenant.

(b) The provisions of paragraph (a) of this Section 6.1 shall not, however, apply to transactions by Tenant if it involves twenty percent (20%) or less of the Total Rentable Floor Area of the Building and is with an entity into or with which Tenant is merged or consolidated or to which substantially all of Tenant's assets, or substantially all of the assets of any one or more of Tenant's divisions are transferred or to any entity which controls or is controlled by Tenant or is under common control with Tenant (an "Affiliate"). In the event of any sublet or assignment of this Lease to any entity that is not an Affiliate of Tenant or which involves more than twenty percent (20%) of the Total Rentable Floor Area, then (i) the successor or assignee/sublessee

Tenant shall have a net worth reasonably adequate to enable its successor or assignee to perform its obligations hereunder as reasonably determined by Landlord (in making such determination Landlord may also consider any material adverse change in the financial strength of Tenant from its strength as of the Execution Date); (ii) proof satisfactory to Landlord of such net worth shall have been delivered to Landlord at least 10 days prior to the effective date of any such transaction; then, in addition, in connection with any assignment or sublet of this Lease (either to an Affiliate or a non-Affiliate of Tenant) the assignee or subtenant shall agree directly with Landlord, by written instrument in form reasonably satisfactory to Landlord, to assume and be bound by all the obligations of Tenant hereunder including, without limitation, the covenant against further assignment and subletting without the Landlord's prior written consent pursuant to the terms hereof. Tenant shall notify Landlord in writing of any such sublet or assignment regardless of whether Landlord's consent is required.

(c) In the event Landlord consents to any assignment or subletting to a non-Affiliate or to an Affiliate if for more than twenty percent (20%) of the Total Rentable Floor Area, one half of any rent payable to Tenant in excess of the Annual Fixed Rent and Additional Rent (i.e., Tax Increases and Operating Cost Increase payable by Tenant under this Lease) shall be the sole

property of Landlord, payable as Additional Rent upon demand of Landlord; however, prior to calculating the amount of such excess rent to be shared by Landlord and Tenant, Tenant shall be entitled to net out (and retain) the following of its out-of-pocket third-party costs of such transaction: reasonable attorney's fees, broker's commission, and advertising/marketing costs.

VII. REPAIRS AND CONDITION OF PREMISES; BUILDING SERVICES

7.1 REPAIR AND MAINTENANCE. Landlord and Tenant agree that the Premises, Building, public areas, roof (including gutters and downspouts), exterior walls (including exterior glass), structure of the Building (including all plumbing, mechanical, sewage, elevator and electrical systems) and the interior of the Premises shall be kept neat and clean and shall be maintained substantially in the same good order, working condition and repair as they were in on the Commencement Date (unless they were put into better condition thereafter, in which case they will be maintained substantially in such better condition), reasonable wear and tear, and damage by fire, other casualty or a taking by eminent domain only excepted, . Landlord shall not be responsible to make any improvements or repairs to the Building other than as expressly provided in Sections 7.2 (a) and 15.1 or elsewhere in this Lease.

7.2 RESPONSIBILITY FOR REPAIRS AND MAINTENANCE

(a) Landlord shall be responsible for performing, or causing to be performed, all repairs and maintenance necessary to operate, maintain and repair the Premises and the Building in the manner provided in Sections 7.1 above and Section 7.3 below, except to the extent that Tenant exercises its right under Section 7.6 to contract separately for the delivery of certain services for the Premises and Building.

(b) Except for Landlord's obligations under Section 15.1 to perform, at its expense, those capital improvements set forth on Exhibit F, Tenant shall be responsible for paying all costs of operating, maintaining and repairing the Building and Premises in the manner provided in Section 7.1 above and Section 7.3 below, but only to the extent that such costs of so operating, maintaining and repairing the Building and/or Premises exceed Base Operating Expenses; Tenant's obligation to pay such costs are more particularly described in, and governed by, the provisions of Article IX below; however, Tenant shall also be responsible for the cost of repairs which may be made necessary by reason of damage to the Building caused by any act or neglect of Tenant or its agents, employees, contractors or invitees, subject, however, to the waiver of subrogation provisions of Section 13.16.

(c) If Tenant becomes aware of the need of any repairs that are required to be made pursuant to the terms hereof, Tenant shall promptly give Landlord notice of such need. Landlord may elect to make any repairs immediately and without notice to Tenant if Landlord reasonably believes that there exists immediate danger to persons or property.

7.3 BUILDING SERVICES. Landlord shall operate and maintain the Building and the Land in the same condition and quality as other comparable buildings and parcels of land in first class suburban office parks in the Framingham/Southborough area. Landlord shall make available to Tenant at all times heating and cooling as normal seasonal changes may require, provide reasonable comfortable space temperature and ventilation for occupants of the Premises under normal business operation at an occupancy of not more than one person per 250 square feet of rentable area and an electrical load not exceeding 2.5 watts per square foot of rentable area. Tenant shall not introduce into the

Premises personnel or equipment which overloads the capacity of the Building system or in any other way interferes with the system's ability to perform its proper functions adequately, PROVIDED, however, if Tenant shall violate the foregoing, Landlord may, at its option, but without being required to do so, elect to provide supplementary systems or otherwise take steps to cure such violation, at Tenant's sole cost and expense. This shall relate, not only to system installation and removal, but also to continuing costs of operation and related expenses.

Landlord shall also provide, without additional charge to Tenant:

(i) Passenger elevator service from the passenger elevator system (if any);

(ii) Hot water for lavatory purposes and cold water (at temperatures and otherwise as supplied by the City, Town or other water provider) for drinking, lavatory and toilet purposes.

(iii) Cleaning and janitorial services to the Premises on Monday through Friday, excluding national holidays, provided the same are

kept in order by Tenant, in accordance with the cleaning standards set forth from time to time in EXHIBIT C attached hereto.

(iv) 24-hour access to the Premises subject to such reasonable security systems, procedures and restrictions as Tenant may install, but subject to Landlord's reasonable approval.

7.4 ELECTRICITY. Landlord shall supply electricity, as supplied to it by the electric utility, to the Premises to meet normal and usual demand requirements of Tenant for premises lighting; typical office copier, computer and related equipment and convenience outlets. Tenant agrees, in its use of the Premises, not to unreasonably burden Building systems nor to exceed any limits from time to time established under applicable governmental regulations.

7.5 INTERRUPTION OR CURTAILMENT OF BUILDING SERVICES. Landlord shall have the right to interrupt, curtail, stop or suspend the furnishing of any services and the operation of any of the Building's systems, in the case of emergency or accident, or in the event of Force Majeure. In the event of such emergency, accident or Force Majeure, Landlord shall attempt to notify Tenant of such interruption, curtailment, stoppage or suspension as soon as reasonably possible. Tenant shall have no claim of any type or nature whatsoever against Landlord for any interruption, curtailment, stoppage or suspension of any electrical or other service being provided hereunder, nor shall any of the same result in any reduction of Tenant's obligations under this Lease. Landlord shall not abate or reduce the Annual Fixed Rent or other compensation of whatever form or nature due from Tenant to Landlord hereunder on account of any such interruption, curtailment, stoppage or suspension, and Landlord shall use reasonable diligence, to the extent possible under the circumstances, to eliminate the cause of such interruption, curtailment, stoppage or suspension. Notwithstanding the foregoing, if the electrical service to the Premises is completely discontinued for more than one full work day other than a weekend day or National Holiday, then the Tenant shall receive a proportional abatement of the Electricity Component based on the amount of time that electrical service to the Premises is discontinued. If the delivery of electrical service to the

Premises is discontinued for in excess of five work days, as such work days are described above, such discontinuation is due to Landlord's gross negligence, and such discontinuation materially and adversely affects Tenant's ability to conduct its business in the Premises, then Tenant's Annual Fixed Rent hereunder shall be abated for each work day beyond such fifth day until such time as the electrical service is restored.

7.6 TENANT'S CONTRACTS FOR SERVICES. Landlord hereby agrees to permit Tenant to contract separately for the delivery of certain services to the Building including, but not limited to, janitorial and cleaning services, security services and/or snow removal services. However, in no event may Tenant contract separately for the delivery of property management, maintenance or repair services relating to the Premises. The Tenant shall deliver to Landlord a copy of the proposed contract for services, which shall be subject to Landlord's approval, which shall not be unreasonably withheld, delayed or conditioned. Landlord agrees to cooperate with, and cause its employees,

agents and contractors to cooperate with, any provider of such services selected by Tenant and approved by Landlord. Any such contract must be terminable upon no more than thirty (30) days prior notice. Landlord shall have the right to terminate any such contract if Landlord is not reasonably satisfied with the services delivered and shall do so by giving thirty days prior notice thereof to both Tenant and the particular contractor. Upon Landlord's approval of any such contract, Annual Fixed Rent and Base Operating Expenses shall be adjusted downward by the amount to be paid by Tenant for such services under the particular contract, which downward adjustment shall in no event be greater than the amount of the line item for the services provided under such contract set forth in the attached Exhibit E. If the services provided under such approved contract are not identified as a separate line item on Exhibit E, but are services being provided by Landlord under this Lease, then Annual Fixed Rent and Base Operating Expenses shall be adjusted downward by the fair market value cost as commonly charged for the delivery of such services in the Framingham-Southborough area, but such downward adjustment may not exceed the reasonable amount Landlord states it has budgeted for said service. Such payment by Tenant for services shall be made in accordance with the payment schedule agreed upon between Tenant and such service provider, as long as a copy thereof has been provided to Landlord by Tenant. Landlord's related adjustments shall be made on the same basis as long as Tenant remains in good payment standing under the contract between Tenant and such service provider. Upon the request from Landlord from time to time, Tenant shall provide Landlord with evidence, reasonably satisfactory to Landlord, that Tenant is in good payment standing under any such contract. Tenant agrees to pay for any such services at the time or after they have been delivered but not prior to their delivery. Tenant hereby agrees to indemnify and hold Landlord harmless from and against any and all costs, expenses, damages and claims which may be incurred by Landlord in connection with any such contract for services into which Tenant has entered.

VIII. REAL ESTATE TAXES

It being the intention of the parties hereto that the Annual Fixed Rent be net of any increases (over Base Real Estate Taxes) in real estate taxes and all other governmental impositions in the nature thereof or otherwise similarly related to the Property, Tenant shall pay, as Additional Rent, an escalation charge, calculated and payable as follows:

8.1 PAYMENT ON ACCOUNT OF REAL ESTATE TAXES.

(a) (i) "Tax Period" or "Tax Year" shall be any fiscal

tax period in respect of which Taxes are due and payable to the appropriate governmental taxing authority, any portion of which period occurs

during the Term of this Lease, the first such period being the one in which the Term Commencement Date occurs.

(ii) "Taxes" shall mean the real estate taxes and other taxes, levies and assessments imposed upon the Property and upon any personal property of Landlord used in the operation thereof, or Landlord's interest in the Property or such personal property; charges, fees, assessments and payments for transit, housing, police, fire or other governmental services or purported benefits to the Property; service or user payments in lieu of taxes; and any and all other taxes, levies, assessments and charges arising from the construction, ownership, leasing, operation, use or occupancy of the Property or based upon rentals derived therefrom, which are or shall be imposed by Municipal or other authorities. Betterment Assessments and interest thereon shall be apportioned equally over the longest period permitted by law. As of the date of execution hereof, "Taxes" shall not include any franchise, rental, income or profit tax, capital levy or excise, provided, however, that any of the same and any other tax, excise, fee, levy, charge or assessment, however described, that may in the future be levied or assessed as a substitute for or an addition to, in whole or in part, any tax, levy or assessment which would otherwise constitute "Taxes," foreseen or unforeseen and whether or not now customary or in the contemplation of the parties on the date of execution of this Lease, shall constitute "Taxes," but only to the extent calculated as if the Building and the Land is the only real estate owned by Landlord. "Taxes" shall also include expenses of tax abatement or other proceedings contesting assessments or levies.

(b) If for any reason, Taxes as allocated on a per square foot basis for the Total Rentable Floor Area of the Premises shall be greater for any Tax Year than Base Real Estate Taxes, Tenant shall pay to Landlord, as Additional Rent, an Escalation Charge in an amount equal to (i) the excess of Taxes on a square foot basis over Base Real Estate Taxes (the "Tax Increase"), such amount to be prorated for any fraction of a Tax Year in which the Commencement Date falls or the Term of this Lease ends.

(c) Tenant shall make reasonably estimated escalation payments on account of the Tax Increase in monthly installments; such estimated escalation payments shall be based upon the prior year's assessed Taxes in comparison with the preliminary or estimated tax bills issued by the municipality. Landlord shall provide Tenant with a copy of any preliminary estimated and final tax bill issued by the municipality. Upon receipt by Landlord of a final tax bill each Tax Year, Landlord shall advise Tenant of the final amount of Taxes due and the calculation of the Tax Increase and Tenant's share thereof. If the amount paid by Tenant under subsection (b) above exceeds the estimated payments for such Tax Year then Landlord shall repay the Tenant

the amount of such overpayment within thirty (30) days after so advising Tenant (or refund within 30 days such

overpayment if the Term of this Lease has ended and Tenant has no further obligation to Landlord). If, however, the amount payable by Tenant under Subsection (b) above is greater than such estimated payments made by Tenant for such Tax Year, Tenant shall pay the amount of such shortfall within 30 days after being so advised by Landlord.

8.2 ABATEMENT. If Landlord shall receive a tax abatement or refund of Taxes with respect to any Tax Year, which is not due to vacancies in the Building, then, if Tenant shall have made any payments on account thereof, Landlord shall pay to Tenant its share of any balance remaining thereof after deducting Landlord's expenses reasonably incurred in obtaining such refund provided (i) there does not then exist a Default of Tenant, and (ii) that in no event shall Tenant either be entitled to receive more than the payments made by Tenant on account of Tax Increases for such Year pursuant to paragraph (c) of Section 8.1 or receive any repayment or abatement of Annual Fixed Rent if Taxes for any year are less than Base Real Estate Taxes. Landlord is not currently seeking an abatement of Taxes. If Landlord elects not to seek a tax abatement or refund in a particular fiscal year, Tenant may elect to do so; however, Tenant shall keep Landlord informed in writing of all aspects of the abatement proceedings and Landlord shall have a right of approval over any abatement settlement, which approval shall not be unreasonably withheld, delayed or conditioned. In no event may Tenant seek an abatement on terms which would allocate abated taxes or refunds disproportionately to years in which the Tenant is responsible for the payment of a Tax Increase. Landlord agrees that it shall, at Tenant's expense, cooperate with and support any application by Tenant for a tax abatement or refund; such cooperation shall include, without limitation, the co-signing of all applications, providing Tenant with historic operating cost and tax data for the Premises, and providing such other support as may be necessary and uniquely available from Landlord as the owner of the Property.

IX. OPERATING EXPENSES

It being the intention of the parties that the Annual Fixed Rent be net of any Building Operating Expense increases, Tenant has agreed to pay, as Additional Rent, an Escalation Charge, calculated and payable as follows:

9.1 DEFINITIONS, ETC. For the purposes of this Lease, the following terms shall have the following respective meanings:

OPERATING YEAR: Each calendar year in which any part of the Term of this Lease shall fall.

OPERATING EXPENSES: The aggregate costs and expenses incurred by Landlord with respect to the cleaning, administration, insuring, repair and replacements, ownership, management, landscaping and groundskeeping, maintenance and operation of the Property, and all Building mechanical, electrical and other systems and facilities including, without limitation, the lighting, plumbing, heating, ventilation and air conditioning equipment serving the entire Building, the elevators and all other electrical

and other energy or utility service equipment serving the entire Building. In the event of any loss, repair or damage to the Property or Building which is covered by insurance, the portion of the cost of such loss, repair or damage that must be paid for by Landlord due to the existence of the deductible (to the extent that said deductible is for a reasonable amount compared to those maintained for comparable buildings) shall be included in Operating Expenses. Any replacements permitted hereunder shall be substantially the same in quality and/or utility as the item being replaced (unless Tenant consents to any upgrade in quality or utility) or shall be expected to reduce Operating Expenses or otherwise provide some other economic benefit to the operation of Premises such as the conserving of energy or environmental resources. Landlord agrees to submit its annual projected Operating Expenses budget to Tenant for its review not less than thirty (30) days prior to the beginning of each Operating Year; however, as long as Landlord is not shown to have been unreasonable in calculation of any items in said budget, Tenant shall have no right to object to any such items. Landlord hereby agrees that the Operating Expense line item for management fee and Landlord's off-site administrative costs, which are subsections of the Management Services line item of the attached Exhibit E, shall in no event exceed three and one half percent (3 1/2%) of the aggregate of Annual Fixed Rent and Additional Rent.

If, during the Term of this Lease, Landlord shall make a Capital Expenditure as hereafter defined, there shall be included in the Operating Expenses for the Operating Year in which it was made and in Operating Expenses for each succeeding Operating Year, a proportionate charge-off of such Capital Expenditure. Annual proportionate charge-off percentages shall be reasonably determined by Landlord by dividing the original Capital Expenditure plus an interest factor equal to the interest rate yield on U.S. Treasury securities then having a maturity closest to the useful life of the particular Capital Expenditure item plus 250 basis points by the number of years of useful life of the Capital Expenditure. Useful life shall be based on the industry standards for the anticipated functional life expectancy of the particular item at issue. If there is no industry standard, then Landlord shall consult with the manufacturer of the particular item to determine its useful life. Promptly after determining (as provided below) whether an item is a Capital Expenditure, the useful life thereof, and the amount of any annual proportionate charge-off percentage, Landlord shall provide Tenant with a reasonably detailed statement describing such determination. Tenant shall have the right to raise any reasonable, good faith objections to such determination by giving Landlord notice of such objection within 15 days after receipt of the aforesaid detailed statement.

For purposes of this Lease, whether any particular item (or series of functionally related items or components which, in the aggregate, represent a single repair or replacement project) constitutes a Capital Expenditure or an Operating Expense, shall be determined in accordance with the following principles:

(a) Any single item costing less than $10,000, regardless of its useful life and regardless of whether such item would be considered capital under industry standards, shall not be treated as a Capital Expenditure, but rather as an item of Operating Expense, the full cost of which shall be included in Operating Expenses for the year incurred.

(b) Any single item either (i) costing $10,000 or more, which industry standards customarily treat as an operating expense chargeable against income even if its useful life is greater than one year (such as, by way of example only, the painting of the exterior of the Building), or (ii) which has a useful life of three years or less,

shall be treated as an item of Operating Expense, the full cost of which shall be included in Operating Expenses for the year incurred.

(c) Any single item costing $10,000 or more and having a useful life of more than three years, which industry standards customarily treats as a capital item shall be treated as a Capital Expenditure, an annual proportionate charge-off of which shall be included in Operating Expenses as provided above in this Section 9.1.

(d) For purposes of determining whether the foregoing dollar thresholds have been met, the cost of any series of functionally related items or components which represent a single repair or replacement project shall be aggregated.

Tenant shall not be charged the cost of any Capital Expenditure incurred in connection with any expansion, or any material increase in the quality of operation or the aesthetic appearance, of the Building unless Tenant has agreed thereto in writing. However, any costs associated with any Capital Expenditures required to be undertaken by the Landlord during the first twelve months of Tenant's occupancy of the Premises shall not be included in Operating Expenses and shall not be charged to Tenant, but rather shall be paid for solely by Landlord. Capital Expenditures to be required in the first twelve months of Tenant's occupancy shall be those expressly set forth in Exhibit F hereto or those which are deemed necessary during said twelve month period in order to remedy a failure in any of the following items as long as no such failure is caused by Tenant or its agents, contractors or representatives: the Building's roof (including gutters and downspouts; exterior walls including exterior glass); structural and weight-bearing walls and members; floor slabs; base building as to each of the following systems: HVAC, plumbing, sewage, mechanical or electrical systems; elevators; and the structural integrity of the Building's public areas, parking areas and walkways. Landlord's obligation to pay for such Capital Expenditures during said twelve month period shall not include the obligation to pay any Capital Expenditures necessary to cause the Premises to comply with any statutory, regulatory or other similar set of guidelines, except as otherwise expressly set forth in Exhibit F or elsewhere in this Lease.

9.2 TENANT'S PAYMENTS.

(a) If for any Operating Year the Operating Expenses as allocated on a per square foot basis for the Total Rentable Floor Area of the Premises shall exceed the Base Operating Expenses, Tenant shall pay to Landlord, as Additional Rent, an escalation charge in an amount equal to the excess of such Operating Expenses as calculated for the entire Premises ("Operating Expense Increase"), such amount to be apportioned for any Operating Year in which the Term Commencement Date falls or the Term of this Lease ends.

(b) Tenant shall make reasonably estimated escalation payments on account of any Operating Expense Increase in monthly installments based on the budget described in Section 9.1. Within ninety (90) days after the end of each Operating Year, Landlord shall submit to Tenant a reasonably detailed statement (including a reasonably detailed statement of the expenses included in the sub-sections of the Operating Expense line item for Management Services which are not subject to the 3 1/2% cap) of Operating Expenses for such Year, and Landlord shall certify to the accuracy thereof. If such estimated payments exceed Tenant's share of such Operating Expense Increase, Landlord shall repay to Tenant the amount of such overpayment within thirty (30) days after so advising Tenant (or refund within thirty (30) days such overpayment if the Term of this Lease has ended), and Tenant thereupon shall have no further obligation to Landlord assuming Tenant is not in default hereunder. If, however,

the amount payable by Tenant under Subsection (a) above is greater than such estimated payments made by Tenant for such Operating Year, Tenant shall pay Landlord the amount of such shortfall within 30 days after being so advised by Landlord. Landlord and Tenant agree that, notwithstanding, any exercise or non-exercise by Tenant of its right to review and examine Landlord's books and records of Operating Expenses and Taxes, Landlord and Tenant shall remain obligated to repay the other for any over and underpayment of Operating Expense Increases as aforesaid.

(c) Upon written request from Tenant to Landlord received by Landlord within ninety (90) days after Tenant's receipt of the annual statement of Operating Expenses, Tenant and its representatives or agents shall be granted access to and the right to review and examine those of Landlord's books and tapes and records which relate to the determination and computation of Operating Expenses for the particular year at issue.

X. INDEMNITY AND PUBLIC LIABILITY INSURANCE

10.1 TENANT'S INDEMNITY. Tenant agrees to defend, indemnify and save harmless Landlord from and against all claims, loss, liability, costs and damages of whatever nature whenever arising from any default by Tenant under this Lease and from the following, occurring at any time after the execution date of this Lease: (i) from any accident, injury or damage whatsoever to any person, or to the property of any person, in or about the Property, except to the extent due to Landlord's negligence; or (ii) from any accident, injury or damage occurring outside of the Property, where such accident, damage or injury results or is claimed to have resulted from an act or omission on the part of Tenant or Tenant's agents, employees or invitees. Landlord hereby agrees to

indemnify Tenant against and hold it harmless from all costs, expenses and liabilities incurred by Tenant as a direct result of Landlord's gross negligence. These indemnity and hold harmless agreements shall include an indemnity against all costs, expenses and liabilities incurred in, or in connection with, any such claim or proceeding brought thereon and the defense thereof, including, without limitation, reasonable attorney's fees at both the trial and appellate levels and shall survive the expiration or sooner termination of the Term of this Lease.

10.2 COMMERCIAL GENERAL LIABILITY INSURANCE. Tenant agrees to maintain in full force and effect from the date upon which Tenant first enters the Property for any reason throughout the Term of this Lease, and thereafter so long as Tenant is in occupancy of any part of the Premises, a policy of commercial general liability and property damage insurance (including broad form contractual liability, independent contractor's hazard and completed operations coverage secured) from established reputable companies in the face amount of not less than One Million Dollars ($1,000,000.) per person and Ten Million Dollars ($10,000,000.) per occurrence, for personal injury to any number of persons or damage to property, or such greater amounts as Landlord shall from time to time request, under which Landlord (and such other persons as are in privity of estate with Landlord as may be designated in notice from time to time) are named as additional insureds. Each such policy shall be noncancellable and non-amendable with respect to Landlord and Landlord's designees without thirty (30) days' prior notice to Landlord; and a duplicate original or certificate thereof shall be delivered to Landlord. All insurance required to be carried by Tenant pursuant to this Section 10.2 may be provided under one or more "blanket" insurance policies covering other locations and facilities operated by Tenant or any Affiliate of Tenant, provided that such blanket policies otherwise comply with the provisions of this Section. In addition, Tenant may satisfy the $10,000,000 per occurrence liability insurance coverage with excess liability

(so-called "umbrella") coverage, so long as Tenant maintains primary liability coverage of not less than $5,000,000.

10.3 TENANT'S RISK. Tenant agrees that its use and occupancy of the Property, and any and all of Tenant's property and leasehold improvements located at the Property, (including, without limitation, Tenant's Removable Property) shall be at Tenant's sole risk and hazard except to the extent caused by Landlord's gross negligence or willful misconduct. Landlord shall have no responsibility or liability for any injury to Tenant, its employees, invitees, contractors or others and for any loss of or damage to any of Tenant's property or leasehold improvements (including, without limitation, Tenant's Removable Property), or for any inconvenience, annoyance, interruption or injury to business, arising from any condition of the Property or any of the facilities or services provided by Landlord or arising from Landlord's making of any repairs or changes which Landlord is permitted by this Lease, or required by law, to make in or to any portion of the Premises or other sections of the Property, or in or to the fixtures, equipment or appurtenances thereof.

10.4 INJURY CAUSED BY THIRD PARTIES. Tenant agrees that Landlord shall not be responsible or liable to Tenant, or to those claiming by, through or under

Tenant, for any loss or damage that may be occasioned by or through the acts or omissions of persons other than Landlord, its agents, employees, contractors or invitees, including, without limitation, other tenants or occupants of the Property.

XI. FIRE AND EMINENT DOMAIN

11.1 DAMAGE BY FIRE OR CASUALTY. If the Premises or any part thereof shall be damaged by fire or other casualty, then, subject to the last paragraph of this Section 11.1, Landlord shall proceed with continuous diligence, subject to then applicable statutes, building codes, zoning ordinances and regulations of any governmental authority, and at the expense of Landlord, to repair or cause to be repaired such damage. Landlord agrees to insure the Building against fire and other casualty normally covered by a casualty loss policy in an amount equal to the full replacement cost of the Building. All such repairs made necessary by any act or omission of Tenant shall be made at the Tenant's expense to the extent that the cost of such repairs are not paid for by Landlord's insurer or to the extent the cost of such repairs are less than the deductible amount in Landlord's insurance policy. Landlord agrees to maintain a reasonable deductible consistent with standards normally maintained for a building of the value and type of the Building. In the event Tenant requests Landlord to obtain a lower deductible than it is otherwise obtaining, the Tenant shall promptly pay to Landlord the additional premium charge due as a result of the reduction of the deductible. All repairs to and replacements of property which Tenant is entitled to remove shall be made by and at the expense of Tenant unless such property is covered by Landlord's insurance. If the Premises or any part thereof shall have been rendered unfit for use and occupation hereunder by reason of such damage, the Annual Fixed Rent or a just and proportionate part thereof, according to the nature and extent to which the Premises shall have been so rendered unfit, shall be abated until the Premises (except as to the property which is to be repaired by or at the expense of Tenant) shall have been made tenantable and have been restored as nearly as practicable to the condition in which they were immediately prior to such fire or other casualty, provided, however, that if Landlord or any mortgagee of the Premises shall be unable to collect the insurance proceeds (including rent insurance proceeds) applicable to such damage solely because of some action or

inaction on the part of Tenant, or the employees, licensees or invitees of Tenant, the cost of repairing such damage shall be paid by Tenant and there shall be no abatement of rent. If such damage is not of a substantial nature and does not render the Premises unfit for use and occupation by Tenant, then Landlord agrees to commence repair work within 15 days after the date of the casualty and diligently to pursue such repair work until completion.

Between 30 and 60 days after any casualty, Tenant may inquire of Landlord as to Landlord's estimate of the time period necessary to complete repair of the Premises. Within 30 days after such inquiry, Landlord shall provide Tenant with Landlord's architect's good faith estimate of the time to complete such repairs and if such estimate (which shall be non-binding) shall be more than one year from the date of the casualty, then Tenant may terminate this Lease by notice given to Landlord within 30 days after Tenant's receipt of Landlord's architect's estimate.

If Landlord fails to commence repairs within sixty (60) days after such damage, and such failure is not due to causes beyond the control of Landlord, or if Landlord's mortgagee refuses to release to Landlord sufficient insurance proceeds to restore the Premises to substantially the condition they were in prior to the damage, Tenant may elect to terminate this Lease by notice to Landlord. If Landlord, having commenced such repair, has not completed the repair of such damage within one year from the occurrence of such damage or by the date given in any Landlord's architect's repair period estimate under the prior paragraph, if later than one year (the later of such dates is referred to below as the "Outside Restoration Date"),Tenant may elect to terminate this Lease by notice to Landlord within twenty (20) days of the Outside Restoration Date, the effective termination date pursuant to such notice shall not be less than thirty (30) days after the date on which such termination notice is received by Landlord. The Outside Restoration Date shall be extended by up to an additional 90 days for delays caused by causes beyond the reasonable control of Landlord as described in the next sentence. Landlord shall not be liable for delays in the making of any such repairs which are due to government regulation, casualties and strikes, unavailability of labor and materials, delays in obtaining insurance proceeds, and other causes beyond the reasonable control of Landlord, nor shall Landlord be liable for any inconvenience or annoyance to Tenant or injury to the business of Tenant resulting from delays in repairing such damage; however if such delays continue more than 90 days beyond the initial Outside Restoration Date, Tenant may elect to terminate this Lease in the manner provided above.

If (i) the Building is so damaged by fire or other casualty (whether or not insured) at any time during the last twelve months of the Term that the cost to repair such damage is reasonably estimated to exceed one-third of the total Annual Fixed Rent payable hereunder for the period from the estimated completion date of repair until the end of the Term, or (ii) at any time during the last twelve months of the Term the Building (or any substantial portion thereof) is so damaged by fire or other casualty (whether or not insured) that substantial alteration or reconstruction or demolition of the Building (or a substantial portion thereof) shall in Landlord's reasonable judgment be required, then and in any of such events, this Lease and the term hereof may be terminated at the election of Landlord by a notice from Landlord to Tenant within sixty (60) days following such fire or other casualty; the effective termination date pursuant to such notice shall be not less than thirty (30) days after the day on which such termination notice is received by Tenant. In the event of any termination, the Term shall expire as though such effective termination date were the date originally stipulated in Section 1.1 for the end of the Term and the Annual Fixed Rent and Additional Rent shall be apportioned as of such date.

11.2 CONDEMNATION - EMINENT DOMAIN. If, during the Term, all or any substantial part of the Premises are actually taken away from Landlord or its successors in title by eminent domain, this Lease shall terminate at either Landlord's or Tenant's election, which may be made (notwithstanding that Landlord's entire interest may have been divested) by notice given within 90 days after the event giving rise to the election to terminate arises, specifying the effective date of termination. The effective date of termination specified shall not be less than 60 days after the date of notice of such

termination unless an earlier date is required by the terms of the taking. Unless terminated pursuant to the foregoing provisions, this Lease shall remain in full force and effect following any such taking, subject, however, to the following provisions. If in any such case the Premises or any substantial part thereof are rendered unfit for use and occupation and this Lease is not terminated, Landlord shall use due diligence (following the expiration of the period in which Landlord may terminate this Lease pursuant to the foregoing provisions of this Section, or if Landlord and Tenant waive their right to terminate, following such waiver) to put the Premises, or what may remain thereof (excluding any items installed or paid for by Tenant which Tenant may be required to remove hereunder), into proper condition for use and occupation, and a just proportion of the Annual Fixed Rent and Additional Rent according to the nature and extent of the injury shall be abated until the Premises or such remainder shall have been put by Landlord in such condition, and in case of a taking which permanently reduces the area of the Premises, a just proportion of the Annual Fixed Rent and Additional Rent shall be abated for the remainder of the Term.

11.3 EMINENT DOMAIN AWARD. Except for Tenant's relocation expenses and any award for Tenant's personal property and fixtures (specifically so designated by the court or authority having jurisdiction over the matter) Landlord reserves to itself any and all rights to receive awards made for damages to the Premises, or the leasehold hereby created, or any one or more of them, accruing by reason of exercise of eminent domain or by reason of anything lawfully done in pursuance of public or other authority. Tenant hereby releases and assigns to Landlord all Tenant's rights to such awards, and covenants to deliver such further assignments and assurances thereof as Landlord may from time to time request, hereby irrevocably designating and appointing Landlord as its attorney-in-fact to execute and deliver in Tenant's name and behalf all such further assignments thereof.

XII. DEFAULT

12.1 TENANT'S DEFAULT.

(a) If at any time subsequent to the Execution Date of this Lease any one or more of the following events (herein referred to as a "Default of Tenant") shall happen:

(i) Tenant shall fail to pay the Annual Fixed Rent or Additional Rent or other charges hereunder when due and such failure shall continue for five (5) full business days after notice thereof from Landlord ; however, once such a notice has been given by Landlord, no notice shall be required for any failure to pay during the twelve (12) months after said notice and Tenant shall be considered in default if such failure to pay shall continue for five (5) business days after such due date; or

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(ii) Tenant shall neglect or fail to perform or observe any other covenant herein contained on Tenant's part to be performed or observed or Tenant shall desert or abandon the Premises or the Premises shall become, or appear to have become vacant (regardless of whether the keys shall have been surrendered or the rent and all other sums due shall have been paid) and Tenant shall fail to remedy the same within thirty (30) days after notice to Tenant specifying such neglect or failure, or if such failure is of such a nature that Tenant cannot reasonably remedy the same within such thirty (30) day period, Tenant shall fail to commence promptly to remedy the same and to prosecute such remedy to completion with diligence and continuity; or

(iii) Tenant suffers financial difficulties such as the issuing, filing or recording of unsatisfied liens or judgments, bankruptcy, receivership or other debtor-relief, creditors' rights or reorganization proceedings (voluntary or involuntary, under State or Federal law), which are not discharged, satisfied or dismissed within sixty (60) days; or

(iv) If either a Default of the kind set forth in clauses (i) or (ii) above occurs or if (whether or not such Default has been cured, or the Default waived by Landlord) an event which would constitute a similar Default if not cured within the applicable grace period occurs, more than once within the next 365 days.

then in any such case Landlord may invoke any remedy (including the remedy of specific performance) allowed at law or in equity as if particular remedies were not herein provided for and, in addition thereto: (1) if such Default of Tenant shall occur prior to the Term Commencement Date, this Lease shall, at the option of the Landlord, without further act on the part of Landlord, terminate, and (2) if such Default of Tenant shall occur on or at any time after the Term Commencement Date, Landlord may terminate this Lease by notice to Tenant; and thereupon, this Lease shall come to an end on the date specified therein as fully and completely as if such date were the date herein originally fixed for the expiration of the Term of this Lease and Tenant will then quit and surrender the Premises to Landlord, but Tenant shall remain liable as hereinafter provided.

(b) If this Lease shall have been terminated as provided in this Article, or if any execution or attachment shall be issued against Tenant or any of Tenant's property whereupon the Premises shall be taken or occupied by someone other than Tenant, then Landlord may, without notice, re-enter the Premises, either by summary proceedings, ejectment or other legal means, and remove and dispossess Tenant and all other persons and any and all property from the same, as if this Lease had not been made, and Tenant hereby waives the service of notice of intention to re-enter or to institute legal proceedings to that end. In the event Landlord takes possession of the Premises, it hereby agrees to exercise reasonable efforts to relet the Premises; however, its failure to do so

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shall not constitute default hereunder nor shall this duty to exercise reasonable efforts apply to any mortgagee who takes possession of the Premises.

(c) In the event of any termination, Tenant shall pay the Annual Fixed Rent, Additional Rent and other sums payable hereunder up to the time of such termination, and thereafter Tenant, whether or not the Premises shall have been relet, shall be liable to Landlord for and shall pay to Landlord, as liquidated current damages, the Annual Fixed Rent, Additional Rent and other sums which would be payable hereunder if such termination had not occurred, less the net proceeds, if any, of any reletting of the Premises, after deducting all commercially reasonable expenses of Landlord in connection with such reletting, including, without limitation, all repossession costs, brokerage commissions, legal expenses, attorneys' reasonable fees, advertising, expense of employees, alteration costs and expenses of preparation for such reletting. Tenant shall pay such current damages to Landlord monthly on the days on which the Annual Fixed Rent would have been payable hereunder if this Lease had not been terminated.

(d) At any time after such termination, whether or not Landlord shall have collected any such current damages, at Landlord's election, Tenant shall pay (in addition to such current damages as have accrued but may not yet then have been collected) to Landlord upon demand, as liquidated final damages and in lieu of all such further current damages beyond the date of such demand, (in view of the uncertainty of prompt re-letting and the expense entailed in re-letting the premises) either (i) an amount equal to the Annual Fixed Rent, Additional Rent and other sums due hereunder and payable for and in respect of the twelve (12) month period next preceding the date of termination, as aforesaid; or (ii) an amount equal to THE EXCESS, IF ANY OF (x) the Annual Fixed Rent, Additional Rent and other sums as in this Lease provided which would be payable hereunder from the date of such demand for what would be the then unexpired Term of this Lease if the same remained in effect, OVER (y) the then fair rental value of the Premises for the same period, less reletting costs reasonably projected by Landlord.

(e) In the case of any Default of Tenant, re-entry, expiration and dispossession by summary proceedings or otherwise, Landlord may (i) relet the Premises or any parts thereof, either in the name of Landlord or otherwise, for any term(s), and may grant concessions or free rent to the extent that Landlord considers it to be advisable in order to relet the same and (ii) may make such reasonable alterations, repairs and decorations in the Premises as Landlord in its sole judgment considers advisable or necessary for the purpose of reletting the Premises. The making of such alterations, repairs and decorations shall not operate or be construed to release Tenant from liability hereunder as aforesaid. Landlord shall in no event be liable in any way whatsoever for failure to relet the Premises, or , in the event that the Premises are relet, for failure to collect the rent under such reletting.

(f) Should either Landlord or Tenant employ an attorney to enforce any of the provisions of this Lease, the non-prevailing party in any final judgment agrees to pay the other party's reasonable expenses, including reasonable attorneys' fees and

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expenses in or out of litigation, and, if in litigation, trial, appellate, bankruptcy or other proceedings, expended or incurred in connection therewith,

as determined by a court of competent jurisdiction.

XIII. MISCELLANEOUS PROVISIONS

13.1 WAIVER.

(a) Failure on the part of Landlord or Tenant to complain of any action or non-action on the part of the other, no matter how long the same may continue, shall not be a waiver by Tenant or Landlord, respectively, of any rights hereunder. Further, no waiver at any time of any of the provisions hereof by Landlord or Tenant shall be construed as a waiver of any of the other provisions hereof. The consent or approval of Landlord or Tenant to or of any action by the other requiring such consent or approval shall not be construed to waive or render unnecessary Landlord's or Tenant's consent or approval to or of any subsequent similar act by the other.

(b) Any payment by Tenant, or acceptance by Landlord, of a lesser amount than shall be due from Tenant to Landlord shall in all events be considered as a payment on account of the earliest installment of any payment due from Tenant under the provisions hereof. The acceptance by Landlord of a check for a lesser amount with an endorsement or statement thereon, or upon any letter accompanying such check, that such lesser amount is payment in full, shall be given no effect, and Landlord may accept such check without prejudice to any other rights or remedies which Landlord may have against Tenant.

13.2 COVENANT OF QUIET ENJOYMENT. Tenant, subject to the terms and provisions of this Lease, on payment of the Annual Fixed Rent, Additional Rent and other sums due hereunder and observing, keeping and performing all of the other terms and provisions of this Lease on Tenant's part to be observed, kept and performed shall lawfully, peaceably and quietly have, hold, occupy and enjoy the Premises during the term hereof, without hindrance or ejection by any person lawfully claiming by, under or through Landlord to have title to the Premises superior to Tenant; the foregoing covenant of quiet enjoyment is in lieu of any other such covenant, express or implied.

13.3 LANDLORD'S LIABILITY

(a) Tenant specifically agrees to look solely to Landlord's then interest in the Property at the time owned, for recovery of any judgment from Landlord, it being specifically agreed that in no event shall Landlord, (original or successor), or any of the officers, trustees, directors, partners, beneficiaries, joint venturers, members, stockholders or other principals or representatives, and the like, disclosed or undisclosed, ever be personally liable for any such judgment, or other liability or for the payment of any monetary obligation to Tenant. In no event shall Landlord's officers, trustees, directors, partners, beneficiaries, joint venturers, members, stockholders or other principals or

representatives, and the like, as aforesaid, ever be individually liable to Tenant nor shall they or Landlord ever be liable for either (i) any indirect or consequential damages suffered by Tenant from whatever cause or (ii) any loss or damage that may accrue to Tenant's stock or business.

(b) With respect to any repair, restoration or other services or utilities to be furnished by Landlord to Tenant, Landlord shall in no event be liable for failure to furnish or to perform same when prevented from doing so by reason of any matter beyond the reasonable control of Landlord, and any measured time period shall be extended by the period during which Landlord

is so prevented provided that Landlord shall exercise reasonable efforts to remove the cause of such delay.

(c) As used in this Lease, "Force Majeure" shall mean, collectively and individually, strike, lockout or other labor trouble, fire or other casualty, governmental pre-emption of priorities or other controls in connection with a national or other public emergency or shortages of fuel, supplies or labor; breakdown, accident; war or other emergency; any other cause beyond Landlord's reasonable control; PROVIDED however, that no cause due to any act or neglect of Tenant or Tenant's servants, agents, employees, licensees or any person claiming by, through or under Tenant shall be considered an act of Force Majeure unless it hinders or delays Landlord's performance hereunder.

13.4 ASSIGNMENT OF RENTS AND TRANSFER OF TITLE.

(a) If, at any time and from time to time, Landlord assigns this Lease or the rents payable hereunder to the holder of any mortgage on the Building, or to any other party for the purpose of securing financing (the holder of any such mortgage and any other such financing party are referred to herein as the "Financing Party"), whether such assignment is conditional in nature or otherwise, the following provisions shall apply:

(i) Such assignment to the Financing Party shall not be deemed an assumption by the Financing Party of any obligations of Landlord hereunder unless such Financing Party shall, by written notice to Tenant, specifically otherwise elect;

(ii) Except as provided in (i) above and (iii) below, the Financing Party shall be treated as having assumed Landlord's obligations hereunder only upon foreclosure of its mortgage (or voluntary conveyance by deed in lieu thereof) or the taking of possession of the Premises and, with respect to obligations regarding return of the security deposit, only upon receipt of the funds constituting such security deposit;

(iii) The Financing Party shall only be responsible for such breaches under the Lease by Landlord which occur during the period of ownership by the Financing Party after such foreclosure (or

voluntary conveyance by deed in lieu thereof) or taking of possession, as aforesaid;

(iv) In the event Tenant alleges that Landlord is in default under any of Landlord's obligations under this Lease, Tenant agrees to give the holder of any mortgage, by certified mail, a copy of any notice of default which is served upon the Landlord, provided that prior to such notice, Tenant has been notified, in writing, (whether by way of notice of an assignment of lease, request to execute an estoppel letter, or otherwise) of the address of any such holder. Tenant further agrees that if Landlord shall have failed to cure such default within the time provided by law or such additional time as may be provided in such notice to Landlord, such holder

shall have forty-five (45) days after the last date on which Landlord could have cured such default within which such holder will be permitted to cure such default. If such default cannot be cured within such sixty day period, then such holder shall have such additional time as may be necessary to cure such default but not in excess of six (6) months, if within such sixty day period such holder has commenced and is diligently pursuing the remedies necessary to effect such cure (including, but not limited to, commencement of foreclosure proceedings, if necessary, to effect such cure), in which event Tenant shall have no right with respect to such default while such remedies are being diligently pursued by such holder.

In all events, any liability of a Financing Party shall be limited to the interest of such Financing Party in the Land and Building, and in no event shall a Financing Party ever be liable for any indirect or consequential damages.

Tenant hereby agrees to enter into such agreements or instruments as may, from time to time, be reasonably requested in confirmation of the foregoing.

(b) In no event shall the acquisition of Landlord's interest in the Property by a purchaser which, simultaneously therewith, leases landlord's entire interest in the Property back to seller thereof be treated as an assumption of Landlord's obligations hereunder, whether by operation of law or otherwise, but Tenant shall look solely to such seller-lessee, and its successors in title from time to time for performance of Landlord's obligations hereunder until such time as such purchaser-lessor has assumed the Landlord's position. In any such event, this Lease shall be subject and subordinate to the lease to such purchaser, provided that any such purchaser-lessor agrees to recognize Tenant's rights hereunder so long as Tenant is not in default beyond any applicable notice, grace or cure period.

For all purposes, such seller-lessee, and its successors in title, shall be the Landlord hereunder unless and until Landlord's position shall have been assumed by such purchaser-lessor.

(c) Except as provided in paragraph (b) of this Section, in the event of any transfer of title to the Property by Landlord, Landlord shall thereafter be entirely freed and relieved from the performance and observance of all covenants and obligations hereunder arising thereafter and for all liabilities asserted thereafter provided that if the transferee of title is a party other than a mortgagee or other creditor of Landlord's, that said transferee agrees to be bound by the covenants and obligations of Landlord hereunder from and after the date of such transfer.

13.5 RULES AND REGULATIONS. Tenant shall abide by the Rules and Regulations presently in effect, (a copy of which has been attached hereto as Exhibit B) and as they may subsequently from time to time be amended by Landlord as approved by Tenant, which approval shall not be unreasonably withheld, delayed or conditioned. Tenant shall have such right of approval only if it is in occupancy of at least eighty percent (80%) of the Total Rentable Floor Area and as long as the particular rules and regulations are not for the purpose of protecting Landlord's interest in the Premises or of addressing the reasonable concerns of abutters or of responding to any instructions from public

authorities.

13.6 INVALIDITY OF PARTICULAR PROVISIONS. If any term or provision of this Lease, or the application thereof to any person or circumstance shall, to any extent, be invalid or unenforceable, the remainder of this Lease, or the application of such term or provision to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby, and each term and provision of this Lease shall be valid and be enforced to the fullest extent permitted by law.

13.7 PROVISIONS BINDING, INC. Except as herein otherwise provided, the terms hereof shall be binding upon and shall inure to the benefit of the successors and assigns, respectively, of Landlord and Tenant and, if Tenant shall be an individual, upon and to his heirs, executors, administrators, successors, and assigns. Each term and each provision of the Lease to be performed by Tenant shall be construed to be both a covenant and a condition. The reference contained to successors and assigns of Tenant is not intended to constitute a consent to assignment by Tenant, but refers only to an assignment expressly permitted under the terms of this Lease.

13.8 RECORDING. Tenant agrees not to record this Lease, but each party hereto agrees, on the request of the other, to execute a memorandum or notice of lease in recordable form, complying with applicable law and reasonably satisfactory to Landlord's attorneys. In no other event shall such document set forth the rent or other charges payable to Tenant under this Lease. Any such document shall expressly state that it is executed pursuant to the provisions contained in this Lease and that it is not intended to vary the terms and conditions of this Lease.

13.9 NOTICES. Any notice, consent, request, bill, demand or statement hereunder by either party to the other party shall be in writing, and, if received at Landlord's or Tenant's address, shall be deemed to have been duly given when either

delivered or served personally or mailed in a postpaid envelope, deposited in the United States mails addressed to Landlord at Landlord's Address, or if any address for notices shall have been duly changed as hereinafter provided, if mailed as aforesaid to the party at such changed addresses. A copy of notices to Tenant should also be sent to Genzyme, Inc., One Kendall Square, Building 1400, Cambridge, Massachusetts, 02139, Attn: General Counsel. Either party may at any time change the address or specify an additional address for such notices, consents, requests, bills, demands or statements by delivering or mailing, as aforesaid, to the other party a notice stating the change and setting forth the changed or additional address, provided such changed or additional address is within the continental United States.

13.10 BILLS AND CHARGES. All bills and statements for reimbursement or other payments or charges due from Tenant to Landlord hereunder shall be due and payable in full fifteen (15) days after submission thereof by Landlord to Tenant unless otherwise provided herein. Tenant's failure to make timely payment of any amounts indicated by such bills and statements, whether for work done by Landlord at Tenant's request, reimbursement provided for by this Lease or for any other sums properly owing by Tenant to Landlord, shall be treated as a default in the payment of Annual Fixed Rent, in which event Landlord shall have all rights and remedies provided in this Lease for the nonpayment of Annual Fixed Rent.

13.11 PARAGRAPH HEADINGS. The paragraph headings throughout this instrument are for convenience and reference only, and the words contained

therein shall in no way be held to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this Lease.

13.12 SUBORDINATION. This Lease shall be subject and subordinate to all ground or underlying leases and any mortgages that may now or hereafter be placed upon the Building and/or the Land and to any and all advances to be made under such mortgages and to the interest thereon, and all renewals, extensions and consolidations thereof. Prior to the Commencement Date hereunder Landlord shall obtain a non-disturbance agreement from the sole mortgagee of the Premises, such non-disturbance to be in a form and substance which is customary for mortgagee such as Manufacturer's Life Insurance Company and is reasonably satisfactory to Tenant. The receipt by Tenant of such a non-disturbance agreement from any future ground lessor or mortgagee shall be a precondition of Tenant's obligation to sign a subordination agreement for future ground lessors or mortgagees. Any mortgagee may elect to give this Lease priority to its mortgage, except that the Lease shall not have priority to (i) the prior rights to insurance proceeds and the disposition thereof under the mortgage; (ii) the prior rights to condemnation awards and the disposition thereof under the mortgage; and (iii) intervening liens. In the event of such election and upon notification by such mortgagee, this Lease shall be deemed prior in lien to the said mortgage. This Section shall be self-operative, but in confirmation thereof, Tenant shall execute and deliver whatever instruments may be reasonably required by the lessor or the mortgagee (or mortgagees) to acknowledge such subordination or priority in recordable form so long as the terms thereof are consistent with the terms of the Lease, and if Tenant fails to do so within ten

(10) days after demand, Landlord shall remind Tenant of its obligations to execute and deliver said instrument; however, if Tenant fails to do so within ten (10) days of such reminder, Tenant shall be deemed in default of this Lease. Tenant's obligation to subordinate this Lease to any ground lease or mortgage is subject to the condition that either the certificate or instrument to be executed or a separate document executed at the same time provide that the lessor or mortgagee execute and deliver to the Tenant an agreement not to disturb the Tenant's possession as long as the Tenant is not in default (continuing beyond any applicable notice, grace or cure period) with respect to any of the covenants or conditions of this Lease to be performed and observed by the Tenant.

13.13 STATUS REPORT. Recognizing that both parties may find it necessary to establish to third parties, such as accountants, banks, mortgagees, ground lessors, or the like, the then current status of performance hereunder, either party, on the request of the other made from time to time, will promptly furnish to Landlord, or the holder of any mortgage or ground lease encumbering the Premises, or to Tenant, as the case may be, a statement of the status of any matter pertaining to this Lease, including, without limitation, acknowledgements that (or the extent to which) each party is in compliance with its obligations under the terms of this Lease.

13.14 REMEDYING DEFAULTS. (a) Following a default by Tenant continuing, other than in the case of emergencies, beyond any applicable notice, grace or cure periods, Landlord shall have the right, but shall not be required, to pay such sums or do any act which requires the expenditure of monies which may be necessary or appropriate by reason of the failure or neglect of Tenant to perform any of the provisions of this Lease, and in the event of the exercise of such right by Landlord, following such default, Tenant agrees to pay to Landlord forthwith upon demand all such sums as Additional Rent, together with interest thereon at a rate equal to 3% over the base rate in effect from time to time at the Bank of Boston as an additional charge. Any payment of Additional Rent or other sums payable hereunder not paid when due or upon the expiration of any applicable grace period shall, at the option of Landlord, be treated as

Additional Rent and shall bear interest at the rate as aforesaid from the date thereof and shall be payable forthwith on demand by Landlord, as an additional charge. If any payment of Annual Fixed Rent is not paid when due, then Tenant shall pay to Landlord interest on such unpaid amount each month and for each part thereof during which said delinquency continues at an annual rate three (3) percentage points over the then Bank of Boston base rate; provided, however, in no event shall such interest exceed the maximum permitted to be charged by applicable law;

(b) In the event that Landlord fails to meet its obligation hereunder to repair and maintain the Premises as expressly set forth in Article VII hereunder, and if said failure continues for seven (7) days or more after Tenant has so notified Landlord in writing, the Tenant shall have the right, but not the obligation, to pay such sums or do any act which requires the expenditure of monies which may be reasonably necessary or appropriate by reason of the failure or neglect of Landlord to perform said obligation, and in the event of the exercise of such right by Tenant, following such default, Tenant shall have the right to set-off the reasonable amount expended by it in this connection but only

to the extent the Tenant's expenditures are equal to or less than the applicable Base Year operating cost line item. In the event that Landlord fails to meet its obligations hereunder as set forth in Section 9.1 with respect to the Capital Expenditures required to be performed by Landlord under Exhibit F or during the first twelve (12) months of Tenant's occupancy or if Landlord fails to perform remediation work for which it is expressly responsible under the provisions of Section 13.19 hereof, and if Landlord fails to commence and diligently pursue such cure within seven (7) days or more after Tenant has so notified Landlord in writing, then Tenant shall have the right, but not the obligation, to pay such sums or do any act which requires the expenditure of monies which may be reasonably necessary or appropriate by reason of the failure or neglect of Landlord to perform said obligation, and in the event of the exercise of such right by Tenant, following such default, Tenant shall have NO right of set-off but shall be entitled to recover from Landlord the reasonable amounts expended by it in this connection.

13.15 HOLDING OVER. Any holding over by Tenant after the expiration of the term of this Lease shall be treated as a daily tenancy at sufferance at a rate equal to the then (at the time of Lease expiration) fair market rental value of the Premises but in no event less than 1-1/2 times the sum of (i) Annual Fixed Rent then in effect plus (ii) Additional Rent, Escalation Charges and other charges herein provided (prorated on a daily basis). Tenant shall also pay to Landlord for all damages, direct and/or indirect (including, without limitation, the loss of a tenant and of rental income) sustained by reason of any such holding over. Otherwise, such holding over shall be on the terms and conditions set forth in this Lease as far as applicable.

13.16 WAIVER OF SUBROGATION. Landlord and Tenant mutually agree that (insofar as and to the extent that such agreement may be effective without invalidating or making it impossible to secure insurance coverage obtainable from responsible insurance companies doing business in Massachusetts at commercially reasonable rates), with respect to any loss which is covered by insurance then being carried by Landlord or Tenant, respectively, the party carrying such insurance and suffering such loss releases the other of and from all claims with respect to such loss (but not for any claims for any deductible costs paid for by the party suffering such loss); and they further mutually agree that their respective insurance companies shall have no right of subrogation against the other on account thereof, even though extra premiums may result therefrom.

Notwithstanding any provisions of this Lease to the contrary, Landlord and Tenant each hereby waives any and all right of recovery which it may have against the other party and its agents, employees, licensees and contractors for any loss or damage to the Building or Premises and for any injury to or death of persons occurring in, on or about the Building with respect to any hazard which (a) would be covered under a standard "all-risk" property insurance policy without regard to the amount of coverage other than a reasonable deductible with malicious mischief and vandalism coverage, whether or not such policy is then being carried by the Landlord or Tenant or (b) is covered by insurance then being carried by the Landlord or Tenant, notwithstanding that such loss or damage may result from the negligence or other fault of Landlord, Tenant or

their respective, agents, employees, subtenants, licensees, invitees or assignees. In the event that an extra premium is payable by either party as a result of this provision, the other party shall reimburse the party paying such premium the amount of such extra premium. If, at the request of one party, this release and non-subrogation provision is waived, then the obligation of reimbursement shall cease for a period of time as such waiver shall be effective. If the release of either party provided above shall contravene any law with respect to exculpatory agreements, the liability of the party for whose benefit such release was intended shall remain but shall be secondary to that of the other party's insurer.

13.17 SURRENDER OF PREMISES. Upon the expiration or earlier termination of the Term of this Lease, Tenant shall peaceably quit and surrender to Landlord the Premises in substantially the same good order, condition and repair the Premises were in as of the Commencement Date, together with all alterations, additions and improvements which may have been made or installed in, on or to the Premises prior to or during the Term of this Lease, excepting only ordinary wear and use and damage by fire, other casualty and taking by eminent domain, for which, under other provisions of this Lease, Tenant has no responsibility of repair or restoration. In the event Tenant changes any of the space in the Building to a non-office character Tenant shall, at its own expense, restore said space to an open-floor office lay-out as of the date of expiration or earlier termination of the Lease. Tenant shall return all keys to the Premises, remove all of the Tenant's Removable Property and, to the extent specified by Landlord at the time Landlord approves the plans for the same, all alterations and additions made by Tenant and all partitions wholly within the Premises(however, in no event shall Tenant be required to remove any alterations installed as part of its initial build-out); and shall repair any damages to the Premises or the Building caused by such installation or removal. Any of the Tenant's Removable Property which shall remain in the Building or on the Premises after the expiration or termination of the Term of this Lease and continues to remain there for five (5) days after notice thereof from Landlord shall conclusively be deemed to have been abandoned, and either may be retained by Landlord as its property or may be disposed of in such manner as Landlord may see fit, at Tenant's sole cost and expense.

13.18 BROKERAGE. Tenant warrants that it has had no dealings with any broker or agent in connection with this Lease except for any broker designated in Section 1.1. Tenant covenants to pay, hold harmless and indemnify Landlord from and against any and all costs, expense or liability for any compensation, commission and charges claimed by any broker or agent other than any such broker designated in Section 1.1 with respect to this Lease or the negotiations thereof arising from a breach of the foregoing warranty. Landlord shall be responsible for payment of any brokerage commission to any broker designated in Section 1.1.

13.19 HAZARDOUS SUBSTANCES.

13.19.1 Tenants Covenants Regarding Hazardous Substances:

13.19.1.1 LANDLORD'S CONSENT REQUIRED. Tenant shall not cause or permit any Hazardous Substances, as defined in Section 13.19.1.5 below, to be brought upon or kept or used in or about the Premises, the Building, or the Property by Tenant, its agents, employees, contractors, or invitees, unless (a) such Hazardous Substances are necessary for Tenant's business (and such business is a permitted use under Section 5.1 above) and (b) Tenant obtains the prior written consent of Landlord, which consent shall not be unreasonably withheld provided that the net worth/environmental insurance standards of the last sentence of Section 13.19.4 below are met.

13.19.1.2 COMPLIANCE WITH ENVIRONMENTAL LAWS. Tenant shall at all times and in all respects comply with all local, state, and federal laws, ordinances, regulations, and orders (collectively "Hazardous Substances Laws" relating to industrial hygiene, environmental protection, or the use, analysis, generation, manufacture, storage, disposal, or transportation of any Hazardous Substances.

13.19.1.3 HAZARDOUS SUBSTANCES HANDLING. Tenant shall at its own expense procure, maintain in effect, and comply with all conditions of any and all permits, licenses, and other governmental and regulatory approvals required for Tenant's use of the Premises, including, without limitation, discharge of (appropriately treated) materials or wastes into or through any sanitary sewer serving the Premises, the Building, or the Property. Except as discharged into a sanitary sewer in strict compliance and conformity with all applicable Hazardous Substances Laws, Tenant shall cause any and all Hazardous Substances to be removed from the Premises or from the Property and to be transported solely by duly licensed haulers to duly licensed facilities for final disposal of such wastes. Tenant shall in all respects handle, treat, deal with, and manage any and all Hazardous Substances in, on, under, or about the Premises, the Building, or the Property in total conformity with all applicable Hazardous Substance Laws and prudent industry practices regarding management of such Hazardous Substances. Upon expiration or earlier termination of the Term of the Lease, Tenant shall cause all Hazardous Substances to be removed from the Premises (except such Hazardous Substances, if any, as were located in the premises prior to the commencement of Tenant's occupancy thereof) and the Property (if Tenant caused such Hazardous Substance to located on the Property) and to be transported for use, storage, or disposal in accordance and compliance with all applicable Hazardous Substances Laws; PROVIDED HOWEVER, that Tenant shall not take any remedial action in response to the presence of any Hazardous Substance in or about the Premises, the Building, or the Property, nor enter into any settlement agreement, consent decree, or other compromise in respect to any claims relating to any Hazardous Substances in any way connected with the Premises, the Building, or the Property, without first notifying Landlord of Tenant's intention to do so

and affording Landlord adequate opportunity to appear, intervene, or otherwise appropriately assert and protect Landlord's interest with respect thereto.

13.19.1.4 NOTICES. If at any time Tenant

shall become aware, or have reasonable cause to believe, that any Hazardous Substance has come to be located on or beneath the Property, Tenant shall, immediately upon discovering such presence or suspected presence of the Hazardous Substance, give written notice of that condition to the Landlord. In addition, Tenant shall immediately notify Landlord in writing of (i) any enforcement, cleanup, removal, or other governmental or regulatory action instituted, completed, or threatened pursuant to any Hazardous Substances Laws, (ii) any claim made or threatened by any person against Tenant, the Premises, the Building, or the Property relating to damage, contribution, cost recovery, compensation, loss, or injury resulting from or claimed to result from any Hazardous Substances, and (iii) any reports made to any local, state, or federal environmental agency arising out of or in connection with any Hazardous Substances in or removed from the Premises, the Building, or the Property, including any complaints, notices, warnings, or asserted violations in connection therewith. Tenant shall also supply to Landlord as promptly as possible, and in any event within five (5) business days after Tenant first receives or sends the same, copies of all claims, reports, complaints, notices warnings or asserted violations related in any way to the Premises the Building, the Property, or the Tenant's use thereof. Tenant shall promptly deliver to Landlord copies of hazardous waste manifests reflecting the legal and proper disposal of all Hazardous Substances removed from the Premises or the Property.

13.19.1.5 DEFINITION OF HAZARDOUS SUBSTANCES. As used in this Agreement, the term "Hazardous Substance or Substances" means any hazardous or toxic substances, materials or wastes, including, but not limited to, those substances, materials, and wastes listed in the United States Department of Transportation Hazardous Materials Table (49 CFR 172.101) or by the Environmental Protection Agency as hazardous substances (40 CFR Part 302) and amendments thereto, or such substances, materials, wastes which are or become regulated under any applicable local, state, or federal law excluding, however, small quantities of materials such as cleaning solvents, computer/photocopier toner and similar substances typically used in the ordinary course of a business office.

13.19.2 INDEMNIFICATION OF LANDLORD. Tenant shall indemnify, defend (by counsel reasonably acceptable to Landlord), protect, and hold harmless Landlord, and each of Landlord's partners, directors, officers, employees, agents, attorney, successors, and assigns, from and against any and all claims, liabilities, penalties, fines, judgements forfeitures, losses (including without limitation, diminution in the value of the Premises, the Building, or the Property, damages for the loss or restriction on use of rentable or useable space or of any amenity of the Premises, the Building, or the Property), costs or expenses (including attorney fees, consultant fees, and expert fees) for the death of or injury to any person or damages to any property whatsoever, arising from or caused in whole or in part, directly or indirectly, by (A) the release or discharge by Tenant or any of its Affiliates in, on, under, or about the Premises,

the Building, or the Property, of any Hazardous Substances or Tenant's use, analysis, storage, transportation, disposal, release, threatened release, discharge, or generation of Hazardous Substances to, in, on, under, about, or from the Premises, the Building, or the Property, or (B) Tenant's failure to comply with any Hazardous Substances Law. Tenant's obligations under this Section 13.19.2 shall include, without limitation, and whether foreseeable or unforeseeable, any and all costs incurred in connection with any investigation of site conditions, and any and all costs of any required or necessary repair, cleanup, detoxification, or decontamination of the Premises, the Buildings or the Property (including without limitation. the soil and ground water on or under the Property), and the preparation and implementation of any closure,

remedial action, or other require plans in connection therewith. Tenant's obligations under this Section 13.19.2 shall survive the expiration or earlier termination of the term of the Lease. For purposes of the release and indemnity provisions hereof, any acts or omissions of Tenant, or by employees, agents, assignees, contractors, or subcontractors of Tenant or others acting for or on behalf of Tenant (whether or not they are negligent, intentional, willful, or unlawful), shall be strictly attributable to Tenant.

13.19.3 INDEMNIFICATION OF TENANT. Landlord shall indemnify, defend (by counsel reasonably acceptable to Tenant), protect, and hold harmless Tenant, and each of Tenant's partners, directors, officers, employees, agents, attorney, successors, and assigns, from and against any and all claims, liabilities, penalties, fines, judgements forfeitures, losses, costs or expenses (including attorney fees, consultant fees, and expert fees) for the death of or injury to any person or damages to any property whatsoever, arising from or caused in whole or in part, directly or indirectly, by the presence prior to Tenant's taking of possession of the Premises or the release or discharge by Landlord in, on, under, or about the Premises, the Building, or the Property, of any Hazardous Substances or Landlord's use, analysis, storage, transportation, disposal, release, threatened release, discharge, or generation of Hazardous Substances to, in, on, under, about, or from the Premises, the Building, or the Property, or Landlord's failure to comply with any Hazardous Substances Law. For purposes of the release and indemnity provisions hereof, any acts or omissions of Landlord, or by employees, agents, assignees, contractors, or subcontractors of Landlord or others acting for or on behalf of Landlord (whether or not they are negligent, intentional, willful, or unlawful), shall be strictly attributable to Landlord.

Tenant acknowledges having received certain environmental reports from Landlord with respect to the Building, the Premises and the Land as prepared by GZA, Inc. and Environmental Solutions; to the best of Landlord's knowledge, except as disclosed in such environmental reports, there exist no Hazardous Substances in, on or under the Premises or the Land. To the best of Landlord's knowledge there are no material inaccuracies in such reports, but Landlord assumes no responsibility for the accuracy, reliability or completeness of such reports and Tenant assumes all risk in connection with the review and use thereof. Landlord represents to Tenant that the reports as delivered to Tenant are complete and true copies of the documents as received by Landlord. Landlord hereby agrees that if any pre-existing asbestos not already disclosed to Tenant is discovered anywhere in the Building, the Premises or the Land, and if the condition of

such asbestos requires remediation of some kind under the applicable law, then Landlord shall arrange for such remediation and shall pay the full cost of such remediation. However, Landlord's remediation and payment obligations under this paragraph shall be waived if remediation would not have been required but for the performance of building improvements by Tenant on the Building or the area at issue, or if due to actions taken by Tenant or its employees, agents, contractors, invitees or representatives on the Premises.

13.19.4 WITHHOLDING CONSENT TO PROPOSED TRANSFEREES. Tenant acknowledges and agrees that it shall not be unreasonable for Landlord to withhold its consent to any proposed assignment, subletting, or transfer of Tenant's interest in this Lease if the anticipated use of the Premises by the proposed assignee, subtenant, or transferee (collectively, a "Transferee") involves the generation, storage, use, treatment, or disposal of Hazardous Substances; and (i) the proposed Transferee has been required to take remedial action in connection with Hazardous Substances contaminating a property, if the contamination resulted from such Transferee's actions or use of the property in question; or (ii) the proposed Transferee is subject to an enforcement order

issued by any governmental authority in connection with the use, disposal, or storage of a Hazardous Substance. Any Affiliate of Tenant shall be permitted to make such use of the Premises if it does not fall under clauses (i) or (ii) above and as long as such anticipated use is limited to no more than twenty percent (20%) of the Total Rentable Floor Area of the Premises, and such use is undertaken in full compliance with all applicable licenses, laws, regulations and other governing rules, and both Tenant and the Affiliate fully and unconditionally indemnify Landlord and hold Landlord harmless from and against any and all cost, expenses, liabilities and damages which result directly or indirectly from such use, as well as any consequential damages which may result therefrom. Additionally, if Tenant or an Affiliate undertakes such a use of any part of the Premises and if at any time while such use is ongoing Tenant's net worth drops below $100,000,000.00, then at Landlord's request Tenant shall purchase at its expense insurance in an amount of no less than $2,000,000.00 insuring Landlord against any loss caused by the presence of Hazardous Substances on the Premises.

13.19.5 ADDITIONAL INSURANCE OR FINANCIAL CAPACITY. If Tenant or its Affiliate is permitted to conduct the use described in Section 13.19.4 (i) and at any time it reasonably appears to Landlord that Tenant is not maintaining sufficient insurance or other means of financial capacity to enable Tenant to fulfill its obligations to Landlord under this Section 13.19.5, whether or not then accrued, liquidated, conditional, or in contingent, Tenant shall procure and thereafter maintain in full force and effect such insurance or other form of financial assurance, with companies or persons and in forms reasonably acceptable to Landlord, as Landlord may from time to time reasonably request

13.20 GOVERNING LAW. This Lease shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts.

13.21 ACCESS TO PREMISES. The Landlord or the Landlord's agents shall have the right to enter the Premises at all reasonable times throughout the term hereof, to examine the same, and to show them to prospective purchasers or lenders of the Building

and to make such repairs as the Landlord may deem necessary or desirable, provided that Landlord shall give Tenant reasonable notice other than in emergency circumstances and, provided, further that such entry shall not unreasonably interfere with normal business operations of Tenant. Landlord shall have the same right of access as is set forth above during the last twelve months of the Term hereof or of any extension of said Term for the purpose of showing the Premises to possible future tenants or to real estate brokers.

13.22 SAFETY APPLIANCES. Tenant shall keep the Premises equipped with all safety appliances and permits which, as a result of Tenant's particular activities, are required by law or ordinance or by an order or regulation of any public authority or are reasonably require by Landlord, shall keep the Premises equipped at all times with adequate fire extinguishers, and, shall make all repairs, alterations, replacements, or additions so required as a result of Tenant's particular activities.

13.23 NO AGREEMENT UNTIL SIGNED. The submission of this Lease or a summary of some or all of its provisions for examination does not constitute a reservation of or option for the Premises or an offer to lease, and no legal obligations shall arise with respect to the Premises or other matters herein until this Lease is executed and delivered by Landlord and Tenant.

13.24 SIGNAGE. Any signage which Tenant may be permitted to place on

the interior and exterior of the Building or elsewhere on the Property shall be governed by the terms of Exhibit D hereto.

13.25 AUTHORITY OF PARTIES. Landlord and Tenant each warrant to the other that the person or persons executing this Lease on behalf of the Landlord or Tenant, as the case may be, has authority to do so fully obligate Landlord or Tenant, as the case may be, to all terms and provisions of this Lease. If Landlord or Tenant is a corporation, each warrants that it has legal authority to operate and is authorized to do business in the Commonwealth of Massachusetts.

13.26 CAFETERIA. Landlord hereby consents to Tenant's operating a cafeteria for the benefit of its employees, patrons and business visitors in the space in the Building currently laid out for such use, and Landlord further consents to Tenant's use of all equipment currently located in the cafeteria area. Landlord makes no representations hereunder as to the fitness of such cafeteria equipment for use nor as to the right to operate a cafeteria in the Building. Tenant will be solely responsible for the establishment, licensing, contracting and ongoing operations of said cafeteria and for all related costs and expenses. To the extent that the cafeteria's kitchen and counter areas (i.e., the area with stoves, sinks, and the like) are included within the rentable square footage of the Premises, and if despite its good faith efforts Tenant is unable to obtain all necessary permits for the operation of this area as a cafeteria within the current space limitations and the Tenant does not otherwise use said area, then such cafeteria kitchen and counter areas should be excluded from the Premises and the appropriate rent adjustment should be made. However, Landlord shall have the discretion, but not the obligation, to remove any or all of such counters, stoves, sinks and other equipment so

that the space at issue can be readily adapted for office use, whereupon there will be no rental adjustment for the space so cleared.

13.27 OLD LEASE. Tenant acknowledges that it is aware that the Premises are subject to a current lease with Healthplan Services, Inc. and that Healthplan Services, Inc. has agreed to yield up its lease, at or prior to the Tenant's entry permitted under Section 4.1 above, so that this Lease between Landlord and Tenant would govern the use of the Premises.

XIV. EXTENSION OPTION

14.1 FIVE YEAR EXTENSION. The Tenant shall have the right to extend the term hereof by one additional five (5) year term ("the Renewal Term") by so notifying Landlord in writing by no later than twelve (12) months prior to the Term Expiration Date; however, Tenant's option to extend will be void at Landlord's option if Tenant is in default beyond any applicable notice, grace or cure period orif Tenant and/or Tenant's Affiliates are not in possession of at least eighty percent (80%) of the Total Rentable Floor Area of the Premises either at the time the Tenant elects to extend the Term or at the time the original Term would expire. Such Renewal Term shall apply to the entire Premises and shall be subject to all the terms and conditions of this Lease as in effect during the original seven year term hereof, except that during the Renewal Term (Lease Years 8 through 13), the Annual Fixed Rent shall be set at ninety-five percent (95%) of the prevailing fair market rents as of the date which is twelve months prior to the Term Expiration Date, which 95% shall in no event be less than the Annual Fixed Rent due in year 7 of the Lease. In determining fair market rent, the parties and their arbitrators shall take the then condition of the Building into account, but shall not consider any specialty laboratory or similar special non-office space built out by Tenant at its expense, but rather shall treat such areas as if Tenant restored them to open-floor office space.

Landlord shall notify Tenant of its estimate of the prevailing fair market rent within thirty (30) business days after the Tenant exercises the Renewal Term option. Tenant shall have the option, within twenty (20) business days of the Landlord's notice, to accept the Landlord's estimate, to reject Landlord's estimate and request arbitration or to withdraw its exercise of the extension option. Failure by the Tenant to respond to the Landlord's notice within the twenty (20) business day period shall be deemed an acceptance of the Landlord's estimate. In the event Tenant rejects Landlord's estimate, then the prevailing fair market rent shall be arbitrated in accordance with the following procedure. The parties within ten (10) days after Tenant's rejection of Landlord's estimate shall each identify an impartial third party to serve as an arbitrator and these two arbitrators shall seek to identify one mutually acceptable impartial third party to serve as the third arbitrator. If either party has not designated its arbitrator to the other in a timely fashion, then the determination of the other party's arbitrator shall be final. All such arbitrators shall be commercial real estate brokers, having current and at least fifteen (15) years' prior experience in appraising first class office space in the "Metro-West" area. If the two arbitrators are unable to agree upon a third arbitrator within ten (10) days, the third

arbitrator shall be selected by J.A.M.S/ENDISPUTE, or any successor entity. If neither J.A.M.S/ENDISPUTE nor any successor entity exists at the time of the dispute, the third arbitrator shall be selected by the American Arbitration Association ("AAA") or any successor entity. If neither AAA nor any successor exists at the time of the dispute, the third arbitrator shall be selected by the largest private provider of dispute resolution services then doing business in the Greater Boston area. Within thirty (30) days after the parties are notified as to the identity of the third arbitrator, each of the three arbitrators shall submit its final determination of the prevailing market rate (the "Final Rent Determination") to the other arbitrators. The two Final Rent Determinations which are closest to each other shall be averaged and this average shall be designated as the prevailing market rate. If the highest and lowest Final Rent Determinations are equally close to the middle Final Rent Determination then the middle one shall be designated as the prevailing market rate. If one of the arbitrators has not submitted its Final Rent Determination to the other arbitrators within the time limits set forth herein, the other arbitrators will designate the average of their Final Rent Determinations as the prevailing market rent. The arbitrators shall notify the parties of their decision in writing within such thirty (30) day period. All costs incurred for the services of the arbitrator shall be borne equally by the parties. The prevailing market rate as designated by the arbitrator shall be final and binding and the parties shall have no further recourse to such determination.

Promptly after rent is determined for the Renewal Term, Landlord and Tenant shall enter into an amendment of this Lease confirming the extension of the Term and the new rate for rent.

XV. CONDITION OF PREMISES AND CONSTRUCTION OF LEASEHOLD IMPROVEMENTS

15.1 AS IS CONDITION. Tenant accepts the Premises and the Building in their present "as is" condition, without representation or warranty, express or implied, in fact or in law, by Landlord except as expressly provided herein and without recourse to Landlord as to the nature, condition or usability thereof, and Tenant agrees that Landlord has no work to perform in or on the

Premises to prepare the Premises for Tenant's occupancy, and that any and all work, other than those capital improvements described in Exhibit F or required to be performed by Landlord as Capital Expenditures in the first twelve months as described in Section 9.1 hereof, to be done in or on the Premises will be performed by Tenant at Tenant's sole cost and expense in accordance with the terms of this Lease. Notwithstanding the foregoing, Landlord agrees to deliver the Premises to Tenant vacant and in broom clean condition with all building systems, roof, structure, exterior parking areas and walkways in good working order and all exterior windows and walls in waterproof weather-tight condition.

15.2 TENANT IMPROVEMENTS. Tenant shall be responsible, at its sole cost and expense, for the performance of all work, if any, necessary to prepare the Premises for Tenant's occupancy, which work is currently anticipated to consist solely of ordinary

office tenant fit-out work (the "Tenant Improvements"). If Tenant's preparation of the space for its usage necessitates a higher electrical capacity than is customary for office use, the provision of such additional capacity shall be undertaken by Tenant at Tenant's sole cost. Tenant agrees that the construction of Tenant Improvements and the Tenant's use of the Premises may not overburden the capacity of the Building's existing plumbing, mechanical, electrical, elevator or sewage systems unless Tenant agrees to be responsible for the cost of such expenditures. Tenant shall complete the Tenant Improvements substantially in accordance with plans and specifications prepared by it, submitted to Landlord and Landlord's current tenant, Health Plan Services, Inc., and is approved by Landlord and the aforesaid current tenant (such approval not to be unreasonably withheld or delayed). Tenant shall complete the Tenant Improvements in accordance with all applicable laws and with all applicable requirements of this Lease relating to alterations; and such work shall only be performed by contractors and subcontractors who have been approved in writing by Landlord, such approval not to be unreasonably withheld. It shall be solely the responsibility of Tenant to cause the Premises to comply with the Americans with Disabilities Act ("ADA") and any other state or local laws, ordinances or regulations relating thereto, except as otherwise expressly provided in Exhibit F or elsewhere in this Lease. Any such alterations or modifications to the Premises shall be performed by Tenant at its sole cost and expense, except as set forth in Section 15.4 hereof.

15.3 DELIVERY DATE. During the period from and after the date on which Landlord delivers the Premises to Tenant ("Delivery Date"), until the Term Commencement Date, the Tenant shall have the right to enter and make use of the Premises solely for the purpose of constructing the Tenant Improvements and fitting out the Premises with its personal property and equipment, and not for the conduct of business or operations, provided that during the period after the Delivery Date, Tenant shall pay, perform and observe all its covenants and obligations under this Lease (including, in particular, having liability and other insurance policies in effect as herein required), except only that no rental payments shall be due the Landlord for such period prior to the Lease Commencement Date. Landlord shall notify Tenant when Premises are or expected to be available for the purposes of this paragraph and the Delivery Date shall be no less than five (5) days after Tenant's receipt of such notice.

15.4 REIMBURSEMENT. Landlord will reimburse Tenant for the cost of Tenant Improvements in an amount up to, but not to exceed, the Expense Reimbursement Amount specified in Section 1.1 above within thirty (30) days after Landlord receives copies of invoices and receipts of payment from Tenant, but in no event before January 1, 1999, and the Tenant's execution and delivery to Landlord of the Commencement Letter attached hereto as Exhibit G. The Expense Reimbursement shall be applied towards the cost of the following matters related

to the performance of the Tenant Improvements; material used and labor costs incurred in construction, architectural and engineering planning, space planning and construction services

15.5 LANDLORD'S REPRESENTATIONS. To the best of Landlord's knowledge, the operating systems of the Building will not be subject to interruption nor

will they fail to operate properly due to the inability of any computer guided system to recognize the year 2000 as a regular operating year of the Building. To the best of Landlord's knowledge there are no new material matters on record since March 28, 1996, which would adversely and substantially interfere with Tenant's anticipated use of the Premises under this Lease. Landlord represents that under applicable zoning laws, it is lawful to use the Building for general business office use.

Landlord represents that, to the best of its knowledge, it has delivered to Tenant true, correct and complete copies of the following plans, reports, studies and records of the Building in Landlord's possession:

1. Environmental Reports referred to in Section 13.19.3;

2. Site Plan;

3. Internal air quality reports;

4. Lists of chemicals, fertilizers, pesticides, etc. used in lawn maintenance programs;

5. Letter regarding floor load calculations; and

6. Floor plans of the Building and certain other architectural and engineering documents.

To the best of Landlord's knowledge, except as disclosed in this Lease, the aforesaid reports, plans, studies and records and/or in the several due diligence inspection reports of the Building prepared for Tenant by Genzyme's Health, Safety and Environmental Group, by CID Associates, Inc. and BR&A, there exist no conditions that materially adversely affect the utility of this Building, Premises or the Land for occupancy by Tenant under this Lease. Landlord assumes no responsibility for the accuracy, completeness or reliability of any of the aforesaid plans, reports, studies and records, and Tenant assumes all risk in connection with the review and use thereof.

15.6 COOPERATION. Landlord agrees that it shall, at Tenant's expense, cooperate with, support, consult with, and provide information in its possession to Tenant in seeking, applying for and obtaining any and all consents, permits, licenses, certificates, waivers, special permits, approvals and the like required, or deemed necessary or appropriate by Tenant, in connection with (a) Tenant's use and occupancy of the Premises for the Permitted Use and/or (b) Tenant's exercise of its rights and/or performance of its obligations under this Lease. Landlord agrees that such cooperation shall include, without limitation, the co-signing of applications; the providing of support and information that can reasonably be made available by the record owner of the Premises but not by other parties; providing letters of support or other supporting information or evidence for submission to hearings or proceedings before any zoning,

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planning, land use, or regulatory board or authority, or any license or permit-granting or permitting office board or authority

XVI. PARKING

16.1 PARKING. On and after Term Commencement Date Landlord agrees to provide (without additional rent or charge to Tenant) automobile parking in parking areas serving the Building for the benefit and use of customers and employees of Tenant. Whenever the words "automobile parking areas" are used in this Lease, it is intended that the same shall include, whether in a surface parking area or parking structure, the automobile stalls, driveways, entrances, exits, sidewalks, landscaped areas, pedestrian passageways in conjunction therewith and other areas designated for parking as approximately shown on the Site Plan and subsequently restriped and expanded as described in the definition of Building set forth in Section 1.1.. Landlord shall keep the automobile parking area neat, clean and in good repair, properly lighted and landscaped, ordinary wear and tear excepted. Nothing contained herein shall be deemed to create liability upon Landlord for any damage to motor vehicles of customers and employees or from loss of property from within such motor vehicles, unless caused by the gross negligence or reckless or willful misconduct of Landlord, its agents, servants, and employees. Landlord shall have the right to establish and enforce against all users of the automobile parking area, such reasonable rules and regulations as may be deemed necessary and advisable for the proper and efficient operation and maintenance of the automobile parking area; however, to the extent that particular rules and regulations are not for the purpose of protecting Landlord's interest in the Premises or of addressing the reasonable concerns of abutters or of responding to any instructions from public authorities, the Tenant shall have a right of approval of the parking area rules and regulations, which approval may not unreasonably be withheld, delayed or conditioned.

Landlord shall at all times during the term hereof have the sole and exclusive control of the automobile parking areas, and may at any time during the term hereof exclude and restrain any person from use thereof, excepting, however, Tenant and its employees, bonafide customers, patrons and service suppliers of Tenant.

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IN WITNESS THEREOF, Landlord and Tenant have caused this Lease to be duly executed, under seal, by persons hereunto duly authorized, in multiple copies, each of which is to be considered as an original, as of the Execution Date stated herein.

Dated this 12th day of November, 1998. ("Execution Date").

LANDLORD Consolidated Group Service Company Limited Partnership	TENANT Genzyme Corporation
By: /s/ Woolsey Conover --- Woolsey Conover President Hereunto Duly Authorized	By: /s/ Evan M. Lebson --- Evan M. Lebson Vice President and Treasurer Hereunto Duly Authorized

November 13, 1998	November 12, 1998
Date Signed	Date Signed

EXHIBIT A

FLOOR PLAN OF THE PREMISES

ATTACHED

EXHIBIT B

RULES AND REGULATIONS

The following Rules and Regulations constitute a part of the Lease and of Tenant's obligations thereunder in respect of Tenant's use and occupancy of the Premises in the Building.

I. BUILDING HOURS

1.1 Tenant's access to the Building shall be as provided in Section 7.3 of the Lease.

1.2 Building security shall be installed and administered by Tenant; however, Tenant's proposed security system shall be subject to Landlord approval prior to installation, and said approval shall not be unreasonably withheld by Landlord. Pass cards and other devices necessary for access to all parts of the Premises shall be made available to Landlord by Tenant.

1.3 You are advised, for the protection and safety of your personnel, to lock front doors at the end of each working day. Front doors should also be locked whenever your receptionist leaves the area.

II. ELEVATORS, DELIVERIES AND PARKING

2.1 If you expect delivery of any bulky material, notify the Building Management Office reasonably in advance so that elevators may be scheduled and elevator pads may be installed. This protects both your shipment and the elevators.

2.2 All larger deliveries must be made from the designated Building loading dock area. The receiving area can accommodate only certain types and sizes of vehicles. All hand trucks used for interior deliveries must be equipped with rubber bumpers and tires.

2.3 The loading dock may be used only for deliveries. No vehicles are allowed to stand or park in this area after unloading nor are vehicles allowed to park at the loading dock for service calls. You should advise your vendors and suppliers of this rule. Any vehicle abusing the truck dock privileges are subject to being towed at the vehicle owner's expense.

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III. GENERAL USE OF BUILDING AND PREMISES

3.1 Property may not be placed or stored on the sidewalks, passageway, parking areas or courtyards adjacent to the Building or in the elevators, vestibules, stairways, or corridors (except as may be necessary for brief periods during deliveries).

3.2 No animals may be brought into or kept in or about the Building premises except if kept in cages.

3.3 Rubbish, rags, sweepings, acid and any and all harmful or damaging substances may not be deposited in the lavatories or in the janitor closets.

IV. FLOOR LOAD - HEAVY MACHINERY

4.1 You may not place a load upon any floor in the Premises or Building exceeding the floor load which that section of floor was designed to carry and which is allowed by law. Landlord reserves the right to prescribe the weight and position of all business machines and mechanical equipment, including safes, all of which shall be so placed as to distribute the weight. You shall place and maintain your business machines and mechanical equipment in setting sufficient to absorb and prevent vibration, noise and annoyance. You may not move any safe, heavy machinery, heavy equipment, freight, bulky matter or fixtures into or out of the Building without notice to Landlord. Notwithstanding the foregoing, proper placement of all such business machines, etc., in the Premises shall be your responsibility as Tenant.

4.2 If any such safe, machinery, equipment, freight, bulky matter or fixtures requires special handling, you must employ only persons holding a Master Rigger's license to do such work; and all work in connection therewith must comply with applicable laws and regulations. Any such moving shall be at your sole risk and hazard and you, as Tenant, will defend, exonerate, indemnify and save Landlord harmless against and from any liability, loss, injury claim or suit resulting directly or indirectly from such moving.

V. ELECTRICAL SYSTEM: ENERGY CONSERVATION: WATER

5.1 Notwithstanding anything to the contrary contained in the Lease, Landlord reserves the right to implement policies and procedures it deems, in its reasonable judgment, to be necessary or required in order to comply with applicable government laws, rules, regulations, codes, orders and standards.

VI. SIGNS AND ADVERTISING

6.1 Except as provided in Section 13.24 of the Lease, you may not place on the exterior surfaces of the Premises without Landlord's express consent, not to be unreasonably withheld, including both interior

and exterior surfaces or doors and interior surfaces of windows, or on any part of the Building outside the Premises, any signs, symbol, advertisement or the like visible to public view outside of the Premises.

VII. EXTRA HAZARDOUS AND PROHIBITED USES

7.1 PROHIBITED USES. Notwithstanding any other provision of the Lease, you may not use, or permit the use or occupancy of, the Premises or the Building, or permit any act or practice to be done or anything to be brought into or kept in or about the Premises or the Building or any part thereof: (i) which would violate any of the covenants, agreements, terms, provisions and conditions or the Lease or such other covenants, agreements, terms, provisions and conditions otherwise applicable to or binding upon the Premises; (ii) for any unlawful purposes or in any unlawful manner; (iii) which, in the reasonable judgment of Landlord shall in any way (a) adversely affect the appearance of the Building as a first-class office building, (b) adversely affect, directly or indirectly any building services, or (c) cause any offensive odors or loud noises or constitute a nuisance or a menace to any others outside the Building. Without intending to limit the general applicability of the foregoing and other than as permitted under Section 13.26 hereof, you may not use or permit the use of any part of the Premises for the preparation or dispensing of food. You may, nevertheless, install hot-cold water fountains, coffee makers and refrigerator-sink-stove combinations for the preparation of beverages and foods, provided that no cooking, frying, etc., are carried on that require special exhaust venting. The Building contains no facilities to provide special venting.

VIII. LIFE SAFETY AND EMERGENCY PROCEDURES

8.1 In case of emergency situations such as power failure, water leaks or serious injury, call the Building Management Office immediately. In case of fire or smoke, pull the nearest alarm (located on your floor) and then call the Building Management Office.

EXHIBIT C

SCHEDULE OF CLEANING SERVICE

Lessor shall provide at the Lessor's expense all labor, supervision, materials and equipment for the satisfactory performance of the following services:

I. Daily Services
1. Empty waste receptacles.
2. Damp mop, or sweep with a chemically treated dust mop, all uncarpeted areas. Vacuum all carpeted areas.
3. Spot clean carpets, wall surfaces, and other partition glass as necessary.
4. Wash and polish all entrance glass doors.
5. Spray buff (buffing over a light spray of a mixture of detergent and floor finish) uncarpeted floors in reception area, lunchroom and corridors.
6. Damp clean all bright work.
7. Remove and dispose of all trash (wet and dry).

II. Weekly Services
1. Dust window ledges.

2. Dust tops of office furniture, furnishings, files, cabinets, radiators, convectors, and baseboards.

III. Monthly Services
1. Machine buff all uncarpeted floors.
2. Deep vacuum (pile lifting) all carpeted areas.

IV. Every Three-Month Services
1. Wash baseboards, window sills and remove smudges and marks from radiators and convectors whenever possible.
2. Wash all interior windows and glass in private offices and enclosures inside and out.
3. Vacuum drapes.
4. Vacuum ceiling diffusers.
5. Strip and refinish all uncarpeted (resilient tile) floors.

V. Toilet Rooms
1. Daily Services:
a. Empty all waste receptacles.
b. Sweep and wet mop floors.
c. Clean and disinfect all fixtures.
d. Polish mirrors.
e. Clean shelves, tops of tile edges and dispensers.
f. Refill paper towel, toilet paper and soap dispensers.

2. Weekly Services:
a. Wash toilet partitions
b. Wash and disinfect all ceramic tile, fixtures and waste receptacles.

VI. Shampooing of Carpets
1. Twice a year shampoo all high traffic areas such as hallways.
2. All other carpets are to be shampooed once a year.

VII Cleaning of perimeter induction unit drain pans throughout the Building and the exterior air intake areaways shall be performed in accordance with a periodic schedule reasonably acceptable to Landlord and Tenant.

EXHIBIT D

SIGNAGE CRITERIA AND RESTRICTIONS

Tenant will not erect any signs except in conformity with both (i) applicable sign by-laws and codes and (ii) sign plans specifically approved in writing by Landlord, such approval not to be unreasonably withheld. In event of a conflict between the requirements of the by-laws or codes and the approved signage, the more restrictive requirements shall control.

(a) Wording on large-scale signs shall be limited to business name only. All signs shall be drawn up by Tenant and submitted to Landlord for approval prior to fabrication.

(b) Signs with exposed neon tubing or exposed lamps and signs of the flashing, blinking, rotating, moving or animated types are not permitted.

(c) Public safety decals or artwork on glass in minimum sizes to comply with applicable Code, subject to the approval of Landlord, may be used, as required by building codes or other governmental regulations.

Tenant will be permitted, subject to Landlord's approval which is not to be unreasonably withheld, to install exterior signage on the Building in accordance with applicable sign by-laws, and Landlord agrees to cooperate with Tenant, if so requested, to apply for such signage. Such agreement to cooperate shall in no event require the expenditure of money by Landlord.

EXHIBIT E

BASE YEAR OPERATING EXPENSES BUDGET

ATTACHED

EXHIBIT F

REQUIRED CAPITAL IMPROVEMENTS

ATTACHED

Management Services shall include the following:

Management Fee

Salary, benefits and other direct and indirect costs of on-site building management.

Direct and indirect costs of all labor providing services for the operation, maintenance and management of the Premises.

All direct and indirect administrative costs of Landlord in operating, maintaining and managing the Premises.

Exhibit 10.22

Approved by directors on March 6, 1998
Approved by stockholders on May 28, 1998

GENZYME CORPORATION

1998 DIRECTOR STOCK OPTION PLAN

1. GENERAL; PURPOSE.

This 1998 Director Stock Option Plan dated March 6, 1998 (the "Plan") governs options to purchase common stock, $0.01 par value ("Common Stock"), of Genzyme Corporation (the "Company") granted on or after the date hereof by the Company to members of the Board of Directors of the Company (the "Board") who are not also officers or employees of the Company. The Plan constitutes an amendment and restatement of the Company's 1988 Director Stock Option Plan (the "Prior Plan") and supersedes the Prior Plan, the separate existence of which shall terminate on the effective date of this Plan. The rights and privileges of holders of options outstanding under the Prior Plan shall not be adversely affected by the foregoing action.

The purpose of the Plan is to attract and retain qualified persons to serve as Directors of the Company and to encourage ownership of stock of the Company by such Directors so as to provide additional incentives to promote the success of the Company.

2. ADMINISTRATION OF THE PLAN; GOVERNING LAW.

Grants of stock options under the Plan shall be automatic as provided in Section 7. However, all questions of interpretation with respect to the Plan and options granted under it shall be determined by a committee consisting of all Directors of the Company who are not eligible to participate in the Plan, and such determination shall be final and binding upon all persons having an interest in the Plan. This Plan shall be governed by and interpreted in accordance with the laws of The Commonwealth of Massachusetts.

3. PERSONS ELIGIBLE TO PARTICIPATE IN THE PLAN.

Members of the Board who are not also officers or employees of the Company shall be eligible to participate in the Plan.

4. SHARES SUBJECT TO THE PLAN.

(a) GENZYME GENERAL DIVISION COMMON STOCK ("GGD STOCK"), GENZYME TISSUE REPAIR DIVISION Common Stock ("GTR Stock") and Genzyme Molecular Oncology Division Common Stock ("GMO Stock") are series of the Company's Common Stock that may be granted under this Plan. The aggregate number of shares of each series of Common Stock that may be issued upon exercise of options granted under this Plan is:

<TABLE>
<CAPTION>

	GGD STOCK	GTR STOCK	GMO STOCK
<S>	<C>	<C>	<C>
New shares to be authorized under the Plan	130,400	100,000	70,000
Authorized and available for grant from Prior Plan	24,000	24,818	53,800
Outstanding options from Prior Plan	185,600	75,182	16,200
Total reserve	340,000	200,000	140,000

</TABLE>

In the event of a stock dividend, split-up, combination or reclassification of shares, recapitalization or other similar capital change relating to the Common Stock, the maximum aggregate number and kind of shares or securities of the Company as to which options may be granted under this Plan and as to which options then outstanding shall be exercisable, and the option price of such

options, shall be appropriately adjusted by the

Board (whose determination shall be conclusive) so as to preserve the value of the option.

(b) In the event of a consolidation or merger of the Company with another corporation where the Company's stockholders do not own a majority in interest of the surviving or resulting corporation, or the sale or exchange of all or substantially all of the assets of the Company, or a reorganization or liquidation of the Company, any deferred exercise period shall be automatically accelerated and each holder of an outstanding option shall be entitled to receive upon exercise and payment in accordance with the terms of the option the same shares, securities or property as he or she would have been entitled to receive upon the occurrence of such event if he or she had been, immediately prior to such event, the holder of the number of shares of Common Stock purchasable under his or her option or, if another corporation shall be the survivor, such corporation shall substitute therefor substantially equivalent shares, securities or property of such other corporation; provided, however, that in lieu of the foregoing the Board may make such other provision as it may consider equitable to holders and in the best interests of the Company.

(c) Whenever options under this Plan (including options outstanding under the Prior Plan as of the effective date of this Plan) lapse or terminate or otherwise become unexercisable, the shares of Common Stock which were subject to such options may again be subjected to options under this Plan. The Company shall at all times while this Plan is in force reserve such number of shares of Common Stock as will be sufficient to satisfy the requirements of this Plan.

5. NONSTATUTORY STOCK OPTIONS.

All options granted under this Plan shall be nonstatutory options not entitled to special tax treatment under Section 422 of the Internal Revenue Code of 1986, as amended (the "Code").

6. FORM OF OPTIONS.

Options granted hereunder shall be in such form as the Board may from time to time determine.

7. GRANT OF OPTIONS AND OPTION TERMS.

(a) AUTOMATIC GRANT OF OPTIONS. At each annual meeting of the stockholders of the Company, those Directors to be elected or re-elected at that meeting who are eligible to receive options under this Plan shall automatically be granted, for each year of the term of office to which they are elected, options to purchase (i) 4,000 shares of GGD Stock, (ii) a number of shares of GTR Stock equal to 1,000 times a fraction, the numerator of which is the Fair Market Value of the GGD Stock and the denominator of which is the Fair Market Value of the GTR Stock (a market value equal to one-quarter of the market value of the stock subject to the GGD Stock option), and (iii) a number of shares of GMO Stock equal to 1,000 times a fraction, the numerator of which is the Fair Market Value of the GGD Stock and the denominator of which is the Fair Market Value of the GMO Stock (a market value equal to one-quarter of the market value of the stock subject to the GGD Stock option). In addition, upon the election of an eligible Director under this Plan other than at an annual meeting of stockholders (whether by the Board or the stockholders and whether to fill a vacancy or otherwise), such Director shall automatically be granted options to purchase the number of shares of GGD Stock, GTR Stock and GMO Stock described in the preceding sentence for each year or portion thereof of the term of office to which he or she is elected. The "Date of Grant" for options granted under this Plan shall be the date of election or re-election as a Director, as the case may

be. No options shall be granted hereunder after ten years from the date on which this Plan was initially approved and adopted by the Board. As used herein, "Fair Market Value" for each series of the Common Stock shall mean the closing sale price of such series as reported by the Nasdaq National Market or the principal securities exchange or over-the-counter market on which such series is listed or quoted on the Date of Grant of such options or, if such series is not then listed on the Nasdaq National Market or any securities exchange or quoted in the over-the-counter market, the fair market value of such series as determined in good faith by the Board.

(b) OPTION PRICE. The option price per share for each option granted under this Plan shall be equal to the Fair Market Value of the series of Common Stock with respect to which the option is exercisable.

(c) TERM OF OPTION. The term of each option granted under this Plan shall be ten years from the Date of Grant.

(d) PERIOD OF EXERCISE. Options granted under this Plan shall become exercisable on the date of each annual meeting of stockholders following their Date of Grant, if and only if the option holder is a member of the Board at the opening of business on that date. Directors holding exercisable options under this Plan who cease to serve as members of the Board may, during their lifetime, exercise the rights they had under such options at the time they ceased being a Director for the full unexpired term of such option. Upon the death of a Director, those entitled to do so under the Director's will or the laws of descent and distribution shall have the right, at any time within twelve months after the date of death, to exercise in whole or in part any rights which were available to the Director at the time of his or her death. Options granted under this Plan shall terminate, and no rights thereunder may be exercised, after the expiration of the applicable exercise period. Notwithstanding the foregoing provisions of this section, no rights under any options may be exercised after the expiration of ten years from their Date of Grant.

(e) METHOD OF EXERCISE AND PAYMENT. Options may be exercised only by written notice to the Company at its head office accompanied by payment of the full option price for the shares of Common Stock as to which they are exercised. The option price shall be paid in cash or by check. Upon receipt of such notice and payment, the Company shall promptly issue and deliver to the optionee (or other person entitled to exercise the option) a certificate or certificates for the number of shares as to which the exercise is made.

(f) NON-TRANSFERABILITY. Options granted under this Plan shall not be transferable by the holder thereof otherwise than by will or the laws of descent and distribution, and shall be exercisable, during the holder's lifetime, only by him or her.

(g) AMENDMENT. In addition to the rights set forth in Section 4(b) of this Plan, the Board may amend or modify any outstanding option in any respect, provided that the optionee's consent to such action shall be required unless the Board determines that the action, taking into account any related action, would not materially and adversely affect the optionee.

8. LIMITATION OF RIGHTS.

(a) NO RIGHT TO CONTINUE AS A DIRECTOR. Neither this Plan, nor the granting of an option or any other action taken pursuant to this Plan, shall constitute an agreement or understanding, express or implied, that the Company will retain an optionee as a Director for any period of time or at any particular rate of compensation.

(b) NO STOCKHOLDERS' RIGHTS FOR OPTIONS. Directors shall have no rights as a stockholder with respect to the shares covered by their options until the date they exercise such options and pay the option price to the Company, and no adjustment will be made for dividends or other rights for which the record date is prior to the date such option is exercised and paid for.

9. EFFECTIVE DATE; AMENDMENT OR TERMINATION.

Subject to the approval of the stockholders of the Company, this Plan shall be effective as of March 6, 1998. Prior to such approval, options may be granted under this Plan expressly subject to such approval. The Board may amend or terminate this Plan at any time, subject to any stockholder approval that the Board determines to be necessary or advisable.

10. STOCKHOLDER APPROVAL.

This Plan is subject to approval by the stockholders of the Company by the affirmative vote of the holders of a majority of the votes properly cast by holders of the shares of Common Stock of the Company present, or represented and entitled to vote, at a meeting duly held in accordance with the laws of The Commonwealth of Massachusetts. In the event such approval is not obtained, all options granted under this Plan shall be void and without effect.

EXHIBIT 10.27

SCHEDULE TO EXECUTIVE SEVERANCE AGREEMENT

The following are the senior executive of Genzyme Corporation who are party to an Executive Severance Agreement, the form of which was filed as Exhibit 10.33 to Genzyme's Form 10-K for 1990:

<TABLE>

<S>

David D. Fleming
John V. Heffernan
Elliot D. Hillback, Jr.
David J. McLachlan
John M. McPherson
Alan E. Smith
G. Jan van Heek
Richard A. Moscicki

<C>

Russell J. Campanello
Earl M. Collier, Jr.
Richard H. Douglas
Frank Ollington
Lisa J. Raines
Thomas J. DesRosier
Michael S. Wyzga

</TABLE>

The Company is a party to Executive Severance Agreements with the executive officers named above, under which payments will be made under certain circumstances following a Change of Control of the Company (as defined in the Executive Severance Agreements). The Executive Severance Agreements proved that in the event the officer's employment is terminated by the Company without Cause (as defined) or by the officer for Good Reason (as defined) following a Change of Control, the Company will make a lump sum severance payment to the officer of up to two times (in the case of David J. McLachlan, three times) annual salary and bonus. Upon such termination, the Executive Severance Agreements also provide for (i) a cash payment equal to the additional retirement benefit which would have been earned under the Company's retirement plans if employment had continued for two years (in the case of David J. McLachlan, three years) following the date of termination, (ii) participation in the life, accident and health insurance plans of the Company for such period except to the extent such benefits are provided by a subsequent employer and (iii) in certain circumstances, legal costs and expenses associated with such termination.

EXHIBIT 10.28

SCHEDULE TO INDEMNIFICATION AGREEMENT

The following are the directors and senior executive of Genzyme Corporation who are party to an Indemnification Agreement, the form of which was filed as Exhibit 10.34 to Genzyme's Form 10-K for 1990:

Constantine E. Anagnostopoulos
Douglas A. Berthiaume
Henry E. Blair
Russell J. Campanello
Robert J. Carpenter
Earl M. Collier, Jr.
Charles L. Cooney
Thomas J. DesRosier
Richard H. Douglas
David D. Fleming
John V. Heffernan
Elliott D. Hillback, Jr.
Evan M. Lebson
Henry R. Lewis
David J. McLachlan
John M. McPherson
Richard A. Moscicki
Frank Ollington
Lisa J. Raines
Alan E. Smith
G. Jan van Heek
Michael S. Wyzga

CONSULTING SERVICES AGREEMENT

EXHIBIT 10.30

This AGREEMENT (this "Agreement") dated December 14, 1998, but effective as of January 1, 1999 (the "Effective Date") between CHARLES L. COONEY, Ph.D., with an address at 35 Chestnut Place, Brookline, Massachusetts, 02146 (Consultant"), and GENZYME CORPORATION, a Massachusetts corporation having an office and principal place of business at One Kendall Square, Cambridge, Massachusetts 02139 ("Genzyme").

WITNESSETH:

WHEREAS, Consultant has knowledge, expertise and experience in chemical and biochemical engineering, manufacturing processes and operations management;

WHEREAS, Genzyme manufactures a variety of therapeutic, surgical, diagnostic and pharmaceutical products;

WHEREAS, Consultant is willing to provide counseling, planning, recommendations and assistance to Genzyme with respect to Genzyme's business operations and manufacturing processes, including technical reviews of current and prospective development projects, evaluations and benchmarking studies of systems and procedures, advice concerning Genzyme planning and staffing, and other forms of assistance relating to Genzyme's manufacturing and operations; and

WHEREAS, Genzyme desires to engage Consultant as an independent contractor to consult to Genzyme regarding the matters described above.

NOW, THEREFORE, in consideration of the premises and the covenants and undertakings set forth below, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Consulting Services.

(a) Genzyme hereby engages Consultant as an independent contractor to provide Consulting Services (as hereafter defined) for Genzyme with respect to the Transactions. As used herein, the term "Consulting Services" shall include the provision of technical and business advice regarding Genzyme's business operations, technology development and manufacturing processes, including in particular but without limitation, the projects set forth on Exhibit A attached hereto.

(b) Consultant agrees to make himself available and, if requested, to provide not less than fifteen (15) business days (each business day to consist of 8 hours devoted to the conduct of the Consulting Services) of Consulting Services each year during the term of this Agreement as

requested by Genzyme. Each Genzyme request (which may be provided orally or in writing) shall include a description of the requested Consulting Services, the number of consulting hours anticipated to complete the requested Consulting Services, the proposed dates and times of the Consulting Services and the location for delivery of the Consulting Services. Consultant shall use his best efforts to provide the Consulting Services in accordance with Genzyme's request; nonetheless, if the date and location of the requested Consulting Services conflict with activities previously scheduled by Consultant or are otherwise not reasonably convenient for the Consultant, the Consultant may reasonably decline to provide the Consulting Services on the proposed dates and may suggest alternative scheduling which is subject to Genzyme's approval.

2. Compensation for Consulting Services.

(a) Genzyme shall pay Consultant an annual fee equal to $30,000, payable quarterly in four equal installments of $7,500 within 20 business days after the end of each calendar quarter. If Consultant works in excess of 15 business days during the year, Genzyme shall pay Consultant a fee at a rate of $2,000 per day, and for partial days at a rate of $250.00 per hour.

(b) Genzyme shall reimburse Consultant for all reasonable out-of-pocket expenses reported by Consultant, provided, that such expenses are confirmed by appropriate supporting documentation as Genzyme may from time to time require and approved by Genzyme. Expenses subject to reimbursement shall include, but shall not be limited to, costs incurred by Consultant for travel, lodging, meals, office supplies and other costs directly related to the provision the Consulting Services. Reasonable efforts should be made by Consultant to arrange and book travel in advance to obtain the most cost effective travel pricing available. In addition to other reasonable travel policies that may be established by Genzyme from time to time, for air travel flights of less than six (6) hours Genzyme reimbursement shall be limited to coach class fares, and for air travel flights greater than six (6) hours Genzyme reimbursement shall be limited to business class fares.

3. Independent Contractor Status.

It is understood and agreed between the parties that during the period Consultant renders Consulting Services hereunder, all of his activities shall be undertaken and performed as an independent contractor. Consultant shall have no rights to receive any employee benefits, such as health and accident insurance, sick leave or vacation, which are afforded by Genzyme to regular employees. Consultant shall not in any way represent himself or herself to be an employee, partner, joint venturer, agent or officer of or with Genzyme. Genzyme shall not be responsible for the Consultant's acts while the Consultant is performing the Consulting Services, whether on Genzyme's premises or elsewhere, and the Consultant will not have authority to speak for, represent or obligate Genzyme in any way without additional prior written authority.

4. Assignments and Subcontracts.

Neither party may assign this Agreement to another person or entity without the express written permission of the other party; provided, however, that Genzyme may assign this Agreement to an affiliated company in connection with a merger, consolidation or sale of all or substantially all of the assets. If assignment is permitted, all of the conditions of this Agreement shall remain in effect for the future assignee for the entire term of this Agreement. Permission to assign shall not be unreasonably withheld or delayed.

5. Confidential Proprietary Information.

Both parties acknowledge that each owns or is entrusted with and use confidential and proprietary information which may include, without limitation, computer programs, inventions, discoveries, tools, machines, articles of manufacture, mechanisms, jigs, fixtures, methods, processes, compositions, mixtures, formulas, designs, techniques of production, manufacture or assembly, know-how, show-how, trade secrets, patent applications, technical data or specifications, testing methods, information which concerns their financial affairs, marketing practices, internal policies and procedures, research and development activities, products, contracts, suppliers or customers ("Confidential Information"). The parties acknowledge that during the performance of this Agreement, each may become privy to the Confidential Information of the other or its affiliates. Notwithstanding the foregoing, both parties agree that neither obtains any title to or interest or license in such Confidential Information of the other, and that all such Confidential Information is owned exclusively by its respective owner.

(a) Restrictions on Use and Disclosure. Each of the parties shall use the Confidential Information of the other solely for the purposes set forth in this Agreement. Each party shall maintain in strict confidence

the Confidential Information of the other, except that Genzyme may disclose or permit disclosure of Consultant's Confidential Information to its directors, officers, employees and advisors who are obligated to maintain the confidential nature of such Confidential Information and who need to know such Confidential Information for the purposes set forth in this Agreement. During the term of this Agreement, and for a period of five (5) years thereafter, irrespective of the manner of or reason for termination of this Agreement, neither party shall disclose, divulge, publish to others or use in any manner any such Confidential Information of the other without the prior written consent of the other. Upon the expiration or termination of this Agreement, each party shall return to the other party all originals, copies and summaries of documents, materials and other tangible manifestations of Confidential Information in the possession or control of such party, except that each party may retain one copy of such Confidential Information in the possession of its legal counsel for purposes of monitoring its obligations under this Agreement. Both parties further

acknowledge that any unauthorized disclosure or use of Confidential Information of the other would substantially and irreparably damage and impair the business of the other; therefore, the other party shall have, in addition to any remedies available at law, the right to obtain equitable relief to enforce the provisions of this Section 6.

(b) Subject Matter Excluded From Restrictions. The foregoing proscription against use, disclosure and copying by one party (the "Receiving Party") does not apply to information or data of the other party (the "Disclosing Party") which (i) can be shown by written documents to have been known by the Receiving Party prior to disclosure hereunder other than as a result of some breach of the Disclosing Party's rights in and to such confidential proprietary information; (ii) is available in published print or is otherwise known to the public, unless published or made known as a result of some act of omission of the Receiving Party; (iii) can be shown by written documents to have been obtained by the Receiving Party in writing from a third party who did not wrongfully acquire such information or data from the Disclosing Party and who has no obligation of confidentiality to the Disclosing Party with respect to such information; (iv) can be shown by written documents to have been independently developed by the Receiving Party or its affiliates without breach of any of the provisions of this Agreement; or (v) is disclosed by the Receiving Party pursuant to a subpoena lawfully issued by a Genzyme or governmental agency, provided that such party notifies the Disclosing Party immediately upon receipt of any such subpoena.

(c) Additional Obligations of Consultant. The Consultant agrees not to disclose to representatives of Genzyme any information which is secret or confidential information belonging to a third party or with respect to which the Consultant is under an obligation to a third party not to disclose. Similarly, if during the term of this Agreement, the Consultant discloses any ideas to Genzyme which were conceived prior to the term of this Agreement or are outside the scope of the consultancy under this Agreement, Genzyme shall have no liability to the Consultant because of his use of such ideas, except that this shall not be construed as a license under any valid patent now or hereafter issued thereon. The Consultant has not brought and will not bring to Genzyme or use in the performance of this Agreement any materials or documents of any current or former employer which are not generally available to the public, unless the Consultant shall have obtained written authorization from such employer for the possession and use of such materials or documents.

6. Non-Competition and Conflicting Obligations

(a) Non-Competition. During the term of this Agreement the Consultant shall not enter into a consulting arrangement with any other person or entity which is engaged in any business or activity similar to or competitive with the business or products of Genzyme unless such arrangement has been approved by Genzyme in writing and signed by an appropriate representative of Genzyme. It shall not be considered a competitive activity within the meaning of this Section 7 for the Consultant to be a member of the faculty or staff of a university, college or other educational or non-profit research institution.

(b) Conflicting Obligations. The Consultant represents that the Consultant is

presently under no obligation to any third party (including without limitation any governmental body and others with whom the

Consultant consults) which would prevent the Consultant from carrying out his duties and obligations under this Agreement or which is inconsistent with the provisions contained herein. The Consultant agrees not to enter into any agreement (either oral or written) in conflict with this Agreement.

7. Compliance with Policies and Regulations.

In performing the Consulting Services, the Consultant shall comply with all business conduct, regulatory and health and safety guidelines or regulations established by Genzyme or any governmental authority that may be applicable to the Consulting Services.

8. Requisite Authority.

Each party warrants and represents to the other that he, she or it has the right to enter into and fully perform this Agreement, and that, to the best of that party's knowledge, the performance of their respective obligations under this Agreement will not violate any applicable law, rule or regulation, or any contract with a third party. Each party warrants to the other that he or it has the requisite power and authority to execute and deliver this Agreement and to perform his or its obligations hereunder. Each party warrants that this Agreement has been duly and validly executed and constitutes a valid and binding obligation, enforceable in accordance with the terms of this Agreement.

9. Term and Termination.

(a) Term and Renewal. Unless earlier terminated, the initial term of this Agreement shall be for a period of one (1) year from the Effective Date hereof. The term of this Agreement may be extended at the end of its initial term and any subsequent renewal term for an additional one (1) year period by written agreement of Consultant and Genzyme executed and delivered by both parties prior to the end of the initial term or any renewal term, as the case may be.

(b) Termination by Mutual Consent. The parties may terminate this Agreement without cause upon the mutual written consent of the parties.

(c) Termination for Breach. In the event that either party commits a material breach of any of the terms herein, the non-breaching party must then give ten (10) days written notice to the breaching party, specifically setting forth the nature of the complained of breach. If the breach is not satisfactorily cured within the ten (10) day period, then the Agreement will be deemed terminated; provided, however, that all monies due hereunder as of the date of the termination will remain due and owing, under a complete and full post-termination accounting and payment, within forty-five (45) days of said

termination date.

(d) Grounds For Immediate Termination. If either party becomes bankrupt or insolvent, or if either party's business is placed in the hands of a receiver, assignee or trustee, whether by that party's voluntary act or otherwise, this Agreement shall immediately and automatically terminate.

(e) Effect of Termination. Upon termination of this Agreement, neither party shall have any further obligations under this Agreement, except (i) the liabilities accrued through the date of termination, and (b) the obligations which by their terms survive termination. The provisions of Section 9 and this Section 10(e) shall survive the expiration or termination of this Agreement.

10. Succession.

This Agreement shall inure to the benefit of and be binding upon the heirs, lawful assigns, successors, and legal representatives, as the case may be, of the undersigned parties. The operation of this Section 17 is subject to Section 6 of this Agreement.

11. Ownership of Work Product. Any products, methods, approaches or ideas made or conceived by Consultant in connection with or during the performance of the consulting services under this Agreement,

whether developed alone or in conjunction with Genzyme, shall be the property of Genzyme, free of any restrictions of any kind maintained or asserted by you or any third party.

12. Notices.

All notices contemplated herein shall be deemed sufficient when given or made in writing and personally delivered or sent by registered or certified mail (return receipt requested, postage prepaid) or by the so-called next business day service of an overnight carrier of national reputation (with evidence of delivery) to the receiving party and his, her or its representative at the addresses set forth below, or at such further addresses as may be hereafter specified in writing:

To Consultant:

Charles L. Cooney, Ph.D.
35 Chestnut Place
Brookline, MA 02192

To Genzyme:

Genzyme Corporation
One Kendall Square

Cambridge, MA 02139

Attn: Frank Ollington, Ph.D.

13. Waiver.

A waiver by either party of any term or condition of this Agreement in any one instance shall not be deemed or construed to be a waiver of such term or condition for any similar instance in the future or of any subsequent breach hereof. All rights, remedies, undertakings, obligations and agreements contained in this Agreement shall be cumulative and none of them shall be a limitation of any other remedy, right, undertaking, obligations or agreement to either party.

14. Captions.

Titles or captions of sections contained in this Agreement are inserted only as a matter of convenience and for reference, and in no way define, limit, extend or describe the scope of this Agreement or the intent of any provision hereof.

15. Governing Law.

This Agreement and the rights and obligations of the parties hereunder shall be construed in accordance with and be governed by the laws of the Commonwealth of Massachusetts, without giving effect to the conflict or choice of law provisions thereof.

16. Severability.

Any provisions of this Agreement that in any way contravenes any provision of applicable law shall, to the extent that the law is contravened, be considered severable and not applicable and shall not alter or affect any other provision or provisions of this Agreement.

17. Entire Agreement/Amendments.

This Agreement, together with the exhibits hereto, constitutes the entire Agreement between the parties, and supersedes in all respects any and all agreements between the parties, whether active or inactive, verbal or written, and there are no representations or understandings between the parties not set

forth herein. This Agreement may be amended, modified or otherwise changed only by an instrument in writing, executed by the parties, and no waiver, alteration or modification of any of the provisions hereof shall be binding upon a party unless in writing and signed by such party or his, her or its duly authorized representative.

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first written above.

CHARLES L. COONEY, Ph.D.

/s/ Charles L. Cooney
(signature)

GENZYME CORPORATION

By: /s/ Frank Ollington
Frank Ollington, Ph.D.
Senior Vice President, Operations

rwhesslein
Kendall\consult\cooney

Exhibit A

CONSULTING SERVICES PROJECTS

Participate in technical reviews of Genzyme's hyaluronic acid development projects (cost reduction, new formulations, manufacturing improvements, etc.) and support hyaluronic acid manufacturing strategic planning.

Work with Genzyme's Operations Management group to identify suitable metrics of performance for operations; to compare performance to appropriate biotechnology and pharmaceutical companies for benchmarking purposes.

Participate in one or both of Genzyme's semi-annual Technology Development reviews.

Review and evaluate Genzyme's process for the manufacture of Sevelamer in the United Kingdom.

Give presentation(s) to Genzyme technical and business staff on improving Genzyme's competitive advantage in those industries where Genzyme now produces products.

Participate in discussions on reducing Genzyme's product development cycle time (i.e., time to market).

Assist in identifying an appropriate cell culture product for manufacturing in Genzyme's Allston facility.

Participate in the interviewing and selection of key candidates, and participate in the hiring process.

Provide expert advice on technical issues as these are identified and communicated to you by Genzyme staff (Frank Ollington to resolve appropriateness, urgency, prioritization with the Consultant as necessary).

While undertaking the above, Consultant will endeavor to build into his schedule

site visits to Genzyme's United Kingdom facilities (both Kent and Haverhill) and to Genzyme eastern Massachusetts facilities so as to visit as many of these sites as possible at least once per calendar year.

CONSULTING SERVICES AGREEMENT

EXHIBIT 10.31

This AGREEMENT (this "Agreement") dated December 31, 1998, but effective as of January 1, 1998 (the "Effective Date") between ROBERT J. CARPENTER, 9 Lowell Road, Wellesley Hills, Massachusetts , 02181 (Consultant"), and GENZYME CORPORATION, a Massachusetts corporation having an office and principal place of business at One Kendall Square, Cambridge, Massachusetts 02139 ("Genzyme").

In consideration of the premises and covenants and undertakings set forth below, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Consulting Services. Genzyme hereby engages Consultant as an independent contractor to provide consulting services for Genzyme in connection with (i) its general business, and (ii) various strategic alternatives available to Genzyme to further develop its business, including mergers, acquisitions, joint ventures and other types of business collaborations.

2. Compensation for Consulting Services.

(a) Genzyme shall pay Consultant a fee of $2,000 per day, and for partial days at a rate of $250 per hour, for consulting services rendered by Consultant and reported on his Activity Report (as hereafter defined).

(b) Genzyme shall reimburse Consultant for all reasonable out-of-pocket expenses reported by Consultant on his Activity Report; provided, that such expenses are confirmed by appropriate supporting documentation as Genzyme may from time to time require and are approved by Genzyme. Expenses subject to reimbursement shall include, but shall not be limited to, costs incurred by Consultant for travel, lodging, meals, office supplies and other costs directly related to the provision the consulting services. In addition to other reasonable travel policies that may be established by Genzyme from time to time, for air travel flights of less than six (6) hours, reimbursement shall be limited to coach class fares, and for air travel flights greater than six (6) hours, reimbursement shall be limited to business class fares.

3. Activity Report.

(a) Consultant shall submit to Genzyme from time to time a report (the "Activity Report") substantially in the form attached hereto as Exhibit A. The Activity Report shall include a description of the consulting services performed, the number of days of consulting services provided by Consultant, and an itemization of out-of-pocket expenses incurred in performing such consulting services. The Activity Report shall be the basis for confirming the compensation payable to Consultant under Section 2 of this Agreement.

4. Independent Contractor Status.

It is understood and agreed between the parties that during the period Consultant renders consulting services hereunder, all of his activities shall be undertaken and performed as an independent contractor. Consultant shall have no rights to receive any employee benefits, such as health and accident insurance, sick leave or vacation, which are afforded by Genzyme to regular employees. Consultant shall not in any way represent himself or herself to be an employee, partner, joint venturer, agent or officer of or with Genzyme.

5. Assignment and Subcontracting.

Consultant may not assign this Agreement or subcontract the performance of any consulting services to another person or entity without the express written permission of Genzyme.

6. Confidential Proprietary Information.

Both parties acknowledge that each owns or are entrusted with and use confidential and proprietary information which may include, without limitation, computer programs, inventions, discoveries, tools, machines, articles of manufacture, mechanisms, jigs, fixtures, methods, processes, compositions, mixtures, formulas, designs, techniques of production, manufacture or assembly, know-how, show-how, trade secrets, patent applications, technical data or specifications, testing methods, information which concerns their financial affairs, marketing practices, internal policies and procedures, research and development activities, products, contracts, suppliers or customers ("Confidential Information"). The parties acknowledge that during the performance of this Agreement, each may become privy to the Confidential Information of the other or its affiliates. Notwithstanding the foregoing, both parties agree that neither obtains any title to or interest or license in such Confidential Information of the other, and that all such Confidential Information is owned exclusively by its respective owner.

(a) Restrictions on Use and Disclosure. Each of the parties shall use the Confidential Information of the other solely for the purposes set forth in this Agreement. Each party shall maintain in strict confidence the Confidential Information of the other, except that Genzyme may disclose or permit disclosure of Consultant's Confidential Information to its directors, officers, employees and advisors who are obligated to maintain the confidential nature of such Confidential Information and who need to know such Confidential Information for the purposes set forth in this Agreement. During the term of this Agreement, and for a period of five (5) years thereafter, irrespective of the manner of or reason for termination of this Agreement, neither party shall disclose, divulge, publish to others or use in any manner any such Confidential Information of the other without the prior written consent of the other. Upon the expiration or termination of this Agreement, each party shall return to the other party all

originals, copies and summaries of documents, materials and other tangible manifestations of Confidential Information in the possession or control of such party, except that each party may retain one copy of such Confidential Information in the possession of its legal counsel for purposes of monitoring its obligations under this Agreement. Both parties further acknowledge that any unauthorized disclosure or use of Confidential Information of the other would substantially and irreparably damage and impair the business of the other; therefore, the other party shall have, in addition to any remedies available at law, the right to obtain equitable relief to enforce the provisions of this Section 6.

(b) Subject Matter Excluded From Restrictions. The foregoing proscription against use, disclosure and copying by one party (the "Receiving Party") does not apply to information or data of the other party (the "Disclosing Party") which (i) can be shown by written documents to have been known by the Receiving Party prior to disclosure hereunder other than as a result of some breach of the Disclosing Party's rights in and to such confidential proprietary information; (ii) is available in published print or is otherwise known to the public, unless published or made known as a result of some act or omission of the Receiving Party; (iii) can be shown by written documents to have been obtained by the Receiving Party in writing from a third party who did not wrongfully acquire such information or data from the Disclosing Party and who has no obligation of confidentiality to the Disclosing Party with respect to such information; (iv) can be shown by written documents to have been independently developed by the Receiving Party or its affiliates without breach of any of the provisions of this Agreement; or (v) is disclosed by the Receiving Party pursuant to a subpoena lawfully issued by a court or governmental agency, provided that such party notifies the Disclosing Party immediately upon receipt of any such subpoena.

(c) Additional Obligations of Consultant. The Consultant agrees not to disclose to representatives of Genzyme any information which is secret or confidential information belonging to a third party or with respect to which the Consultant is under an obligation to a third party not to disclose. Similarly, if during the term of this Agreement, the Consultant discloses any ideas to Genzyme which were conceived prior to the term of this Agreement or are outside the scope of the consultancy under this

Agreement, Genzyme shall have no liability to the Consultant because of his use of such ideas, except that this shall not be construed as a license under any valid patent now or hereafter issued thereon. The Consultant has not brought and will not bring to Genzyme or use in the performance of this Agreement any materials or documents of any current or former employer which are not generally available to the public, unless the Consultant shall have obtained written authorization from such employer for the possession and use of such materials or documents.

7. Term and Termination.

(a) Term and Renewal. The initial term of this Agreement shall be for a period of one (1) year from the Effective Date hereof. The term of this Agreement shall be extended automatically at the end of its initial term and any subsequent renewal term for an additional one (1) year period without notice and without amendment, unless a party provides written notice to the other party of its election not to extend this Agreement. The terms and conditions in effect at the end of the initial period and any subsequent renewal term shall continue to apply during the renewal period following each automatic extension.

(b) Termination. Either party may terminate this Agreement without cause upon written notice to the other party.

(c) Effect of Termination. Upon termination of this Agreement, neither party shall have any further obligations under this Agreement, except (i) the liabilities accrued through the date of termination, and (b) the obligations which by their terms survive termination. The provisions of Section 6 and this Section 7(c) shall survive the expiration or termination of this Agreement.

8. Ownership of Work Product. Any products, methods, approaches or ideas made or conceived by Consultant in connection with or during the performance of the consulting services under this Agreement, whether developed alone or in conjunction with Genzyme, shall be the property of Genzyme, free of any restrictions of any kind maintained or asserted by you or any third party.

9. Notices.

All notices contemplated herein shall be deemed sufficient when given or made in writing and personally delivered or sent by registered or certified mail (return receipt requested, postage prepaid) or by the so-called next business day service of an overnight carrier of national reputation (with evidence of delivery) to the receiving party and his, her or its representative at the addresses set forth below, or at such further addresses as may be hereafter specified in writing:

To Consultant:

Robert J. Carpenter
9 Lowell Road
Wellesley Hills, MA 02181

To Genzyme:

Genzyme Corporation
One Kendall Square
Cambridge, MA 02139

Attn: Henri A. Termeer

10. Governing Law.

This Agreement and the rights and obligations of the parties hereunder shall be construed in accordance with and be governed by the laws of the Commonwealth of Massachusetts, without giving effect to the conflict or choice of law provisions thereof.

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first written above.

ROBERT J. CARPENTER

/s/ Robert J. Carpenter

GENZYME CORPORATION

By: /s/ Peter Wirth
Peter Wirth
Executive Vice President

rwhesslein
Kendall\consult\carepent2

EXHIBIT A

ACTIVITY REPORT

Name: _____

Address: _____

Report Period: _____

Report Date: _____

Project/Activity Date(s) Consulting Services Rendered~Description of Consulting Services~Location(s) Consulting Services Rendered~Consulting Hours~Expenses Subject to Reimbursement* TOTALS_____ Total Consulting Hours Year-to-Date: _____

* Expenses listed in this Activity Report must be confirmed by appropriate supporting documentation, including receipts, invoices, credit card statements and other similar documents. All requests for expense reimbursement will be considered under Genzyme's general reimbursement polices and practices for consultants and the specific understandings contained in written agreements between Genzyme and Consultant. In all cases, reimbursement for expenses is subject to Genzyme's reasonable approval.

CONSULTING SERVICES AGREEMENT

EXHIBIT 10.32

This AGREEMENT (this "Agreement") dated July 1, 1998, but effective as of July 1, 1998 (the "Effective Date") between HENRY E. BLAIR, P.O. Box 648, 275 Mill Way, Barnstable, Massachusetts 02630 (Consultant"), and GENZYME CORPORATION, a Massachusetts corporation having an office and principal place of business at One Kendall Square, Cambridge, Massachusetts 02139 ("Genzyme").

In consideration of the premises and covenants and undertakings set forth below, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Consulting Services. Genzyme hereby engages Consultant as an independent contractor to provide consulting services for Genzyme in connection with (i) its general business, and (ii) various strategic alternatives available to Genzyme to further develop its business, including mergers, acquisitions, joint ventures and other types of business collaborations. Consultant agrees to use his best efforts to make himself available, and if requested, to provide not less than twenty-five (25) business days (each business day to consist of eight (8) hours devoted to the conduct of consulting services) of consulting services during each calendar year of the term of this Agreement as requested by Genzyme.

2. Compensation for Consulting Services.

(a) Genzyme shall pay Consultant a fee of $50,000 per calendar year payable in equal semi-annual installments on June 1 and December 1, for consulting services rendered by Consultant and reported on his Activity Report (as hereafter defined).

(b) Genzyme shall reimburse Consultant for all reasonable out-of-pocket expenses reported by Consultant on his Activity Report; provided, that such expenses are confirmed by appropriate supporting documentation as Genzyme may from time to time require and are approved by Genzyme. Expenses subject to reimbursement shall include, but shall not be limited to, costs incurred by Consultant for travel, lodging, meals, office supplies and other costs directly related to the provision the consulting services. In addition to other reasonable travel policies that may be established by Genzyme from time to time, for air travel flights of less than six (6) hours, reimbursement shall be limited to coach class fares, and for air travel flights greater than six (6) hours, reimbursement shall be limited to business class fares.

3. Activity Report.

(a) Consultant shall submit to Genzyme from time to time a report (the "Activity Report") substantially in the form attached hereto as Exhibit A. The Activity Report shall include a description of the consulting services

performed, the number of days of consulting services provided by Consultant, and an itemization of out-of-pocket expenses incurred in performing such consulting services. The Activity Report shall be the basis for confirming the compensation payable to Consultant under Section 2 of this Agreement.

4. Independent Contractor Status.

It is understood and agreed between the parties that during the period Consultant renders consulting services hereunder, all of his activities shall be undertaken and performed as an independent contractor. Consultant shall have no rights to receive any employee benefits, such as health and accident insurance, sick leave or vacation, which are afforded by Genzyme to regular employees. Consultant shall

not in any way represent himself or herself to be an employee, partner, joint venturer, agent or officer of or with Genzyme.

5. Assignment and Subcontracting.

Consultant may not assign this Agreement or subcontract the performance of any consulting services to another person or entity without the express written permission of Genzyme.

6. Confidential Proprietary Information.

Both parties acknowledge that each owns or are entrusted with and use confidential and proprietary information which may include, without limitation, computer programs, inventions, discoveries, tools, machines, articles of manufacture, mechanisms, jigs, fixtures, methods, processes, compositions, mixtures, formulas, designs, techniques of production, manufacture or assembly, know-how, show-how, trade secrets, patent applications, technical data or specifications, testing methods, information which concerns their financial affairs, marketing practices, internal policies and procedures, research and development activities, products, contracts, suppliers or customers ("Confidential Information"). The parties acknowledge that during the performance of this Agreement, each may become privy to the Confidential Information of the other or its affiliates. Notwithstanding the foregoing, both parties agree that neither obtains any title to or interest or license in such Confidential Information of the other, and that all such Confidential Information is owned exclusively by its respective owner.

(a) Restrictions on Use and Disclosure. Each of the parties shall use the Confidential Information of the other solely for the purposes set forth in this Agreement. Each party shall maintain in strict confidence the Confidential Information of the other, except that Genzyme may disclose or permit disclosure of Consultant's Confidential Information to its directors, officers, employees and advisors who are obligated to maintain the confidential nature of such Confidential Information and who need to know such Confidential Information for

the purposes set forth in this Agreement. During the term of this Agreement, and for a period of five (5) years thereafter, irrespective of the manner of or reason for termination of this Agreement, neither party shall disclose, divulge, publish to others or use in any manner any such Confidential Information of the other without the prior written consent of the other. Upon the expiration or termination of this Agreement, each party shall return to the other party all originals, copies and summaries of documents, materials and other tangible manifestations of Confidential Information in the possession or control of such party, except that each party may retain one copy of such Confidential Information in the possession of its legal counsel for purposes of monitoring its obligations under this Agreement. Both parties further acknowledge that any unauthorized disclosure or use of Confidential Information of the other would substantially and irreparably damage and impair the business of the other; therefore, the other party shall have, in addition to any remedies available at law, the right to obtain equitable relief to enforce the provisions of this Section 6.

(b) Subject Matter Excluded From Restrictions. The foregoing proscription against use, disclosure and copying by one party (the "Receiving Party") does not apply to information or data of the other party (the "Disclosing Party") which (i) can be shown by written documents to have been known by the Receiving Party prior to disclosure hereunder other than as a result of some breach of the Disclosing Party's rights in and to such confidential proprietary information; (ii) is available in published print or is otherwise known to the public, unless published or made known as a result of some act or omission of the Receiving Party; (iii) can be shown by written documents to have been obtained by the Receiving Party in writing from a third party who did not wrongfully acquire such information or data from the Disclosing Party and who has no obligation of confidentiality to the Disclosing Party with respect to such information; (iv) can be shown by written documents to have been independently developed by the Receiving Party or its affiliates without breach of any of the provisions of this Agreement; or (v) is disclosed by the Receiving Party pursuant to a subpoena lawfully issued by a court or governmental agency, provided that such party notifies the Disclosing Party immediately upon receipt of any such subpoena.

Additional Obligations of Consultant. The Consultant agrees not to disclose to representatives of Genzyme any information which is secret or confidential information belonging to a third party or with respect to which the Consultant is under an obligation to a third party not to disclose. Similarly, if during the term of this Agreement, the Consultant discloses any ideas to Genzyme which were conceived prior to the term of this Agreement or are outside the scope of the consultancy under this Agreement, Genzyme shall have no liability to the Consultant because of his use of such ideas, except that this shall not be construed as a license under any valid patent now or hereafter issued thereon. The Consultant has not brought and will not bring to Genzyme or use in the performance of this Agreement any materials or documents of any current or former employer which are not generally available to the public, unless the

Consultant shall have obtained written authorization from such employer for the possession and use of such materials or documents.

7. Term and Termination.

(a) Term and Renewal. The initial term of this Agreement shall commence on the Effective Date and shall end on December 31, 1999. The term of this Agreement may be extended at the end of its initial term and any subsequent renewal term for an additional one (1) year period by written agreement of Consultant and Genzyme executed and delivered by both parties prior to the end of the initial term or any renewal term, as the case may be.

(b) Termination. Either party may terminate this Agreement without cause upon written notice to the other party.

(c) Effect of Termination. Upon termination of this Agreement, neither party shall have any further obligations under this Agreement, except (i) the liabilities accrued through the date of termination, and (b) the obligations which by their terms survive termination. The provisions of Section 6 and this Section 7(c) shall survive the expiration or termination of this Agreement.

8. Ownership of Work Product. Any products, methods, approaches or ideas made or conceived by Consultant in connection with or during the performance of the consulting services under this Agreement, whether developed alone or in conjunction with Genzyme, shall be the property of Genzyme, free of any restrictions of any kind maintained or asserted by you or any third party.

9. Notices.

All notices contemplated herein shall be deemed sufficient when given or made in writing and personally delivered or sent by registered or certified mail (return receipt requested, postage prepaid) or by the so-called next business day service of an overnight carrier of national reputation (with evidence of delivery) to the receiving party and his, her or its representative at the addresses set forth below, or at such further addresses as may be hereafter specified in writing:

To Consultant:

Henry F. Blair
P.O. Box 648
275 Mill Way
Barnstable, MA 02630

To Genzyme:

Genzyme Corporation
One Kendall Square
Cambridge, MA 02139

Attn: Henri A. Termeer

10. Governing Law.

This Agreement and the rights and obligations of the parties hereunder shall be construed in accordance with and be governed by the laws of the Commonwealth of Massachusetts, without giving effect to the conflict or choice of law provisions thereof.

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first written above.

HENRY E. BLAIR

/s/ Henry E. Blair

GENZYME CORPORATION

By: /s/ Henri A. Termeer
Henri A. Termeer
Chief Executive Officer

EXHIBIT A

ACTIVITY REPORT

Name: _____

Address: _____

Report Period: _____

Report Date: _____

Project/Activity Date(s) Consulting Services Rendered Description of Consulting Services~Location(s) Consulting Services Rendered Consulting Hours Expenses Subject to Reimbursement* TOTALS_____ Total Consulting Hours Year-to-Date: _____

* Expenses listed in this Activity Report must be confirmed by appropriate supporting documentation, including receipts, invoices, credit card statements and other similar documents. All requests for expense reimbursement will be considered under Genzyme's general reimbursement polices and practices for consultants and the specific understandings contained in written agreements between Genzyme and Consultant. In all cases, reimbursement for expenses is subject to Genzyme's reasonable approval.

EXHIBIT 10.37

SECOND AMENDED AND RESTATED CONVERTIBLE DEBT AGREEMENT

THIS SECOND AMENDED AND RESTATED CONVERTIBLE DEBT AGREEMENT dated as of December 28, 1998 (this "AGREEMENT") is between Genzyme Transgenics Corporation, a Massachusetts corporation ("GTC"), and Genzyme Corporation, a Massachusetts corporation ("GENZYME").

RECITALS:

A. Genzyme and GTC entered into an Amended and Restated Convertible Debt Agreement dated as of September 4, 1997 (as amended, the "PRIOR AGREEMENT") whereby Genzyme provided (i) a revolving line of credit to GTC in exchange for securities of GTC.

B. Genzyme and GTC desire to amend certain terms and conditions relating to the revolving credit facility provided by Genzyme to GTC in connection with the establishment of a new credit facility for GTC with Fleet National Bank (the "BANK").

C. The Prior Agreement shall be superseded and replaced in its entirety by the terms of this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants set forth herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, GTC and Genzyme agree as follows:

ARTICLE 1. REVOLVING CREDIT

1.1. LINE OF CREDIT. Subject to the terms and conditions set forth herein, Genzyme shall make loans to GTC (the "REVOLVING CREDIT LOANS") from time to time during the Revolving Credit Availability Period (but not more often than twice in any month) in U.S. Dollars in immediately available funds in the aggregate principal amount not exceeding the Revolving Credit Commitment. Within the foregoing limits and subject to the terms and conditions set forth herein, GTC may borrow, prepay and reborrow the Revolving Credit Loans.

1.2. THE NOTE.

(a) The Revolving Credit Loans shall be evidenced by an amended and restated promissory note (the "REVOLVING CREDIT NOTE") made by GTC and payable to the order of Genzyme, substantially in the form of EXHIBIT A annexed hereto, in the principal amount equal to the initial Revolving Credit Commitment with a final maturity of the Revolving Credit Maturity Date. The Revolving Credit Note shall be dated on or before the date of the first Revolving Credit

Loan and shall have the blanks therein appropriately completed.

(b) Genzyme shall maintain records in which it shall record (i) the amount of each Loan made hereunder, (ii) the amount of any principal or interest due and payable or to become

due and payable from GTC hereunder and (iii) the amount of any sum received by Genzyme hereunder.

(c) The entries made in the records maintained pursuant to paragraph (b) of this Section 1.2 shall be prima facie evidence of the existence and amounts of the obligations recorded therein; provided that the failure of Genzyme to maintain such account or any error therein shall not in any manner affect the obligation of GTC to repay the Loans in accordance with the terms of this Agreement.

1.3. USE OF PROCEEDS. GTC shall use all proceeds of the Revolving Credit Loans to fund its current operations.

1.4. REQUESTS FOR REVOLVING CREDIT LOANS.

(a) To request a Revolving Credit Loan, GTC shall notify Genzyme of such request by a written loan request signed by GTC and received by Genzyme not later than 11:00 a.m., Boston, Massachusetts time, two (2) Business Days before the date of the proposed Borrowing.

(b) Each such written loan request shall specify the following information:

(i) the aggregate amount requested, which shall not be less than $100,000;

(ii) the requested date of such Revolving Credit Loan, which shall be a Business Day; and

(iii) the location and number of GTC's account to which funds are to be disbursed.

Each loan request shall constitute a certification that the representations and warranties contained herein were true and correct when made and are true and correct as of the date of such Revolving Credit Loan and that no Default or Event of Default has occurred and is continuing.

1.5. TERMINATION AND REDUCTION OF COMMITMENT.

(a) Unless previously terminated, the Revolving Credit Commitment shall terminate at the close of business on the Revolving Credit Maturity Date.

(b) GTC may, at its option, at any time terminate, or from time to time reduce, the Revolving Credit Commitment.

(c) Any conversion of the outstanding principal amount of any Revolving Credit Loans pursuant to Section 1.7 shall reduce the Revolving Credit Commitment to the extent of such converted principal amount.

(d) GTC shall notify Genzyme of any election to terminate or reduce the Revolving Credit Commitment under paragraph (b) of this Section 1.5 at least three (3) Business Days prior to the effective date of such termination or reduction, specifying such election and the effective date thereof. Each notice delivered by GTC pursuant to this Section 1.5 shall be irrevocable;

provided that a notice of termination of Revolving Credit Commitment delivered by GTC may state that such notice is conditioned upon the effectiveness of other credit facilities, in which case such notice may be revoked by GTC (by notice to Genzyme on or prior to the specified effective date) if such condition is not satisfied. Any termination or reduction of Revolving Credit Commitment shall be permanent.

1.6. REPAYMENT OF LOANS.

(a) GTC hereby unconditionally promises to pay to Genzyme the then unpaid principal amount of the Revolving Credit Loans on the Revolving Credit Maturity Date. In addition, if following any reduction in the Revolving Credit Commitment the aggregate principal amount of the Revolving Credit Loans shall exceed the aggregate Revolving Credit Commitment, GTC shall immediately pay the Revolving Credit Loans in an aggregate amount equal to such excess; provided that any prepayments on account of reductions in the Revolving Credit Commitment pursuant to Section 1.11 shall be made in accordance with Section 1.11(b)(iv).

(b) Conversions pursuant to Section 1.7 of outstanding principal amounts shall be deemed to be repayments as of the date of such conversion.

1.7. CONVERSION TO GTC COMMON STOCK.

(a) GENZYME'S OPTION. All or part of any outstanding Loans and accrued interest thereon, or any portion thereof, may, at Genzyme's option, be converted at any time into shares of GTC's common stock, par value $.01 per share (the "GTC COMMON STOCK"), at a conversion price equal to the average closing price of GTC Common Stock over the 20 Trading Day period ending two (2) Trading Days prior to the date of conversion (the "CONVERSION PRICE").

(b) GTC'S OPTION. Outstanding Loans and accrued interest thereon, or any portion thereof, may, at the option of GTC, be converted at the

Conversion Price once each fiscal quarter into GTC Common Stock; provided, however, such GTC conversion right may be exercised only to the extent necessary, in the reasonable judgment of GTC, to maintain GTC's tangible net worth as determined at the end of such fiscal quarter at the minimum amount required for continued listing on the NASDAQ National Market.

(c) REGISTRATION RIGHTS. The shares of GTC Common Stock issuable upon conversion shall be entitled to same registration rights as are applicable to the other shares of Common Stock held by Genzyme, which rights are set forth in Section 8 of the Series A Convertible Preferred Stock Purchase Agreement dated May 1, 1993 between GTC and Genzyme.

1.8. TERM LOAN.

(a) MAKING THE TERM LOAN. Subject to Section 1.8(c), Genzyme agrees that, subject to the terms and conditions of this Agreement, and in reliance upon the representations, warranties and covenants contained herein and provided no Default or Event of Default has occurred, at GTC's option, Genzyme shall make a term loan (the "TERM LOAN" and with the Revolving Credit Loans, collectively the "LOANS") to GTC for the purpose of repaying all outstanding principal of the Revolving Credit Loans, on the Revolving Credit Maturity Date

which Term Loan shall be in a principal amount equal to the outstanding balance of the Revolving Credit Loans on the Revolving Credit Maturity Date, or in such lesser amount as is specified in writing by GTC to Genzyme at least two (2) Business Days prior to the Revolving Credit Maturity Date. Any portion of the Revolving Credit Loans not repaid by the making of the Term Loan shall be due and payable in full, along with all accrued interest thereon, on the Revolving Credit Maturity Date. Genzyme shall make the Term Loan hereunder on the Revolving Credit Maturity Date by crediting the amount thereof to the payment of the Revolving Credit Note.

(b) TERM NOTE: REPAYMENT TERMS. The Term Loan shall be evidenced by a note (the "TERM NOTE"), substantially in the form of EXHIBIT B annexed hereto, payable to the order of Genzyme, duly executed on behalf of GTC, dated the Revolving Credit Maturity Date. The Term Loan shall be payable in 12 installments consisting of 11 equal consecutive installments of principal, each installment in an amount sufficient to fully amortize the original principal amount of the Term Loan assuming quarterly principal payments over a seven-year period, payable on each Payment Date together with interest payable in accordance with Section 1.9(c) PLUS one final installment on the Term Loan Maturity Date which shall include all unpaid principal, accrued interest and any and all other amounts due and payable under the Term Note or hereunder.

(c) CONDITIONS INCLUDE ADDITIONAL COVENANTS. The commitment of Genzyme to provide the Term Loan is subject to the agreement of GTC to certain

additional covenants in form and substance satisfactory to both Genzyme and GTC, regarding the financial performance of GTC which covenants shall include covenants establishing the minimum liquidity of GTC and its Subsidiaries.

1.9. INTEREST RATE.

(a) Unless and until converted to GTC Common Stock pursuant to Section 1.7, each Loan shall bear interest at a rate per annum equal to the Interest Rate.

(b) Notwithstanding the foregoing, (i) in the event that an Event of Default shall have occurred under Section 4.1(a), all amounts which are not paid when due shall bear interest beginning on the date such amounts were originally due until paid in full at the Post-Default Rate and (ii) during the period when any other Event of Default shall have occurred the principal of all Loans hereunder shall bear interest, after as well as before judgment, at the Post-Default Rate beginning on the date such Event of Default occurred until such Event of Default is cured, in each case to the extent permitted by law.

(c) Accrued interest on each Loan shall be payable in arrears on each Payment Date; provided that (i) interest accrued at the Post-Default Rate shall be payable on demand, (ii) in the event of any repayment or prepayment in full of any Term Loan, accrued interest on the principal amount repaid or prepaid shall be payable on the date of such repayment or prepayment and (iii) all accrued interest on Revolving Credit Loans shall be payable upon the Revolving Credit Maturity Date or the earlier termination of the Revolving Credit Commitment.

(d) All interest hereunder shall be computed on the basis of a year of 360 days, and in each case shall be payable for the actual number of days elapsed (including the first day but excluding the last day).

1.10. PAYMENTS GENERALLY.

(a) GTC shall make each payment required to be made by it hereunder (whether of principal, interest or fees, or otherwise) prior to 12:00 noon, Boston, Massachusetts time, on the date when due, in immediately available funds, without set-off or counterclaim. Any amounts received after such time on any date may, in Genzyme's discretion be deemed to have been received on the next succeeding Business Day for purposes of calculating interest thereon. All such payments shall be made to Genzyme at its principal offices or at such of its other offices in Cambridge, Massachusetts as shall be notified to the relevant parties from time to time. If any payment hereunder shall be due on a day that is not a Business Day, the date for payment shall be extended to the next succeeding Business Day, and, in the case of any payment accruing interest, interest thereon shall be payable for the period of such extension. All payments

hereunder shall be made in U.S. dollars.

(b) If at any time insufficient funds are received by and available to Genzyme to pay fully all amounts of principal, interest and fees then due hereunder, such funds shall be applied (i) first, to pay interest and fees then due hereunder and (ii) second, to pay principal and then due hereunder.

1.11. PREPAYMENT OF LOANS.

(a) OPTIONAL PREPAYMENTS. GTC shall have the right at any time and from time to time to prepay the Loans in whole or in part. Each prepayment of the Term Loan shall be applied in inverse order of maturity.

(b) MANDATORY PREPAYMENTS. GTC shall make prepayments of the Loans hereunder (and reduce the Revolving Credit Commitment hereunder) as follows:

(i) EQUITY ISSUANCE. GTC agrees, on or prior to the closing of any Equity Issuance by GTC or any of its Subsidiaries, to deliver to Genzyme a statement certified by the chief financial officer of GTC, in form and detail reasonably satisfactory to Genzyme, of the estimated amount of the Net Cash Payments of such sale of securities that will (on the date of such sale of securities) be received by GTC or any of its Subsidiaries in cash.

(ii) SALE OF ASSETS. GTC agrees, on or prior to the occurrence of any Disposition by GTC or any of its Subsidiaries, to deliver to Genzyme a statement certified by the chief financial officer of GTC, in form and detail reasonably satisfactory to Genzyme, of the estimated amount of the Net Cash Payments of such Disposition that will be received by GTC or any of its Subsidiaries in cash on the date of such Disposition plus the amount, if any expected to be received thereafter.

(iii) PAYMENT AND REDUCTION. The Revolving Credit Commitment hereunder shall be reduced on the date of such receipt of Net Cash Payments from any Equity

Issuance or Disposition, or the Term Loan shall be prepaid, in an aggregate amount equal to:

(1) until the aggregate Net Cash Payments of all Dispositions and Equity Issuances from and after the date hereof equal or exceed $20,000,000, no reduction of the Revolving Credit Commitment or prepayment of the Term Loan is required from the proceeds of Dispositions and Equity

Issuances;

(2) when the aggregate Net Cash Payments of all Dispositions and Equity Issuances from and after the date hereof are cumulatively equal to or greater than $20,000,000 but less than $40,000,000, the Revolving Credit Commitment shall be reduced by, or the Term Loan shall be prepaid in an amount equal to, $4,000,000; and

(3) when the aggregate Net Cash Payments of all Dispositions and Equity Issuances from and after the date hereof are cumulatively greater than $40,000,000, all Loans shall be repaid in full and the Revolving Credit Commitment shall terminate, and

GTC shall make prepayments of Revolving Credit Loans to the extent required by Section 1.6(a). Prepayments of Loans and reductions of the Revolving Credit Commitment shall be effected in each case in the manner and to the extent specified in paragraph (iv) of this Section 1.11(b).

(iv) APPLICATION. Upon the occurrence of any of the events described in paragraphs (i) or (ii) of this Section 1.11(b), (1) the Revolving Credit Commitment shall be reduced as provided in paragraph (iii) above and (2) GTC shall prepay (A) the Revolving Credit Loans to the extent that the aggregate principal amount of such Revolving Credit Loans exceeds the Revolving Credit Commitment as adjusted or in full if required paragraph (ii)(3) above or (B) the Term Loan as provided in such paragraphs and, in each case, the amount of the required prepayment shall be applied to the prepayment of the Loans on the ninetieth day after the date on which such Net Cash Proceeds are received by GTC satisfying such conditions. Each prepayment of any Term Loan shall be applied to the installments thereof in the inverse order of maturity.

(iv) PREPAYMENTS ACCOMPANIED BY INTEREST. Prepayments shall be accompanied by accrued interest to the extent required by Section 1.9.

1.12. FEES.

(a) GTC agrees to pay to Genzyme a commitment fee, which shall accrue at a rate equal to 0.125% on the daily average unused amount of the respective Revolving Credit Commitment during the period from and including the date hereof to but excluding the date on which such Revolving Credit Commitment terminates. Accrued commitment fees shall be payable in arrears on each Payment Date and, in respect of any Revolving Credit Commitment, on the date such Revolving Credit Commitment terminate, commencing on the first such date to occur after the date hereof. All commitment fees shall be computed on the basis of a year of 360

days and shall be payable for the actual number of days elapsed (including the first day but excluding the last day).

(b) The fee payable under Section 1.12(a) may be paid by GTC in cash or by issuance to Genzyme of warrants with a term of five (5) years for the purchase of GTC Common Stock. The exercise price of each such warrant shall be equal to the closing price of GTC Common Stock on the Trading Day immediately preceding the date on which such warrant is issued as reported by the NASDAQ National Market or such other principal securities exchange or market on which GTC Common Stock is then traded. The number of shares of GTC Common Stock subject to each such warrant shall be determined using the Black-Scholes valuation method and using the per share exercise price of the warrant as the value per share of GTC Common Stock for purposes of such calculation, and Coopers & Lybrand L.L.P. (or such other independent accounting firm mutually agreeable to Genzyme and GTC) shall perform such calculation.

1.13. SUBORDINATION. Genzyme has executed a Guaranty dated as of the date (the "GUARANTY") hereof in favor of the Bank. Pursuant to Section 7 of the Guaranty the obligations of GTC to repay amounts accrued hereunder to Genzyme are subordinated to GTC's obligations to the Bank.

1.14. SECURITY. The obligations of GTC hereunder are secured by that certain Amended and Restated Security Agreement dated as of the date hereof (the "Security Agreement') between Genzyme, GTC and certain subsidiaries of GTC, a Mortgage and Security Agreement dated as of June 30, 1995 as amended by the First Amendment to Mortgage and Security Agreement dated as of December 15, 1995, and the Second Amendment to Mortgage and Security Agreement dated as of the date hereof between Genzyme, as mortgagee, and GTC as mortgagor (collectively with the Security Agreement, the "COLLATERAL DOCUMENTS"). GTC's obligations hereunder are guaranteed by certain of its subsidiaries pursuant to that certain Amended and Restated Reimbursement Agreement dated as of the date hereof among Genzyme, GTC and certain of GTC's subsidiaries named therein.

ARTICLE 2. REPRESENTATIONS AND WARRANTIES

2.1. REPRESENTATIONS, WARRANTIES AND COVENANTS OF GTC. GTC represents, warrants and covenants to Genzyme as follows:

(a) GTC is a corporation duly organized, validly existing and in good standing under the laws of the Commonwealth of Massachusetts with corporate powers adequate for executing, delivering and performing its obligations under this Agreement and the Notes.

(b) The execution, delivery and performance of this Agreement, the Notes and any other documents delivered or to be delivered to Genzyme have been

duly authorized by all necessary corporate action on the part of GTC and this Agreement, the Notes and all other necessary documents have been duly executed and delivered and, as executed, constitute the valid and binding obligations of GTC, enforceable against GTC in accordance with their respective terms.

(c) The execution, delivery and performance of this Agreement, the Notes and any other documents delivered or to be delivered to Genzyme do not and will not conflict with or contravene any provision of the charter documents or by-laws of GTC or any agreement, document, instrument, indenture or other obligation of GTC, nor does it or will it result in a violation of or default under any law, rule, regulation, order, writ, judgment, injunction, decree, determination, award, indenture, agreement, lease or instrument now in effect having applicability to GTC, or to any of its properties, nor does it or will it result in any encumbrance on GTC or any of its properties, nor does it or will it require any governmental or third party consents. As of the date hereof, GTC is not in default under any provision under the Prior Agreement.

(d) The financial statements of GTC as at December 31, 1997 and for the period then ended included in its filings under the Securities Exchange Act of 1934, as amended (the "EXCHANGE ACT"), fairly present the financial condition of GTC as of the dates thereof and its results of operations for the periods then ended and have been prepared in accordance with generally accepted accounting principles consistently applied.

(e) There is no litigation or proceeding pending before any court or governmental or administrative agency or, to the knowledge of GTC, threatened, or any basis therefor, that is required to be disclosed in GTC's periodic filings under the Exchange Act and that has not been so disclosed.

(f) Since December 31, 1997, there has been no material adverse change in the business, prospects, financial condition or operations of the GTC.

(g) The issuance and delivery to Genzyme of the shares of GTC Common Stock issuable upon conversion of any amounts payable to Genzyme hereunder in accordance with this Agreement have been duly authorized by all necessary corporate action on the part of GTC. Said shares when so issued and delivered in accordance with the provisions of this Agreement will be duly and validly issued, fully paid and non-assessable.

2.2. REPRESENTATIONS, WARRANTIES AND COVENANTS OF GENZYME. Genzyme represents, warrants and covenants to GTC as follows:

(a) Genzyme is a corporation duly organized, validly existing and in good standing under the laws of the Commonwealth of Massachusetts with corporate powers adequate for executing, delivering and performing its obligations under this Agreement.

(b) This Agreement has been executed in the name and on behalf of Genzyme by a duly elected officer of Genzyme, and the execution, delivery and performance of this Agreement by Genzyme are subject to the ratification and confirmation of this Agreement by Genzyme's Board of Directors. Genzyme shall use its reasonable best efforts to obtain the aforementioned ratification and confirmation as soon as practicable after the date hereof.

(c) The execution, delivery and performance of this Agreement do not and will not conflict with or contravene any provision of the charter documents or by-laws of Genzyme or any agreement, document, instrument or other obligation of Genzyme.

(d) Genzyme is acquiring the Notes and the GTC Common Stock issuable upon conversion thereof (the "CONVERSION SHARES") for its own account for investment and not with a view to, or for sale in connection with, any distribution thereof, nor with any present intention of distributing or selling the same; and Genzyme has no present or contemplated agreement, undertaking, arrangement, obligation, indebtedness or commitment providing for the disposition thereof.

(e) As the holder of approximately 41% of the outstanding GTC Common Stock, Genzyme is familiar with GTC, its business and its personnel. The officers of GTC have made available to Genzyme any and all information which it has requested and have answered to Genzyme's satisfaction all inquiries made by Genzyme. Genzyme has such knowledge and experience as is necessary to properly evaluate the risks and merits of an investment in GTC.

(f) Genzyme acknowledges that the Notes and the Conversion Shares shall not be sold or transferred unless either (i) they first shall have been registered under the Securities Act of 1933, as amended (the "SECURITIES ACT"), or (ii) GTC first shall have been furnished with an opinion of legal counsel, reasonably satisfactory to GTC, to the effect that such sale or transfer is exempt from the registration requirements of the Securities Act, and that the Revolving Credit Note and the certificates representing the Conversion Shares shall bear an appropriate legend to that effect.

ARTICLE 3. COVENANTS

3.1. COVENANTS OF GTC. On and after the date hereof and so long as the Revolving Credit Commitment is outstanding and until all of the Loans and all other amounts due hereunder from GTC to Genzyme shall have been paid in full, GTC shall comply with the covenants set forth in Section 3.2 hereof as well as the affirmative and negative covenants set forth in Articles 5 and 6 of the Credit Agreement dated as of the date hereof between GTC and the Bank, as

amended (the "CREDIT AGREEMENT"), which covenants are hereby incorporated by reference as if set forth herein in full, as such covenants may from time to time be amended by the parties to the Credit Agreement or waived by the Bank; provided that for purposes of this Section 3.1 and the covenants so incorporated, "Borrower" shall mean GTC, "Lender" shall mean Genzyme and "Agreement" shall mean this Agreement; provided further that the "Compliance Certificate" (as defined in the Credit Agreement) required to be delivered to Genzyme by GTC pursuant to this Section 3.1 as required by Section 5.1(c) of the Credit Agreement shall include a computation demonstrating the amount of Unfunded R&D and compliance with the covenants set forth in Section 3.2. All other terms incorporated and not otherwise defined in this Section 3.1 shall have the meanings set forth in the Credit Agreement. Such covenants shall be deemed to survive with respect to the parties hereto notwithstanding the earlier termination of the Credit Agreement.

3.2. ADDITIONAL FINANCIAL COVENANTS OF GTC. GTC agrees that, so long as the Revolving Credit Commitment and until all of the Loans and all other amounts due hereunder from GTC to Genzyme shall have been paid in full:

(a) for each of (i) the fiscal quarter ending on March 31, 1999, (ii) the two fiscal quarters ending on June 30, 1999, and (iii) the three fiscal quarters ending on September 30,

1999, GTC will not permit its Consolidated EBITDA for any such period as at the last day of such period to exceed a loss of $5,000,000;

(b) for the four fiscal quarters ending on December 31, 1999, GTC will not permit its Consolidated EBITDA as at the last day of such period to exceed a loss of $2,000,000; and

(c) commencing with the fiscal quarter ending on March 31, 2000, GTC will not, as at the last day of each fiscal quarter, permit its Consolidated EBITDA for the period of four (4) consecutive fiscal quarters ending or most recently ended prior to such date to be less than zero.

ARTICLE 4. EVENTS OF DEFAULT

4.1. EVENTS OF DEFAULT. Each of the events set forth below shall constitute an "EVENT OF DEFAULT":

(a) A payment of principal and/or interest on any Loan is not made within five (5) days after the date due;

(b) A representation or warranty of GTC in this Agreement shall prove to have been incorrect when made or deemed made in any material respect;

(c) GTC shall be in default under any provision of this Agreement and shall fail to remedy such default within 20 days of receiving written notice thereof from Genzyme;

(d) Any bankruptcy, receivership, insolvency or reorganization proceedings shall be instituted by GTC or any such proceedings shall be instituted against GTC and not dismissed within 60 days or GTC shall make an assignment for the benefit of creditors or consent to the appointment of a receiver; or

(e) GTC shall fail to make any payment in excess of $10,000 in respect of Indebtedness for money borrowed by GTC when such payment is due (whether by scheduled maturity, required prepayment, acceleration, demand or otherwise) or shall fail to perform or observe any provision of any agreement or instrument relating to such Indebtedness, which failure has resulted in the acceleration of such Indebtedness by the holder thereof.

4.2. REMEDIES. Following the occurrence and during the continuance of any Event of Default, Genzyme may (i) decline to make any or all further Loans (including conversion to the Term Loan in accordance with Section 1.8) and (ii) by written notice to GTC, declare the entire unpaid principal of the Loans, accrued interest and other amounts payable hereunder to be due and payable without further demand, presentment, protest or further notice of any kind, all of which are hereby waived by GTC; provided, however, that upon the occurrence of an Event of Default described in Section 4.1(d), the Revolving Credit Commitment and Genzyme's commitment to make the Term Loan shall immediately terminate and all Loans, accrued interest and other amounts payable hereunder shall be immediately due and payable, all without any demand or notices of any kind. Thereafter, Genzyme may proceed to protect and enforce its rights by suit in equity, action at law and/or other appropriate proceeding; and Genzyme may

offset and apply toward the payment of such amounts or part thereof any Indebtedness of it to GTC.

ARTICLE 5. DEFINITIONS

5.1. CERTAIN DEFINED TERMS. As used herein, the following terms shall have the following meanings (all terms defined in this Section 5.1 or in other provisions of this Agreement in the singular to have the same meanings when used in the plural and visa versa.

"AGREEMENT" has the meaning assigned to such term in the introductory

paragraph of this Agreement.

"BANK" has the meaning assigned to such term in Section 1.13.

"BUSINESS DAY" means any day that is not a Saturday, Sunday or other day on which commercial banks in Boston, Massachusetts are authorized or required by law to remain closed.

"COLLATERAL DOCUMENTS" has the meaning assigned to such term in Section 1.14.

"CONSOLIDATED EBITDA" shall mean, for any period, the sum, for GTC, of the following: (a) Consolidated Operating Income for such period (excluding any amounts deducted for Unfunded R&D and reported by GTC to Genzyme on the certificate required to be delivered by Section 3.1) PLUS (b) depreciation and amortization, but only to the extent deducted in determining Consolidated Operating Income for such period.

"CONSOLIDATED NET INCOME" shall mean, for any period, net income (or loss) for GTC and its Subsidiaries (determined in accordance with GAAP); provided, however, that Consolidated Net Income shall not include amounts included in computing net income (or loss) in respect of (a) the write-up of assets (other than marketable investments) after December 31, 1996 and (b) extraordinary and non-recurring gains or losses.

"CONSOLIDATED OPERATING INCOME" shall mean, for any period, the Consolidated Net Income of GTC for such period; provided, however, that, to the extent the following items have been included in determining Consolidated Net Income, they shall NOT be considered in computing Consolidated Operating Income: provision for income taxes, interest expense, equity in the operating results of unconsolidated Subsidiaries and other affiliates and non-operating, non-cash items including, but not limited to, write-off of acquired technology or acquired, in-process research and development which, in accordance with GAAP, must be charged to income.

"CONVERSION PRICE" has the meaning assigned to such term in Section 1.7(a).

"CONVERSION SHARES" has the meaning assigned to such term in Section 2.2(d).

"CREDIT AGREEMENT" has the meaning assigned to such term in Section 3.1.

"DEFAULT" means an event or act which with the giving of notice or the passage of time, or both, would become an Event of Default.

"DISPOSITION" means any sale, assignment, transfer or other disposition of any property (whether now owned or hereafter acquired) by GTC or any of its Subsidiaries to any other Person excluding (a) the granting of Liens to Genzyme, (b) any sale, assignment, transfer or other disposition of (i) any property sold or disposed of in the ordinary course of business and on ordinary business terms, (ii) any property no longer used or useful in the business of GTC and (iii) any collateral under and as defined in the Collateral Documents pursuant to an exercise of remedies of the Guarantor thereunder and (c) any licensing of intellectual property of the Borrower in the ordinary course of business.

"DISPOSITION INVESTMENT" means, with respect to any Disposition, any promissory notes or other evidences of indebtedness or investments received by GTC or any of its Subsidiaries in connection with such Disposition.

"EQUITY ISSUANCE" means any issuance or sale of equity securities by a Credit Party to any Person other than (i) an Affiliate of such Credit Party or (ii) the Guarantor; EXCLUDING the issuance or sale of equity securities under an employee benefit plan approved by the stockholders of such Credit Party.

"EXCHANGE ACT" has the meaning assigned to such term in Section 2.1(e).

"EVENT OF DEFAULT" has the meaning assigned to such term in Section 4.1.

"FORCE MAJEURE" has the meaning assigned to such term in Section 6.11.

"GAAP" means generally accepted accounting principles applied on a basis consistent with those that, in accordance with the last sentence of Section 5.2(a), are to be used in making the calculations for purposes of determining compliance with this Agreement.

"GENZYME" has the meaning assigned to such term in the introductory paragraph of this Agreement.

"GTC" has the meaning assigned to such term in the introductory paragraph of this Agreement.

"GTC COMMON STOCK" has the meaning assigned to such term in Section 1.7(a).

"INDEBTEDNESS" means, in respect of any Person, all obligations, contingent and otherwise, that in accordance with GAAP should be classified as liabilities, including without limitation (i) all debt obligations, (ii) all liabilities secured by Liens, (iii) all guarantees and (iv) all liabilities in respect of bankers' acceptances or letters of credit.

"INTEREST RATE" means, for all Loans outstanding, the lesser (where applicable) of respective interest rates indicated below for the periods set forth below:

PERIOD	INTEREST RATES
From the date hereof to and including April 1, 1999	8.0% or Prime Rate

From April 2, 1999 to and including April 1, 2000	8.5% or Prime Rate PLUS 0.5%
From April 2, 2000 to and including April 1, 2001	9.0% or Prime Rate PLUS 1.0%
From April 2, 2001 to and including April 1, 2002	9.5% or Prime Rate PLUS 1.5%
From April 2, 2002 to and including the Term Loan Maturity Date	10.0% or Prime Rate PLUS 2.0%,

but, in any event, not in excess of the maximum amount permitted by law.

"LIENS" means any encumbrance, mortgage, pledge, hypothecation, charge restriction or other security interest of any kind securing any obligation of any Person.

"LOANS" has the meaning assigned to such term in Section 1.8.

"NET CASH PAYMENTS" means,

(a) with respect to Equity Issuance, the aggregate amount of all cash proceeds received by GTC or any of its Subsidiaries therefrom less all legal, accounting, underwriting and similar fees and expenses incurred in connection therewith.

(b) with respect to any Disposition, the aggregate amount of all cash payments received by GTC or any of its Subsidiaries directly or indirectly in connection with such Disposition, whether at the time of such Disposition or after such Disposition under deferred payment arrangements or investments entered into or received in connection with such Disposition (including, without limitation, Disposition Investments); provided that

(i) Net Cash Payments shall be net of (I) the amount of any legal, accounting, title, transfer and recording tax expenses, commissions and other fees and expenses payable by GTC or any of its Subsidiaries in connection with such

Disposition and (II) any Federal, state and local income or other taxes estimated to be payable by GTC or any of its Subsidiaries as a result of such Disposition net of any available tax credits and carryforwards, but only to the extent that such estimated taxes are in fact paid to the relevant Federal, state or local governmental authority within 12 months of the date of receipt of cash payments relating to such Disposition; and

(ii) Net Cash Payments shall be net of any repayments by GTC or any its of Subsidiaries of Indebtedness to the extent that (I) the holder of such Indebtedness requires repayment of such Indebtedness or (II) the transferee of (or holder of a Lien on) such property requires that such Indebtedness be repaid as a condition to the purchase of such property.

"NOTES" means the Revolving Credit Note and the Term Note.

"PAYMENT DATE" means the last Business Day of March, June, September and December in each year, the first of which shall be the first such day after the date of this Agreement.

"PERSON" means any natural person, corporation, limited liability company, trust, joint venture, association, company, partnership, governmental authority or other entity.

"POST-DEFAULT RATE" means, a rate per annum equal to the applicable Interest Rate PLUS 4%

"PRIME RATE" means for any day the rate from time to time equal to the highest rate of interest reported in The Wall Street Journal as the prime rate or in the event that such publication is not available such other or similar rate selected by Genzyme representing the prime rate charged by major banking institutions.

"PRIOR AGREEMENT" has the meaning assigned to such term in Recital A of this Agreement.

"REVOLVING CREDIT AVAILABILITY PERIOD" means the period from and including the date hereof to the Revolving Credit Maturity Date.

"REVOLVING CREDIT COMMITMENT" means $6,300,000 as such commitment may be reduced from time to time pursuant to Sections 1.5 and 1.11.

"REVOLVING CREDIT LOANS" has the meaning assigned to such term in

Section 1.1.

"REVOLVING CREDIT MATURITY DATE" means the last Business Day in March 2000.

"REVOLVING CREDIT NOTE" has the meaning assigned to such term in Section 1.2.

"SUBSIDIARY" means, with respect to any Person (the "PARENT") at any date, any corporation, limited liability company, partnership, association or other entity the accounts of which would be consolidated with those of the parent in the parent's consolidated financial statements if such financial statements were prepared in accordance with GAAP as of such date, as well as any other corporation, limited liability company, partnership, association or other entity (a) of which securities or other ownership interests representing more than 50% of the ordinary voting power or, in the case of a partnership, more than 50% of the general partnership interests are, as of such date, owned, controlled or held, or (b) that is, as of such date, otherwise Controlled, by the parent or one or more subsidiaries of the parent or by the parent and one or more subsidiaries of the parent. References herein to "SUBSIDIARIES" shall, unless the context requires otherwise, be deemed to be references to Subsidiaries of the Borrower.

"SECURITIES ACT" has the meaning assigned to such term in Section 2.2(f).

"TRADING DAY" means any day on which GTC Common Stock is traded for any period on the NASDAQ National Market or on the principal securities exchange or market on which the GTC Common Stock is then traded.

"TERM LOAN" has the meaning assigned to such term in Section 1.8(a).

"TERM LOAN MATURITY DATE" means the last Business Day in March 2003.

"TERM NOTE" has the meaning assigned to such term in Section 1.8(b).

"UNFUNDED R&D" means, for any period, (a) the amount of expenses for research and development costs for such period MINUS (b) revenues earned for such period attributable to contracts for the performance of research and development.

5.2. ACCOUNTING TERMS AND DETERMINATIONS.

(a) Except as otherwise expressly provided herein, all accounting terms used herein shall be interpreted, and all financial statements and certificates and reports as to financial matters required to be delivered to

Genzyme hereunder shall (unless otherwise disclosed to Genzyme in writing at the time of delivery thereof in the manner described in subsection (b) below) be prepared, in accordance with GAAP applied on a basis consistent with those used in the preparation of the latest annual or quarterly financial statements furnished to the Lender hereunder (which, prior to the delivery of the first annual or quarterly financial statements under Section 3.1 hereof, shall mean the audited financial statements as at December 31, 1996).

(b) To enable the ready and consistent determination of compliance with the covenants set forth in Article 5, GTC will not change its fiscal year.

5.3. SECTION REFERENCES. References to particular sections are references to sections of this Agreement unless otherwise indicated.

ARTICLE 6. MISCELLANEOUS

6.1. REPLACEMENT OF PRIOR AGREEMENT. Upon the execution and delivery of this Agreement, Article 1 (except Sections 1.10 and 1.11) of the Prior Agreement shall be superseded and replaced by the terms of this Agreement and the remainder of the Prior Agreement shall remain in full force and effect.

6.2. EXPENSES. GTC shall pay all costs and expenses incurred by Genzyme in connection with the preparation, execution, administration and enforcement of this Agreement and the Notes, including reasonable attorneys' fees.

6.3. NOTICES. All notices, requests and other communications to GTC or Genzyme hereunder shall be in writing (including telecopy or similar electronic transmissions), shall refer specifically to this Agreement and shall be personally delivered or sent by telecopy or other electronic facsimile transmission (with conformation of receipt and a hard copy sent by mail), by the next business day service of a nationally recognized overnight courier or by registered mail or certified mail, return receipt requested, postage prepaid, in each case to the respective address specified below (or to such address as may be specified in writing to the other party hereto in accordance with this Section 6.3):

To GTC:

Genzyme Transgenics Corporation
One Mountain Road
Framingham, MA 01701
Attention: President
Facsimile (508) 370-3797

To Genzyme:

Genzyme Corporation
One Kendall Square
Cambridge, MA 02139
Attention: Chief Legal Officer
Facsimile (617) 252-7553

Any notice or communication given in conformity with this Section 6.3 shall be deemed to be effective when received by the addressee, if delivered by hand or facsimile, the next Business Day after mailing, if mailed via an overnight courier, and seven (7) days after mailing, if sent by registered or certified mail.

6.4. ENTIRE AGREEMENT. This Agreement, together with any agreements referenced herein, constitutes, on and as of the date hereof, the entire agreement of GTC and Genzyme with respect to the subject matter hereof, and all prior or contemporaneous understandings or agreements, whether written or oral, between GTC and Genzyme with respect to such subject matter are hereby superseded in their entirety.

6.5. NO IMPLIED WAIVERS; RIGHTS CUMULATIVE. No failure on the part of GTC or Genzyme to exercise and no delay in exercising any right, power, remedy or privilege under this Agreement, or provided by statute or at law or in equity or otherwise, including, without limitation, the right or power to terminate this Agreement, shall impair, prejudice or constitute a waiver of any such right, power, remedy or privilege or be construed as a waiver of any breach of this Agreement or as an acquiescence therein, nor shall any single or partial exercise of any such right, power, remedy or privilege preclude any other or further exercise thereof or the exercise of any other right, power, remedy or privilege.

6.6. AMENDMENTS. No amendment, modification, waiver, termination or discharge of any provision of this Agreement, nor consent to any departure by GTC or Genzyme therefrom, shall in any event be effective unless the same shall be in writing specifically identifying this Agreement and the provision intended to be amended, modified, waived, terminated or discharged and signed by the party against whom enforcement of such amendment is sought, and each such amendment, modification, waiver, termination or discharge shall be effective only in the specific instance and for the specific purpose for which given. No provision of this Agreement shall be varied, contradicted or explained by any oral agreement, course of dealing or performance or any other matter not set forth in an agreement in writing and signed by the party against whom enforcement of such variation, contradiction or explanation is sought.

6.7. SUCCESSORS AND ASSIGNS. The terms and provisions of this Agreement shall inure to the benefit of, and be binding upon, GTC, Genzyme and their respective successors and assigns. Neither GTC nor Genzyme may assign or transfer any of the respective rights or interests, nor delegate any of their respective obligations, hereunder, without prior written consent from the other party, except that either party may fully assign its rights and interests and delegate its obligations hereunder (a) to an affiliate if such affiliate assumes all of the obligations of such party hereunder in writing and this Agreement remains binding upon the assigning party or (b) to any entity which acquires all or substantially all of the assets of the assigning party or which is the surviving entity in a merger or consolidation with such party, if such entity assumes all of the obligations of such party hereunder in writing.

6.8. SURVIVAL. All covenants, agreements, representations and warranties made by GTC herein, and in any certificates or other instruments delivered in connection with or pursuant to this Agreement, shall be considered to have been relied upon by Genzyme and shall survive the execution and delivery of this Agreement and the making of any Loans, regardless of any investigation made by any such other party or on its behalf and notwithstanding that Genzyme may have had notice or knowledge of any Default or incorrect representation or warranty at the time any credit is extended hereunder, and shall continue in full force and effect so long as the principal of or any accrued interest on any Loan or any fee or any other amount payable under this Agreement is outstanding and so long as the Revolving Credit Commitment has not expired or terminated.

6.9. GOVERNING LAW. This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts.

6.10. WAIVER OF JURY TRIAL. EACH PARTY HERETO HEREBY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY LEGAL PROCEEDING DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY (WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY). EACH PARTY HERETO (A) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND (B) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HERETO HAVE BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION 6.10.

6.11. FORCE MAJEURE. GTC and Genzyme shall each be excused for any failure or delay in performing any of its respective obligations under this Agreement, if such failure or delay is caused by Force Majeure. For purposes of this Agreement, "FORCE MAJEURE" shall mean any act of God, accident, explosion, fire, storm, earthquake, flood, drought, peril of the sea, riot, embargo, war or foreign, federal, state or municipal order of general application, seizure, requisition or allocation, any failure or delay of transportation, shortage of or inability to obtain supplies, equipment, fuel or labor or any other circumstances or events beyond the reasonable control of the party relying upon such circumstances or events.

6.12. FURTHER ASSURANCES. Each of GTC and Genzyme agrees to duly execute and deliver, or cause to be duly executed and delivered, such further instruments and do and cause to be done such further acts and things, including, without limitation, the execution of such additional assignments, agreements, documents and instruments, that may be necessary or as the other party hereto may at any time and from time to time reasonably request in connection with this Agreement or to carry out more effectually the provisions and purposes of, or to better assure and confirm unto such other party its rights and remedies under, this Agreement.

6.13. SEVERABILITY. If any provision hereof should be held invalid, illegal or unenforceable in any respect in any jurisdiction, then, to the fullest extent permitted by law, (a) all other provisions hereof shall remain in full force and effect in such jurisdiction and shall be liberally construed in order to carry out the intentions of the parties hereto as nearly as may be possible and (b) such invalidity, illegality or unenforceability shall not affect the validity, legality or enforceability of such provision in any other jurisdiction. To the extent permitted by applicable law, GTC and Genzyme hereby waive any provision of law that would render any provision hereof prohibited or unenforceable in any respect.

6.14. HEADINGS. Headings used herein are for convenience only and shall not in any way affect the construction of, or be taken into consideration in interpreting, this Agreement.

6.15. EXECUTION IN COUNTERPARTS. This Agreement may be executed in any number of counterparts, each of which counterparts, when so executed and delivered, shall be deemed to be an original, and all of which counterparts, taken together, shall constitute one and the same instrument.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as an instrument under seal in their respective corporate names by their respective authorized representatives as of the date first set forth above.

GENZYME TRANSGENICS CORPORATION

By: /s/ John B. Green
John B. Green

Vice President and Chief Financial Officer

GENZYME CORPORATION

By: /s/ Evan Lebson
Evan Lebson
Treasurer

EXHIBIT A

THIS SECURITY HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR APPLICABLE STATE SECURITIES LAWS AND MAY NOT BE TRANSFERRED OR OTHERWISE DISPOSED OF UNLESS IT HAS BEEN REGISTERED UNDER THE ACT AND SUCH LAWS OR (1) REGISTRATION UNDER APPLICABLE STATE SECURITIES LAWS IS NOT REQUIRED AND (2) AN OPINION OF COUNSEL SATISFACTORY TO THE BORROWER IS FURNISHED TO THE BORROWER TO THE EFFECT THAT REGISTRATION UNDER THE ACT IS NOT REQUIRED.

AMENDED AND RESTATED CONVERTIBLE REVOLVING CREDIT NOTE

$6,300,000 December 28, 1998
Cambridge, Massachusetts

FOR VALUE RECEIVED, Genzyme Transgenics Corporation, a Massachusetts corporation (the "BORROWER"), hereby unconditionally promises to pay to the order of Genzyme Corporation (the "LENDER"), at the place and times provided in that certain Second Amended and Restated Convertible Debt Agreement dated of even date herewith (as amended from time to time, the "AGREEMENT") between the Borrower and the Lender, the principal sum of

SIX MILLION THREE HUNDRED THOUSAND DOLLARS
($6,300,000)

or such lesser amount as may be then outstanding hereunder, in lawful money of the United States of America, as provided in the Agreement, and in immediately available funds, and to pay interest on the unpaid principal balance hereof from time to time outstanding, in like money, for the period commencing on the date hereof until paid in full, at the Interest Rate on the dates provided in the Agreement. Each change in the Interest Rate based upon the Prime Rate shall take

effect simultaneously with the corresponding change in such Prime Rate. All amounts outstanding which are not paid when due and during the period when any Event of Default shall have occurred and be continuing for a period of 30 or more days, the principal of all Loans hereunder shall bear interest, after as well as before judgment, at the Post-Default Rate.

This Amended and Restated Convertible Revolving Credit Note is subordinated to certain indebtedness of the Borrower to Fleet National Bank (the "BANK") as set forth in a Guaranty dated as of the date hereof made by the Lender in favor of the Bank.

This Amended and Restated Convertible Revolving Credit Note is the "Revolving Credit Note" referred to in the Agreement, and is entitled to the benefits of and its subject to the provisions of the Agreement but neither this reference to the Agreement nor any provision thereof shall affect or impair the absolute and unconditional obligation of the undersigned maker of this Amended and Restated Convertible Revolving Credit Note to pay the principal of and interest on this Amended and Restated Convertible Revolving Credit Note as herein provided. All capitalized terms used herein and not specifically defined shall have the meanings given to them in the Agreement.

Each Loan made by the Lender pursuant to the Agreement and all payments made on account of principal and interest shall be recorded by the Lender in its records and prior to any transfer hereof, endorsed on the grid schedule attached hereto. The Borrower acknowledges that, notwithstanding the state of the grid schedule hereto, the Lender's records with respect to Loans and payments made hereunder shall constitute, in the absence of manifest error, presumptive evidence of the Borrower's indebtedness from time to time under the Agreement and hereunder.

Subject to the terms of the Agreement, the outstanding principal and interest payable hereunder shall be convertible into shares of Common Stock, $.01 par value per share, of the Borrower at the Conversion Price set forth in Section 1.7 thereof.

This Amended and Restated Convertible Revolving Credit Note may be prepaid at any time without penalty or fee as provided in the Agreement.

Upon the occurrence of an Event of Default specified in Section 4.1 of the Agreement, the holder hereof may declare the entire outstanding indebtedness evidenced by this Amended and Restated Convertible Revolving Credit Note, with interest accrued thereon, to be immediately due and payable as provided in the Agreement.

PRESENTMENT, DEMAND, PROTEST AND NOTICE OF DISHONOR AND NON-PAYMENT ARE HEREBY WAIVED BY THE UNDERSIGNED.

This Amended and Restated Convertible Revolving Credit Note shall be governed by the laws of the Commonwealth of Massachusetts and shall have the effect of an instrument under seal.

GENZYME TRANSGENICS CORPORATION

By

John B. Green
Vice President and
Chief Financial Officer

GRID SCHEDULE
TO AMENDED AND RESTATED
CONVERTIBLE REVOLVING CREDIT NOTE

Dated: December __, 1998

Date of Advance/Payment	Amount of Advance	Amount of Principal Paid	Amount of Interest Paid	Outstanding Credit	Notation Made By

EXHIBIT B

THIS SECURITY HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR APPLICABLE STATE SECURITIES LAWS AND MAY NOT BE TRANSFERRED OR OTHERWISE DISPOSED OF UNLESS IT HAS BEEN REGISTERED UNDER THE ACT AND SUCH LAWS OR (1) REGISTRATION UNDER APPLICABLE STATE SECURITIES LAWS IS NOT

REQUIRED AND (2) AN OPINION OF COUNSEL SATISFACTORY TO THE BORROWER IS FURNISHED TO THE BORROWER TO THE EFFECT THAT REGISTRATION UNDER THE ACT IS NOT REQUIRED.

CONVERTIBLE TERM NOTE

$[_____] March 31, 2000
Cambridge, Massachusetts

FOR VALUE RECEIVED, Genzyme Transgenics Corporation, a Massachusetts corporation (the "BORROWER"), hereby unconditionally promises to pay to the order of Genzyme Corporation (the "LENDER") at the place and times provided in that certain Second Amended and Restated Convertible Debt Agreement dated as of December __, 1998 (as amended from time to time, the "AGREEMENT"), between the Borrower and the Lender, the principal sum of

[_____] DOLLARS ($_____)

or, if less, the aggregate unpaid principal amount of the Term Loan made by the Lender to the Borrower pursuant to the Agreement, in lawful money of the United States of America, as provided in the Agreement, and in immediately available funds, and to pay interest on the unpaid principal balance hereof from time to time outstanding, in like money, for the period commencing on the date hereof until paid in full, at the Interest Rate on the dates provided in the Agreement. Each change in the Interest Rate based upon the Prime Rate shall take effect simultaneously with the corresponding change in such Prime Rate. Principal on this Convertible Term Note shall be payable quarterly in arrears in 12 consecutive quarterly installments consisting of 11 equal consecutive quarterly installments of principal in an amount sufficient to fully amortize the original principal amount of the Term Loan in quarterly payments over a seven-year period, beginning on June 30, 2000, and payable on each Payment Date thereafter, PLUS one final installment on March 31, 2003 which shall include all unpaid principal, unpaid and accrued interest and any and all other amounts due and payable hereunder and under the Agreement, and together with interest thereon from the date hereof payable at the Interest Rate in arrears on each Payment Date. All amounts outstanding which are not paid when due and during the period when any Event of Default shall have occurred and be continuing for a period of 30 or more days, the principal of all Loans hereunder shall bear interest, after as well as before judgment, at the Post-Default Rate.

This Convertible Term Note is subordinated to certain indebtedness of the Borrower to Fleet National Bank (the "BANK") as set forth in a Guaranty dated as of December __, 1998 made by the Lender in favor of the Bank.

This Convertible Term Note is the "Term Note" referred to in the Agreement, and is entitled to the benefits of and its subject to the provisions

of the Agreement but neither this reference to the Agreement nor any provision thereof shall affect or impair the absolute and unconditional obligation of the undersigned maker of this Convertible Term Note to pay the principal of and interest on this Convertible Term Note as herein provided. All capitalized terms used herein and not specifically defined shall have the meanings given to them in the Agreement.

All payments made on account of principal and interest shall be recorded by the Lender in its records. The Borrower acknowledges that the Lender's records with respect to payments made hereunder shall constitute, in the absence of manifest error, presumptive evidence of the Borrower's indebtedness from time to time under the Agreement and hereunder.

Subject to the terms of the Agreement, the outstanding principal and interest payable hereunder shall be convertible into shares of Common Stock, $.01 par value per share, of the Borrower at the Conversion Price set forth in Section 1.7 thereof.

This Convertible Term Note may be prepaid at any time without penalty or fee as provided in the Agreement.

Upon the occurrence of an Event of Default specified in Section 4.1 of the Agreement, the holder hereof may declare the entire outstanding indebtedness evidenced by this Convertible Term Note, with interest accrued thereon, to be immediately due and payable as provided in the Agreement.

PRESENTMENT, DEMAND, PROTEST AND NOTICE OF DISHONOR AND NON-PAYMENT ARE HEREBY WAIVED BY THE UNDERSIGNED.

This Convertible Term Note shall be governed by the laws of the Commonwealth of Massachusetts and shall have the effect of an instrument under seal.

GENZYME TRANSGENICS CORPORATION

By

John B. Green
Vice President and Chief Financial Officer

EXHIBIT 13.1

FINANCIAL STATEMENTS

<TABLE>
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</TABLE>

GENZYME GENERAL
COMBINED SELECTED FINANCIAL DATA

The following Selected Financial Data reflects the results of operations and financial position of Genzyme General Division ("Genzyme General") and should be read in conjunction with the financial statements of Genzyme General and accompanying footnotes.

<TABLE>
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COMBINED STATEMENTS OF OPERATIONS DATA
(AMOUNTS IN THOUSANDS)

	FOR THE YEARS ENDED DECEMBER 31,				
	1998	1997	1996	1995	1994
<S>	<C>	<C>	<C>	<C>	<C>
Revenues:					
Net product sales	$ 613,685	$ 529,927	$ 424,483	$ 304,373	$ 238,645
Net service sales	55,445	55,835	61,638	47,230	49,686
Revenues from research and development contracts:					
Related parties	3,568	8,041	23,011	26,758	20,883
Other	579	3,400	2,310	202	1,513
Total revenues	673,277	597,203	511,442	378,563	310,727
Operating costs and expenses:					
Cost of products sold	211,076	206,028	155,930	113,964	92,226

Cost of services sold	34,240	35,451	42,889	31,137	32,116
Selling, general and administrative	183,469	173,020	135,153	97,520	80,026
Research and development (including research and development related to contracts)	91,757	74,192	69,969	57,907	51,696
Amortization of intangibles	13,358	12,534	8,849	4,647	4,741
Purchase of in-process research and development	--	--	130,639	14,216	--
Other	--	--	1,465	--	--
Total operating costs and expenses	533,900	501,225	544,894	319,391	260,805
Operating income (loss)	139,377	95,978	(33,452)	59,172	49,922
Other income (expenses):					
Equity in net loss of unconsolidated affiliates	(19,685)	(5,281)	(3,646)	(1,810)	(1,353)
Gain on affiliate sale of stock	2,369	--	1,013	--	--
Minority interest	4,285	--	--	1,608	1,659
Gain on sale of product line	31,202	--	--	--	--
Gain on sale of investments	3,391	--	1,711	--	--
Charge for impaired investments	(3,397)	--	--	--	(9,431)
Other	--	(2,000)	--	--	(1,980)
Investment income	23,097	10,038	13,909	7,428	9,072
Interest expense	(17,069)	(8,108)	(6,842)	(1,069)	(1,354)
Total other income (expenses)	24,193	(5,351)	6,145	6,157	(3,387)
Income (loss) before income taxes	163,570	90,627	(27,307)	65,329	46,535
Provision for income taxes	(62,438)	(33,601)	(20,206)	(30,506)	(16,341)
Net income (loss)	101,132	57,026	(47,513)	34,823	30,194
Tax benefit allocated from Genzyme Tissue Repair	16,394	17,666	17,011	8,857	1,860
Tax benefit allocated from Genzyme Molecular Oncology	3,527	2,755	--	--	--
Net income (loss) attributable to Genzyme General Division Common Stock ("GGD Stock")	$ 121,053	$ 77,447	$ (30,502)	$ 43,680	$ 32,054

</TABLE>

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<TABLE>
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COMBINED STATEMENTS OF OPERATIONS DATA CONTINUED
(AMOUNTS IN THOUSANDS, EXCEPT PER SHARE AMOUNTS)

	FOR THE YEARS ENDED DECEMBER 31,				
	1998	1997	1996	1995	1994
<S>	<C>	<C>	<C>	<C>	<C>
GENZYME GENERAL COMMON SHARE DATA:					
Net income (loss) attributable to GGD Stock	$ 121,053	$ 77,447	$ (30,502)	$ 43,680	$ 32,054
Per Genzyme General common share:					
Net income (loss) per Genzyme General common share - basic	$ 1.53	$ 1.01	$ (0.45)	$ 0.79	$ 0.67
Weighted average shares outstanding	79,063	76,531	68,289	55,531	48,141
Net income per Genzyme General common and common equivalent share-diluted	$ 1.48	$ 0.98	$ (0.45)	$ 0.68	$ 0.58
Adjusted weighted average shares outstanding	81,734	78,925	68,289	63,967	55,321

</TABLE>

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COMBINED BALANCE SHEET DATA: DECEMBER 31,

	1998	1997	1996	1995	1994
<S>	<C>	<C>	<C>	<C>	<C>
Cash and investments	$ 556,097	$ 193,197	$ 171,725	$278,663	$128,652
Working capital	412,711	307,988	381,373	308,036	83,314
Total assets	1,646,307	1,203,056	1,229,519	854,586	630,144
Long-term debt and convertible debt	274,651	117,978	223,998	124,473	126,555
Division equity	1,167,067	980,876	884,225	659,281	395,651

</TABLE>

There were no cash dividends paid.

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MANAGEMENT'S DISCUSSION AND ANALYSIS OF GENZYME GENERAL'S FINANCIAL CONDITION AND RESULTS OF OPERATIONS

INTRODUCTION

This discussion contains forward-looking statements. These forward-looking statements represent the expectations of the management of Genzyme General and Genzyme Corporation ("Genzyme" or the "Company") as of the filing date of this Annual Report. The actual results for both Genzyme General and Genzyme could differ materially from those anticipated by the forward-looking statements due to the risks and uncertainties described under the caption "Factors Affecting Future Operating Results" for Genzyme General and Genzyme included elsewhere in this Annual Report. Stockholders and potential investors should consider carefully each of these risks and uncertainties in evaluating the financial condition and results of operations of Genzyme General and Genzyme.

Genzyme provides separate financial statements for the Company and its subsidiaries on a consolidated basis and for each of Genzyme General, Genzyme Tissue Repair Division ("Genzyme Tissue Repair" or "GTR") and Genzyme Molecular Oncology Division ("Genzyme Molecular Oncology" or "GMO"). The financial statements of each division include the financial position, results of operations and cash flows of programs and products allocated to the division under the Company's Restated Articles of Organization, as amended (the "Charter"), and the management and accounting policies adopted by the Genzyme Board of Directors (the "Genzyme Board") to govern the relationship of the divisions. The financial information of Genzyme General, GTR and GMO, taken together, include all accounts which comprise the consolidated financial information presented for Genzyme and its subsidiaries.

For purposes of financial statement presentation, all of the Company's programs and products are allocated to either Genzyme General, GTR or GMO. Notwithstanding this allocation, Genzyme continues to hold title to all of the assets and is responsible for all of the liabilities allocated to each of the divisions. Holders of Genzyme General Division Common Stock ("GGD Stock"), Genzyme Tissue Repair Division Common Stock ("GTR Stock") and Genzyme Molecular Oncology Division Common Stock ("GMO Stock") have no specific claim against the assets attributed to the division whose performance is associated with the series of stock they hold. Liabilities or contingencies of one division that affect Genzyme's resources or financial condition could affect the financial condition or results of operations of the other divisions.

Stockholders and potential investors should, therefore, read this discussion and analysis of Genzyme General's financial position and results of operations in conjunction with the financial statements and related notes of Genzyme General, the discussion and analysis of Genzyme's financial position and results of operations, and the consolidated financial statements and related notes of Genzyme, all of which are included with this Annual Report.

RESULTS OF OPERATIONS

The following discussion summarizes the key factors management considers necessary in reviewing Genzyme General's combined results of operations. Detailed discussion and analysis of the consolidated results of operations of Genzyme and its subsidiaries, which include the combined results of Genzyme General, Genzyme Tissue Repair and Genzyme Molecular Oncology, are provided separately in this Annual Report under "Management's Discussion and Analysis of Genzyme Corporation and Subsidiaries' Financial Condition and Results of Operations."

1998 AS COMPARED TO 1997

REVENUES. Total revenues for 1998 were $673.3 million compared to $597.2 million in 1997, an increase of 13%. Product and service revenues were $669.1 million, compared to $585.8 million in 1997, an increase of 14%. Revenues from research and development contracts for 1998 were $4.1 million compared to $11.4 million in 1997, a decrease of 64%.

Product revenues in 1998 increased 16% to $613.7 million from $529.9 million in 1997, due primarily to increased sales of Cerezyme(R) enzyme.

In 1998, sales of products by Genzyme General's Therapeutics business unit consisted primarily of sales of Cerezyme(R) enzyme and Ceredase(R) enzyme. Sales of Cerezyme(R) enzyme and Ceredase(R) enzyme increased 24% to $411.1 million from $332.7 million in 1997, due to continued growth in new patient accruals in existing markets and strong international sales. Genzyme General's results of operations are highly dependent on sales of Cerezyme(R) enzyme and Ceredase(R) enzyme, which together represented 67% of Genzyme General's product sales in 1998 compared to 63% in 1997.

The Surgical Products business unit was formed in July 1996 following the acquisition of Deknatel Snowden Pencer, Inc. ("DSP"), which combined the business of DSP with Genzyme General's hyaluronic acid-based products designed to limit the incidence and occurrence of post-operative adhesions (the "Sepra Products"). Revenues from Sepra Products primarily consist of sales of Seprafilm(R) Bioresorbable Membrane. Product sales by the Surgical Products business unit for 1998 were $104.0 million as compared to $100.8 million for 1997. Surgical Products sales consisted primarily of sales of cardiovascular fluid management products, surgical closures and surgical instruments. These product sales (excluding sales of Sepra Products) were up slightly in 1998 as compared to 1997. Sales of Sepra Products increased 88% in 1998 as compared to 1997.

Seprafilm(R) Bioresorbable Membrane is being marketed in the United States and Canada by Genzyme General on behalf of Genzyme Ventures II ("GVII"), a joint venture between Genzyme and Genzyme Development Partners, L.P. ("GDP"). In March 1997, Genzyme and GDP reached agreement concerning the operation of and allocations of profits and losses from GVII. Under the terms of this agreement, Genzyme purchases product from GVII for resale by Genzyme. Genzyme funds the activities of GVII and is reimbursed at cost for selling, general and administrative ("SG&A") expenses. The first $200,000 of losses generated by GVII were allocated to GDP and thereafter losses are allocated 40% to GDP and 60% to Genzyme, except that if losses would be allocated to the general partner of GDP rather than the limited partners, all of such losses are allocated to Genzyme. GDP will receive the first $5.6 million in profits generated by GVII, Genzyme General will receive the next $8.4 million in profits and, thereafter, Genzyme General and GDP will receive 60% and 40%, respectively, of the profits of GVII. In 1997, Genzyme General contributed an additional $1.5 million to GVII through GDP. There were no capital contributions in 1998.

Revenues from the Diagnostics business unit consist of product sales and genetic testing service revenues. On July 1, 1998, Genzyme completed the sale of substantially all of the assets of its research products business to TECHNE Corp. and its wholly owned subsidiary, Research and Diagnostic Systems, Inc. (the "TECHNE Sale"). The research products business contributed $9.1 million and $15.8 million of revenue in 1998 and 1997, respectively. Despite the sale of these assets, product sales of diagnostic products in 1998 were level with 1997. Service revenues in 1998 were level with 1997.

International sales as a percentage of total sales in 1998 increased to 41% from 37% in 1997, due primarily to a 32% increase in combined international sales of Cerezyme(R) enzyme and Ceredase(R) enzyme.

Revenues from research and development contracts for 1998 decreased 64% to $4.1 million from $11.4 million in 1997, due primarily to a decrease in services performed for Genzyme Transgenics Corporation ("GTC").

MARGINS AND OPERATING EXPENSES. Total gross margins for 1998 were 63% compared to 59% in 1997. Excluding other charges, gross margins for 1998 were 67% compared to 63% in 1997. Genzyme General provides a broad range of health care products and services, resulting in a range of gross margins depending on the particular market conditions of each product or service. Product margins for 1998 were 66%, including certain other charges, compared to 61% in 1997, including certain other charges. The increase in product margins in 1998 is primarily due to increased sales of Cerezyme(R) enzyme.

In the third quarter of 1998, Genzyme General recorded charges of $25.2 million associated with the write-down of inventories in the Therapeutics and Surgical Products business units. The conversion of patients with Gaucher disease from Ceredase(R) enzyme to Cerezyme(R) enzyme is substantially complete. Based on its successful progress in converting patients from Ceredase(R) enzyme to Cerezyme(R) enzyme, Genzyme General determined that its existing supply of finished goods of Ceredase(R) enzyme was sufficient to meet patient needs. As a result, in the third quarter of 1998, Genzyme General recorded a $14.8 million charge to cost of products sold primarily for the excess inventory used to make Ceredase(R) enzyme. In addition, during the third quarter of 1998, Genzyme General reviewed its requirements to support the Sepra Products. As a result, in the third quarter of 1998, Genzyme General recorded a $10.4 million charge to

cost of products sold to write-down Sepra Products inventory amounts to net realizable value.

Without these other charges, product margins in 1998 would have been 70% compared to 66% in 1997. Product margins, without other charges increased in 1998 due to increased sales of Cerezyme(R) enzyme. Service margins for 1998 were 38% compared to 37% in 1997.

SG&A expenses and amortization of intangibles for 1998 were $196.8 million compared to $185.6 million in 1997, an increase of 6%. Excluding other charges in 1997, SG&A expenses increased by 8% over 1997. The increase was due primarily to increased sales and marketing expenses related to the product launch of Thyrogen[R] hormone and increased expenditures in support of Cerezyme[R] enzyme.

Research and development expenses for 1998 were $91.8 million compared to $74.2 million in 1997, an increase of 24%. The increase was primarily due to $12.0 million of additional research and development expenses resulting from the consolidation of the results of ATIII LLC, for which there were no comparable amounts in 1997. ATIII LLC is the joint venture between Genzyme and GTC for the development and commercialization of transgenic recombinant human antithrombin III ("ATIII"). In addition, during the third quarter of 1998, Genzyme General

wrote-off $1.7 million of certain costs related to equipment used to manufacture Sepra Products.

OTHER INCOME AND EXPENSES. Other income and expenses was a net other income of $24.2 million in 1998 compared to net other expense of $5.4 million in 1997. The 1997 amount includes $2.0 million of other charges.

Other income and expenses includes $19.7 million in equity in net loss of unconsolidated affiliates in 1998 compared to $5.3 million in equity in net loss of unconsolidated affiliates in 1997. The increase in equity in net loss of unconsolidated affiliates was primarily due to (i) increased losses from GTC; (ii) increased losses resulting from RenaGel LLC, Genzyme's joint venture with GelTex Pharmaceuticals, Inc. ("GelTex") for the development and commercialization of Renagel(R) Capsules (sevelamer hydrochloride), which was established on June 17, 1997; (iii) Genzyme's portion of the losses resulting from Pharming/Genzyme LLC, Genzyme's joint venture with Pharming Group NV ("Pharming") for the development and commercialization of human alpha glucosidase ("hAG") as a treatment for Pompe's disease, which became effective on October 9, 1998; and (iv) Genzyme's portion of the losses resulting from BioMarin/Genzyme LLC, Genzyme's joint venture with BioMarin Pharmaceutical Inc. ("BioMarin") for the development and commercialization of alpha-L-iduronidase for the treatment of mucopolysaccharidosis ("MPS I"), which was established on September 14, 1998.

Other income and expense includes a gain of $2.4 million on Genzyme's investment in GTC due to the issuance by GTC of shares of its common stock, which was recorded in June 1998.

For the year ended December 31, 1998, Genzyme General recorded minority interest in the results of ATIII LLC of $4.3 million, representing GTC's portion of the losses of the joint venture for 1998. There was no comparable amount in the corresponding period of 1997.

In July 1998, Genzyme General recorded a gain of $31.2 million in connection with the TECHNE Sale. In addition, a gain on sale of investment of $3.4 million was recorded in December 1998 upon the sale of a portion of the shares of TECHNE common stock acquired in that transaction. There were no comparable amounts in the corresponding period of last year.

Genzyme General recorded a charge for an impaired investment of $3.4 million related to a strategic investment in a company whose common stock price decline was considered "other than temporary."

Investment income for 1998 was $23.1 million, compared with $10.0 million for 1997. The increase was due to higher average cash balances resulting primarily from the proceeds from the issuance in May 1998 of $250.0 million in principal amount of 5 1/4% Convertible Subordinated Notes due June 1, 2005 (the "GGD Notes"). Interest expense for 1998 was $17.1 million, compared to $8.1 million in 1997. The increase was due to additional interest expense related to the issuance of the GGD Notes and interest related to the $21.2 million in principal amount of 5% convertible debentures due 2003 (the "GGD Debentures").

The net tax provision for 1998 varies from the U.S. statutory tax rate because of the provision for state income taxes, the foreign sales corporation, nondeductible amortization of intangibles, tax credits and Genzyme General's share of the losses of unconsolidated affiliates. In 1998, the effective tax rate was 38%, compared to 37% in 1997. The allocated tax benefit generated by GTR and GMO of $16.4 million and $3.5 million, respectively, in 1998 and $17.7 million and $2.8 million, respectively, in 1997 reduced Genzyme General's tax

rate to 26% and 15% in 1998 and 1997, respectively. The increase in Genzyme General's net tax rate in 1998 was due to the fact that the tax benefits allocated from GTR and GMO decreased the tax rate only 12% in 1998. The same benefits decreased the tax rate 22.6% in 1997. The difference is attributable to the fact that the same dollar benefits gave a lower percentage of benefit over an increased profit before tax.

1997 AS COMPARED TO 1996

In the fourth quarter of 1997, Genzyme General recorded $29.2 million of charges mainly associated with its Pharmaceutical and Surgical Products businesses and the sale of Genetic Design, Inc.("GDI"), which was sold in 1996. The Pharmaceuticals business now focuses on products that are more consistent with Genzyme General's long-term business strategy of moving towards higher-value products and away from fine chemical and bulk pharmaceuticals. This change in strategy resulted in an $18.1 million charge to cost of products sold, primarily related to the melatonin, bulk pharmaceuticals and fine chemical product lines that were discontinued. In addition, Genzyme General recorded charges of $5.5 million to cost of products sold and $3.5 million to SG&A expense primarily related to the manufacturing and selling of Sepracoat(TM) Coating Solution, which was discontinued for the U.S. market after an advisory panel of the U.S. Food and Drug Administration ("FDA") recommended against granting marketing approval of this product in 1997. The product is sold outside of the United States. Genzyme General also recorded a $2.0 million charge to other expense related to the uncertainty of collection on certain notes receivable.

REVENUES. Total revenues for 1997 were $597.2 million compared to $511.4 million in 1996, an increase of 17%. Product and service revenues were $585.8 million, compared to $486.1 million in 1996, an increase of 21%. Revenues from research and development contracts for 1997 were $11.4 million compared to $25.3 million in 1996, a decrease of 55%.

Product revenues in 1997 increased 25% to $529.9 million from $424.5 million in 1996, due primarily to increased sales of Cerezyme(R) enzyme and a full year of sales by DSP, which was acquired by the Company in July 1996.

Sales of Therapeutic products in 1997 consisted primarily of sales of Cerezyme(R) enzyme and Ceredase(R) enzyme. Sales of Cerezyme(R) enzyme and Ceredase(R) increased 26% to $332.7 million from $264.6 million in 1996, due to continued growth in new patient accruals in existing markets. Sales of Cerezyme(R) enzyme and Ceredase(R) enzyme together represented 63% of consolidated product sales in 1997 compared to 62% in 1996.

Pharmaceuticals 1997 product sales decreased 31% from 1996 due primarily to a significant decline in sales of melatonin. Melatonin sales began to decline materially during the second half of 1996 due to reduced demand and Genzyme General discontinued this product line in the fourth quarter of 1997.

Revenues from Sepra Products primarily consist of sales of Seprafilm(R) Bioresorbable Membrane. Product sales by the Surgical Products business unit for 1997 were $100.8 million as compared to $50.7 million for the period from July 1, 1996, the date of the acquisition of DSP, through December 31, 1996. Surgical Products sales consisted primarily of sales of cardiovascular fluid management products, surgical closures and surgical instruments. These product sales (excluding sales of Sepra Products) declined 12% in the second half of 1997 in comparison to the same period of 1996 due to a loss of volume and price competition in the fluid management business. DSP's product sales for the first half of 1996, which are not included in the results of Genzyme General, were $53.2 million.

Product sales of diagnostic products in 1997 were level with 1996. Service revenues for genetic testing in 1997 decreased 9% primarily due to the loss of revenue from GDI, which was sold in November 1996. This decrease was offset in part by higher unit volumes that were primarily attributable to the acquisition of Genetrix, Inc., which was included in Genzyme General's results of operations from May 1, 1996.

International sales as a percentage of total sales in 1997 increased to 37% from 35% in 1996, due primarily to a 32% increase in combined international sales of Cerezyme(R) enzyme and Ceredase(R) enzyme, offset in part by additional domestic sales by DSP.

Revenues from research and development contracts for 1997 decreased 55% to $11.4 million from $25.3 million in 1996, due primarily to the absence of revenue from Neozyme II Corporation, which was acquired by Genzyme in the fourth quarter of 1996. This decrease was offset in part by increases in revenues from

research and development contracts with third parties. Revenues from Neozyme II were $19.8 million in 1996.

MARGINS AND OPERATING EXPENSES. Total gross margins for 1997 were 59%, level with 1996. Excluding the effects of special charges, gross margins were 63% in 1997 compared to 59% in 1996. Genzyme General provides a broad range of health care products and services, resulting in a range of gross margins depending on the particular market conditions of each product or service. Product

margins for 1997 decreased to 61% from 63% in 1996. Excluding the effects of special charges, product margins in 1997 were 66%. The increase in product margins before special charges in 1997 is primarily due to increased sales volume of Cerezyme(R) enzyme offset in part by a full year of sales of lower-margin DSP products. Service margins for 1997 increased to 37% from 30% in 1996 due to the consolidation of Genetrix, the sale of GDI in 1996 and the resulting elimination of redundant facilities and staffing.

SG&A expenses and amortization of intangibles for 1997 were $185.6 million compared to $144.0 million in 1996, an increase of 29%. Excluding special charges, SG&A expenses increased in 1997 by 25% over 1996. The increase was due primarily to the acquisition of DSP and increases in 1997 staffing in support of the growth in several product lines, most notably in support of the North American introduction of Seprafilm(R) Bioresorbable Membrane. DSP added $16.7 million in SG&A expenses and amortization of intangibles in the first half of 1997 for which comparable amounts were not included in the results of Genzyme General in 1996. The acquisition of Genetrix did not materially affect SG&A expenses in 1996 and 1997 due to the consolidation of operations.

Research and development expenses for 1997 were $74.2 million compared to $70.0 million in 1996, an increase of 6%, due to Genzyme General's commitment to fund development costs of the ATIII development program being conducted by GTC and increased spending on internal programs, most notably the Thyrogen(R) hormone program.

OTHER INCOME AND EXPENSES. Other income and expenses was a net other expense of $5.4 million (which includes a $2.0 million special charge) compared to net other income of $6.1 million in 1996. The change was due primarily to a decrease in investment income and an increase in interest expense as well as increased equity in net losses of unconsolidated affiliates. Investment income for 1997 was $10.0 million, compared with $13.9 million for 1996. The decrease resulted from lower average cash and investment balances. Investment income for 1997 did not include any material gain or loss from sales of securities. Interest expense for 1997 was $8.1 million, compared to $6.8 million in 1996. The increase resulted from interest on funds borrowed to finance portions of the acquisitions of DSP and Neozyme II Corporation. Equity in net loss of unconsolidated affiliates increased from $2.6 million in 1996 to $5.3 million in 1997. The change is primarily due to increased losses from GTC and RenaGel LLC.

The net tax provision for 1997 varies from the U.S. statutory tax rate because of the provision for state income taxes, the foreign sales corporation, nondeductible amortization of intangibles, tax credits and Genzyme General's share of the losses of unconsolidated affiliates. In 1997, the effective tax rate was 37%, compared to 41% in 1996 before acquisitions. The decrease in the rate was due to additional tax credits in 1997 as well as a change in Massachusetts state law. The allocated tax benefit generated by GTR and GMO of $17.7 million and $2.8 million, respectively, in 1997 and $17.0 million and zero, respectively, in 1996 reduced Genzyme General's tax rate to 15% and 12% in 1997 and 1996, respectively.

LIQUIDITY AND CAPITAL RESOURCES

At December 31, 1998, Genzyme General had cash, cash equivalents and investments (excluding equity securities) of $556.1 million compared to $193.2 million at December 31, 1997, an increase of $362.9 million. In 1998, operating and financing activities provided $153.7 million and $288.2 million of cash, respectively, while investing activities used $408.5 million of cash and fluctuations in exchange rates caused an increase in cash of $0.3 million.

At December 31, 1998, accounts receivable increased 32% to $153.3 million from $116.1 million primarily due to increased revenue in 1998. At December 31, 1998, inventories decreased 22% to $107.2 million from $137.7 million at December 31, 1997, due primarily to the $25.2 million charge to write-down inventory in the Therapeutics and Surgical Products business units. Genzyme

General used $55.3 million for capital acquisitions. Genzyme General used $320.6 million for net purchases of investments. Genzyme General received $74.6 million of cash from issuances of common stock, $250.0 million in cash from the issuance of debt and used $33.4 million of cash for payments of debt and capital leases.

Genzyme General believes that its available cash, investments and cash flow from operations will be sufficient to finance its planned operations and capital requirements for the foreseeable future. Although Genzyme General currently has substantial cash resources, it has committed to utilize a portion of its resources for certain purposes, such as: (i) paying strategic collaborators and funding joint venture obligations, including a $10 million milestone payment to GelTex in October 1999; (ii) product development and marketing; (iii) expanding facilities; and (iv) marketing the Sepra Products. Genzyme General's cash resources will be further reduced to pay principal and interest on the following debt: (i) $82.0 million allocated to Genzyme General under Genzyme's revolving credit facility with a syndicate of commercial banks, which is payable in November 1999; (ii) $21.2 million in principal amount under the GGD Debentures, which mature on August 29, 2003; and (iii) $250.0 million in principal amount under the GGD Notes, which are convertible into GGD Stock and mature on June 1, 2005. To the extent cash is used to repay or redeem these debt instruments, including the interest payable thereon, Genzyme General's cash reserves will also be diminished. Genzyme General's capital requirements could differ materially from those currently anticipated by management due to the factors described under the section entitled "Factors Affecting Future Operating Results -- Future Capital Needs" in "Management's Discussion and Analysis of Genzyme Corporation and Subsidiaries' Financial Condition and Results of Operations" included in this Annual Report.

For a discussion of the demands, commitments and events that may affect the liquidity and capital resources of Genzyme Corporation, including Genzyme General, see also "Management's Discussion and Analysis of Genzyme Corporation and Subsidiaries' Financial Condition and Results of Operations -- Liquidity and Capital Resources" included in this Annual Report.

NEW ACCOUNTING PRONOUNCEMENTS, EURO, YEAR 2000 AND MARKET RISK

See "Management's Discussion and Analysis of Genzyme Corporation and Subsidiaries' Financial Condition and Results of Operations -- Liquidity and Capital Resources" included in this Annual Report.

FACTORS AFFECTING FUTURE OPERATING RESULTS

The future operating results of Genzyme General could differ materially from the results described above due to the risks and uncertainties described below and under the heading "Management's Discussion and Analysis of Genzyme Corporation and Subsidiaries' Financial Condition and Results of Operations--Factors Affecting Future Operating Results" included in this Annual Report.

DEPENDENCE ON CEREZYME(R) ENZYME AND CEREDASE(R) ENZYME SALES. Genzyme General's results of operations are highly dependent upon the sales of Cerezyme(R) enzyme and Ceredase(R) enzyme, both of which treat Gaucher disease. Sales of Cerezyme(R) enzyme and Ceredase(R) enzyme in 1998 were $411.1 million, representing 67% of Genzyme General's product sales in 1998. In 1994, Genzyme General developed Cerezyme(R) enzyme, a recombinant form of the enzyme, to replace Ceredase(R) enzyme, production of which is subject to supply constraints. Genzyme ceased producing Ceredase(R) enzyme in 1998, after substantially all of the patients previously using Ceredase(R) enzyme had converted to Cerezyme(R) enzyme.

Certain companies have initiated, and other companies in the future may initiate, efforts to develop competitive products to treat Gaucher disease. Although management believes its regulatory position, manufacturing capability and patient and physician relationships provide Cerezyme(R) enzyme with a strong competitive position, there can be no assurance that any competitive products

which are developed will not gain market acceptance. A reduction in revenue from sales of Cerezyme(R) enzyme would adversely affect Genzyme General's results of operations.

TECHNOLOGY TRANSFERRED TO GENZYME DEVELOPMENT PARTNERS, L.P.

Genzyme organized GDP, a special purpose research and development entity, and transferred technology and commercial rights to the Sepra Products. Genzyme has an option to purchase the limited partnership interests in GDP under certain circumstances. It is uncertain at this time whether Genzyme will exercise this option. If Genzyme does not exercise this option, it will have limited rights in revenues generated from the sale of the Sepra Products. If Genzyme does exercise this option, it will be required to make substantial cash payments or to issue

shares of Genzyme common stock, or both. Cash payments will diminish Genzyme's capital resources. Payments in GDP stock could result in dilution to holders of Genzyme common stock and could negatively affect the market price of such stock.

DEPENDENCE ON STRATEGIC ALLIANCES.

Several of Genzyme General's strategic initiatives involve alliances with other biotechnology companies, including: (i) a joint venture with GelTex for the commercialization of Renagel(R) Capsules; (ii) an agreement with Knoll Pharmaceutical Company for the marketing of Thyrogen(R) hormone in the U.S.; (iii) an agreement with Biogen, Inc. for the marketing of AVONEX(R) (interferon-beta-1a) for the treatment of relapsing forms of multiple sclerosis in Japan following regulatory approval; (iv) a joint venture with BioMarin for the development of alpha-L-iduronidase for the treatment of MPS-I; (v) a joint venture with GTC for the development and commercialization of ATIII; and (vi) a joint venture with Pharming for the development and commercialization of hAG for the treatment of Pompe disease. Genzyme General plans to enter into additional alliances in the future. The success of these alliances is largely dependent on the efforts and skill of Genzyme's partners. There can be no assurance that any of these alliances will result in the successful development and/or commercialization of a product.

SUBSEQUENT EVENTS

In March 1999, Genzyme announced that it intends to create a separate division, with its own series of common stock, for the existing surgical products business that is currently part of Genzyme General, subject to approval of the Genzyme Board.

In March 1999, Genzyme announced that it plans to reallocate Genzyme's interest in Diacrin/Genzyme LLC from Genzyme Tissue Repair to Genzyme General. Diacrin/Genzyme LLC is Genzyme's joint venture with Diacrin for the development and commercialization of products based on fetal porcine cells for the treatment of Parkinson's and Huntington's diseases. The transfer of interest in Diacrin/Genzyme LLC is subject to the approval of GTR's shareholders.

GENZYME GENERAL
COMBINED STATEMENTS OF OPERATIONS

(AMOUNTS IN THOUSANDS)	FOR THE YEARS ENDED DECEMBER 31, 1998	1997	1996
Revenues:			
Net product sales	$ 613,685	$ 529,927	$ 424,483
Net service sales	55,445	55,835	61,638
Revenues from research and development contracts:			
Related parties	3,568	8,041	23,011
Other	579	3,400	2,310
Total revenues	673,277	597,203	511,442
Operating costs and expenses:			
Cost of products sold	211,076	206,028	155,930
Cost of services sold	34,240	35,451	42,889
Selling, general and administrative	183,469	173,020	135,153
Research and development (including research and development related to contracts)	91,757	74,192	69,969
Amortization of intangibles	13,358	12,534	8,849
Purchase of in-process research and development	--	--	130,639
Other	--	--	1,465
Total operating costs and expenses	533,900	501,225	544,894
Operating income (loss)	139,377	95,978	(33,452)
Other income (expenses):			
Equity in net loss of unconsolidated affiliates	(19,685)	(5,281)	(3,646)
Gain of affiliate sale of stock	2,369	--	1,013
Minority interest	4,285	--	--
Gain on sale of product line	31,202	--	--
Gain on sale of investments	3,391	--	1,711
Charge for impaired investments	(3,397)	--	--
Other	--	(2,000)	--
Investment income	23,097	10,038	13,909
Interest expense	(17,069)	(8,108)	(6,842)

Total other income (expenses)	24,193	(5,351)	6,145
Income (loss) before income taxes	163,570	90,627	(27,307)
Provision for income taxes	(62,438)	(33,601)	(20,206)
Net income (loss)	101,132	57,026	(47,513)
Tax benefit allocated from Genzyme Tissue Repair	16,394	17,666	17,011
Tax benefit allocated from Genzyme Molecular Oncology	3,527	2,755	--
Net income (loss) attributable to GGD Stock	$ 121,053	$ 77,447	$ (30,502)

</TABLE>

The accompanying notes are an integral part of these combined financial statements.

GENZYME GENERAL
COMBINED STATEMENTS OF OPERATIONS (CONTINUED)
<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS, EXCEPT PER SHARE DATA)	FOR THE YEARS ENDED DECEMBER 31, 1998	1997	1996
<S>	<C>	<C>	<C>
Net income (loss) attributable to GGD Stock	$ 121,053	$ 77,447	$ (30,502)
Per Genzyme General common share:			
Net income (loss) per Genzyme General common share-- basic:	$ 1.53	$ 1.01	$ (0.45)
Weighted average shares outstanding	79,063	76,531	68,289
Net income (loss) per Genzyme General common and common equivalent share-- diluted:	$ 1.48	$ 0.98	$ (0.45)
Adjusted weighted average shares outstanding	81,734	78,925	68,289
Net income (loss)	$101,132	$ 57,026	$ (47,513)
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	7,681	(11,704)	2,845
Unrealized gains (losses) on securities:			
Unrealized gains (losses) arising during the period	(6,059)	833	(2,446)
Reclassification adjustment for gains (losses) included in net income (loss)	2,100	-	(1,077)
Unrealized gains (losses) on securities, net	(3,959)	833	(3,523)
Other comprehensive income (loss)	3,722	(10,871)	(678)
Comprehensive income (loss)	$104,854	$ 46,155	$ (48,191)

</TABLE>

The accompanying notes are an integral part of these combined financial statements.

GENZYME GENERAL
COMBINED BALANCE SHEETS
<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS)	DECEMBER 31, 1998	1997
ASSETS		
<S>	<C>	<C>
Current assets:		
Cash and cash equivalents	$ 100,012	$ 66,276
Short-term investments	174,421	35,294
Accounts receivable, net	153,278	116,056
Inventories	107,188	137,708
Prepaid expenses and other current assets	29,659	15,941
Due from Genzyme Tissue Repair	548	1,213
Due from Genzyme Molecular Oncology	4,773	5,434
Deferred tax assets-- current	39,725	27,601
Total current assets	609,604	405,523
Property, plant and equipment, net	378,992	365,337
Long-term investments	281,664	91,627
Notes receivable-- related parties	--	4,601
Intangibles, net	263,748	243,071
Deferred tax assets-- noncurrent	28,138	35,988
Investments in equity securities	51,977	30,047
Other noncurrent assets	32,184	26,862
Total assets	$1,646,307	$1,203,056
LIABILITIES AND DIVISION EQUITY		
Current liabilities:		
Accounts payable	$ 26,249	$ 18,409
Accrued expenses	70,313	66,865
Income taxes payable	16,532	11,157
Deferred revenue	1,231	217
Current portion of long-term debt and capital lease obligations	82,568	887
Total current liabilities	196,893	97,535
Noncurrent liabilities:		
Long-term debt	3,087	117,978
Convertible subordinated notes and debentures	271,559	--
Other noncurrent liabilities	7,701	6,667
Total liabilities	479,240	222,180
Commitments and contingencies (See Notes)		
Division equity (Note M)	1,167,067	980,876
Total liabilities and division equity	$1,646,307	$1,203,056

</TABLE>

The accompanying notes are an integral part of these combined financial statements.

GENZYME GENERAL
COMBINED STATEMENTS OF CASH FLOWS
<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS) FOR THE YEARS ENDED DECEMBER 31,

	1998	1997	1996
<S>	<C>	<C>	<C>
OPERATING ACTIVITIES:			
Net income (loss)	$ 101,132	$ 57,026	$ (47,513)
Reconciliation of net income to net cash provided by operating activities:			
Depreciation and amortization	45,765	43,653	29,257
Loss on disposal of fixed assets	108	1,234	42
Non-cash compensation expense	8,519	2,881	148
Accrued interest/amortization on bonds	(7,242)	(571)	1,110
Provisions for bad debts and inventory	9,005	14,100	9,521
Accretion of debt conversion feature	705	--	--
Equity in net loss of unconsolidated affiliates	19,685	5,281	3,646
Gain on affiliate sale of stock	(2,369)	--	(1,013)
Minority interest in net loss of subsidiaries	(4,285)	--	--
Gain on sale of product line	(31,202)	--	--
Purchase of in-process research and development	--	--	130,639
Gain on sale of investments	(3,391)	--	(1,711)
Charge for impaired investment	3,397	--	
Deferred income tax benefit	(3,022)	(3,969)	(28,558)
Other	26	528	153
Increase (decrease) in cash from working capital changes:			
Accounts receivable	(38,531)	(10,052)	(18,318)
Inventories	31,307	(29,149)	(40,547)
Prepaid expenses and other assets	(12,254)	(8,774)	(379)
Accounts payable, accrued expenses, income taxes payable and deferred revenue	36,225	8,945	43,342
Due from Genzyme Tissue Repair	665	391	430
Due from Genzyme Molecular Oncology	(553)	(2,011)	--
Net cash provided by operating activities	153,690	79,513	80,249
INVESTING ACTIVITIES:			
Purchases of investments	(439,431)	(131,197)	(117,089)
Sales and maturities of investments	118,871	80,867	195,952
Proceeds from sale of equity investment	9,564	--	--
Acquisition of property, plant and equipment	(55,271)	(28,456)	(42,540)
Sales of property, plant and equipment	1,795	--	--
Proceeds from sale of product line	24,760	--	--
Acquisitions, net of acquired cash and assumed liabilities	(9,949)	--	(299,078)
Purchase of technology rights	(15,100)		
Investment in unconsolidated affiliates	(25,783)	(6,449)	(3,600)
Investment in joint ventures	(14,811)	--	--
Loans to affiliates	(1,000)	(4,601)	(1,676)
Repayment of loans by affiliates	3,019	--	--
Other	(5,119)	(1,173)	(7,621)
Net cash used in investing activities	(408,455)	(91,009)	(275,652)
FINANCING ACTIVITIES:			
Proceeds from issuance of common stock	74,649	123,837	39,119
Proceeds from issuance of debt	250,000	--	480,000
Payments of debt	(33,388)	(101,118)	(340,333)
Net cash allocated to Genzyme Tissue Repair	(155)	(14,892)	(11,714)
Net cash allocated to Genzyme Molecular Oncology	(5,000)	(5,000)	--
Other	2,061	--	--
Net cash provided by financing activities	288,167	2,827	167,072
Effect of exchange rate changes on cash	334	(2,275)	1,920
Increase (decrease) in cash and cash equivalents	33,736	(10,944)	(26,411)
Cash and cash equivalents at beginning of period	66,276	77,220	103,631
Cash and cash equivalents at end of period	$ 100,012	$ 66,276	$ 77,220

</TABLE>

The accompanying notes are an integral part of these combined financial statements.

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS) FOR THE YEARS ENDED DECEMBER 31,

	1998	1997	1996

<S>	<C>	<C>	<C>
Supplemental cash flow information: Cash paid during the year for:			
Interest	$ 15,047	$ 8,684	$ 6,169
Income taxes	24,463	18,887	14,133

</TABLE>

Supplemental disclosure of non-cash transactions:
Allocation of tax benefit -- Note B
Other charges -- Note C
Sale of research products business assets -- Note D
Acquisitions liability -- Note E
Investment in unconsolidated affiliate -- Note J
GGD Debentures -- Note L
Warrant exercise -- Note M
Debt conversion -- Note L
GTR and GMO Designated Shares dividend -- Note M

The accompanying notes are an integral part of these combined financial statements.

GENZYME GENERAL
NOTES TO COMBINED FINANCIAL STATEMENTS

NOTE A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BUSINESS
Genzyme General develops and markets therapeutic and surgical products and diagnostic products and services. It is a division of Genzyme Corporation and has a separate series of common stock intended to reflect its value and track its economic performance.

BASIS OF PRESENTATION
The combined financial statements of Genzyme General include the balance sheets, results of operations and cash flows of Genzyme's therapeutic products, surgical products, diagnostics and corporate operations during the periods presented. Genzyme General's financial statements are prepared using the amounts included in the consolidated financial statements of Genzyme and its subsidiaries ("Genzyme's Consolidated Financial Statements") included in this Annual Report. Corporate allocations reflected in these financial statements are determined based upon methods which management believes to be reasonable.

PRINCIPLES OF COMBINATION
The accompanying combined financial statements of Genzyme General reflect the combined accounts of all of Genzyme General's businesses. The equity method is used to account for investments in companies and joint ventures in which Genzyme General has a substantial ownership interest (20% to 50%), or in which Genzyme General participates in policy decisions. Investments of less than 20% are reported at fair value. (See Note I., "Investments" to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference.) All significant interdivisional items and transactions have been eliminated in combination. Certain items in Genzyme General's combined financial statements for the years ended December 31, 1997 and 1996 have been reclassified to conform with the December 31, 1998 presentation.

FINANCIAL INFORMATION
Genzyme provides to holders of GGD Stock separate financial statements, management's discussion and analysis, descriptions of business and other relevant information for Genzyme General. Notwithstanding the allocation of assets and liabilities, including contingent liabilities, between Genzyme General, GTR and GMO for the purposes of preparing their respective financial statements, Genzyme Corporation continues to hold title to all of the assets and is responsible for all of the liabilities allocated to each of the divisions. Holders of GGD Stock are common stockholders of Genzyme and have no specific claim against the assets attributed to Genzyme General. Liabilities or contingencies of Genzyme General, GTR or GMO could affect the financial condition or results of operations of the other divisions. Accordingly, the

Genzyme General combined financial statements should be read in connection with Genzyme's Consolidated Financial Statements.

Accounting policies and financial information specific to Genzyme General are presented in these Genzyme General combined financial statements. Accounting policies and financial information relevant to Genzyme, Genzyme General, GTR and GMO, collectively, are presented in Genzyme's Consolidated Financial Statements. The Company prepares the financial statements of Genzyme General in accordance with generally accepted accounting principles, the management and accounting policies of Genzyme and the divisional accounting policies approved by the Genzyme Board. (See Note A., "Summary of Significant Accounting Policies," to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference). Except as otherwise provided in such policies, the management and accounting policies applicable to the presentation of the financial statements of Genzyme General may be modified or rescinded at the sole discretion of the Genzyme Board without approval of the stockholders, subject only to the Genzyme Board's fiduciary duty to Genzyme's stockholders.

DIVIDEND POLICY
Under the terms of the Charter, dividends that may be paid to the holders of GGD Stock will be limited to the lesser of funds of Genzyme legally available for the payment of dividends and the Available GGD Dividend Amount, as defined in the Charter. Although there is no requirement to do so, the Genzyme Board would declare and pay cash dividends on GGD Stock, if any, based primarily on earnings, financial condition, cash flow and business requirements of Genzyme.

GENZYME GENERAL
NOTES TO COMBINED FINANCIAL STATEMENTS

NOTE A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

DIVIDEND POLICY (CONTINUED)

Genzyme has never paid any cash dividends on shares of its capital stock. Genzyme currently intends to retain its earnings to finance future growth and, therefore, does not anticipate paying any cash dividends on GGD Stock in the foreseeable future.

NET INCOME (LOSS) PER SHARE
Net income (loss) per share attributable to Genzyme General, GTR and GMO gives effect to the management and accounting policies adopted by the Genzyme Board and is reported in lieu of consolidated per share data. Genzyme computes net income (loss) per share for each division by dividing the earnings attributable to each series of stock by the weighted average number of shares of that stock outstanding during the period, for basic earnings per share, and by the weighted average shares of that stock, plus other potentially dilutive securities outstanding during the applicable period for diluted earnings per share. Earnings (loss) attributable to GGD Stock, GTR Stock and GMO Stock equals the respective division's net income or loss for the relevant period determined in accordance with generally accepted accounting principles in effect at such time, adjusted by the amount of tax benefits allocated to or from the other divisions pursuant to the management and accounting policies adopted by the Genzyme Board.

The following table sets forth the computation of basic and diluted earnings per share for Genzyme General (in thousands, except per share amounts):
<TABLE>
<CAPTION>

	1998	1997	1996
<S>	<C>	<C>	<C>
Net income (loss) attributable to GGD Stock-basic and diluted	$121,053	$ 77,447	$(30,502)
Shares used in net income per common share-basic	79,063	76,531	68,289
Effect of dilutive securities:			
Employee and director stock options	2,661	2,387	--
Warrants	10	7	--
Dilutive potential common shares (1,2,3)	2,671	2,394	--
Shares used in net income per common share-diluted (1,2,3)	81,734	78,925	68,289
Net income (loss) per common share - basic	$ 1.53	$ 1.01	$ (0.45)
Net income (loss) per common share - diluted (1,2,3)	$ 1.48	$ 0.98	$ (0.45)

	========	========	========

</TABLE>

(1) Certain securities were not included in the computation of Genzyme General's diluted earnings per share for the years ended December 31, 1998, 1997 and 1996 because each such security had an exercise price greater than the average market price of GGD Stock during each respective period. Such securities include:

<TABLE>
<CAPTION>

(Amounts in thousands)	December 31, 1998	1997	1996
<S>	<C>	<C>	<C>
Shares of GGD Stock issuable for options(a)	2,827	5,921	3,824
Shares of GGD Stock issuable for warrants	40	40	--
Total shares with exercise prices greater than the average market price of GGD Stock during the year	2,867	5,961	3,824

</TABLE>

(a) Options not included in diluted earnings per share had exercise price ranges of $28.67-$47.88 in 1998, $23.59-$38.00 in 1997 and $3.79-$38.00 in 1996.

(2) In computing diluted earnings per share for Genzyme General for 1998, the following securities were not included in the calculation because inclusion of such shares would have an anti-dilutive effect on Genzyme General's net income per share: (i) approximately 6,313,000 shares of GGD Stock reserved in May 1998 for issuance upon conversion of the GGD Notes and (ii) approximately 630,000 shares of GGD Stock reserved in August 1998 for issuance upon conversion of the GGD Debentures.

(3) In computing diluted earnings per share for 1996, exercise of approximately 6,506,000 options and 35,000 warrants were not included because the result would be anti-dilutive due to Genzyme General's net loss in 1996.

NOTE A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

ACCOUNTING FOR STOCK-BASED COMPENSATION
Genzyme General has elected the disclosure-only alternative permitted under SFAS 123, "Accounting for Stock-Based Compensation". Genzyme General has disclosed herein pro forma net income and pro forma earnings per share in the footnotes using the fair value based method for 1998, 1997 and 1996.

TRANSLATION OF FOREIGN CURRENCIES
Exchange gains and losses on intercompany balances of a long-term investment nature are charged to division equity. Transaction gains and losses are included in the results of operations. Genzyme General incurred net transaction gains of $0.3 million in 1998 and net transaction losses of $0.1 million in 1997 and $1.0 million in 1996. Division equity includes cumulative foreign currency translation charges of $4.8 million and $12.4 million at December 31, 1998 and 1997, respectively.

NOTE B. POLICIES GOVERNING THE RELATIONSHIP OF GENZYME'S DIVISIONS

Genzyme allocates certain corporate costs for general and administrative, research and development and cash management services to the divisions. Genzyme files a consolidated tax return and allocates income taxes to the divisions in accordance with the policies described below. With the exception of the policy regarding Interdivision Asset Transfers, policies may be further modified or rescinded by action of the Genzyme Board, or the Genzyme Board may adopt additional policies, without approval of the stockholders of Genzyme, subject only to the Genzyme Board's fiduciary duty to the Genzyme stockholders. In addition, generally accepted accounting principles require that any change in policy be preferable (in accordance with such principles) to the previous policy.

FINANCIAL MATTERS

The Company manages the financial activities of Genzyme General, GTR and GMO. These financial activities include: the investment of cash; the issuance, repayment and repurchase of short-term and long-term debt; and the issuance and repurchase of equity instruments.

Loans may be made from time to time between divisions. Any such loan of $1.0 million or less will mature within 18 months and interest will accrue at the lowest borrowing rate available to Genzyme for a loan with similar terms and duration. Amounts borrowed in excess of $1.0 million will require approval of the Genzyme Board, which approval shall include a determination by the Genzyme Board that the material terms of such loan, including the interest rate and maturity date, are fair and reasonable to each participating division and to holders of the common stock representing such division.

SHARED SERVICES

Genzyme General operates as a division of Genzyme with its own personnel and financial resources. However, Genzyme General has access to Genzyme's corporate general and administrative functions, the costs of which are allocated to it in a reasonable and consistent manner based on utilization by the division of the services to which such costs relate. Management believes that such allocation is a reasonable estimate of such expenses.

Genzyme's corporate general and administrative and research and development functions and certain selling and marketing efforts are performed primarily by Genzyme General. General and administrative and selling and marketing expenses have been allocated to GTR and GMO based upon utilization of such services as if each division operated independently.

Genzyme General allocated $6.5 million, $7.7 million and $9.1 million of SG&A expenses to GTR in 1998, 1997 and 1996, respectively. Genzyme General allocated $5.7 million, $2.1 million and $0.2 million of SG&A expenses to GMO in 1998, 1997 and 1996, respectively. Genzyme General's allocations to GTR and GMO for research and development expenses were (i) in the case of GTR, $7.7 million, $7.7 million and $6.9 million in 1998, 1997 and 1996, respectively, and (ii) in the case of GMO, $12.1 million in 1998, $5.3 million in 1997, and $0.8 million in 1996. Amounts due from GTR for operating activities were $0.5 million and $1.2 million at December 31, 1998 and 1997, respectively, and in the case of GMO, $4.8 million and $5.4 million at December 31, 1998 and 1997, respectively.

In 1998, Genzyme General adopted SFAS 131, "Disclosures about Segments of an Enterprise and Related Information." SFAS 131 supersedes SFAS 14, "Financial Reporting for Segments of a Business Enterprise," replacing the "industry segment" approach with the "management" approach. The management approach designates the internal organization that is used by management for making operating decisions and assessing performance as the source of Genzyme General's reportable segments. SFAS 131 also requires disclosures about products and services, geographic areas, and major customers. The adoption of SFAS 131 did not affect results of operations or financial position but did affect the disclosure of segment information (see Note R., "Segment Reporting" below).

NOTE B. POLICIES GOVERNING THE RELATIONSHIP OF GENZYME'S DIVISIONS (CONTINUED)

INTERDIVISION INCOME TAX ALLOCATIONS

Genzyme General is included in the consolidated U.S. federal income tax return filed by Genzyme. Genzyme allocates current and deferred taxes to the divisions by determining the tax provision of each division, in accordance with generally accepted accounting principles, as if it were a separate taxpayer. Accordingly, the realizability of deferred tax assets is assessed at the division level. The sum of division tax provisions may not equal the consolidated tax provision under this approach.

Income taxes are allocated to each division based upon the financial statement income, taxable income, credits and other amounts properly allocable to such division under generally accepted accounting principles as if each division were a separate taxpayer; provided, however, that as of the end of any fiscal quarter of Genzyme, any projected annual tax benefit attributable to any division that cannot be utilized by such division to offset or reduce its current or deferred income tax expense may be allocated to the other divisions in proportion to their taxable income without any compensating payment or allocation. The treatment of such allocation for purposes of earnings per share computation is discussed in Note A., "Summary of Significant Account Policies -- Net Income (Loss) Per Share," to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference.

ACCESS TO TECHNOLOGY AND KNOW-HOW

Genzyme General has free access to all technology and know-how of Genzyme that

may prove useful in Genzyme General's business, subject to any obligations or limitations applicable to Genzyme.

INTERDIVISION ASSET TRANSFERS
The policy described below regarding the transfer of assets between divisions may not be changed by the Genzyme Board without the approval of the holders of GTR Stock and GMO Stock, each voting as a separate class; provided, however, that if a policy change affects GTR or GMO alone, only holders of shares representing the affected division will be entitled to a class vote on such matter.

The Genzyme Board may at any time and from time to time reallocate any program, product or other asset from one division to any other division. All such reallocations will be done at fair market value, determined by the Genzyme Board, taking into account, in the case of a program under development, the commercial potential of the program, the phase of clinical development of the program, the expenses associated with realizing any income from the program, the likelihood and timing of any such realization and other matters that the Genzyme Board and its financial advisors, if any, deem relevant. The consideration for such reallocation may be paid by one division to another in cash or other consideration, in lieu of cash, with a value equal to the fair market value of the assets being reallocated or, in the case of a reallocation of assets from Genzyme General to GTR or GMO, the Genzyme Board may elect to account for such reallocation of assets as an increase in Designated Shares representing the division to which such assets are reallocated. Notwithstanding the foregoing, no Key GMO Program, as defined in the management and accounting policies, may be transferred out of GMO without a class vote of the holders of GMO Stock and no Key GTR Program, as defined in the management and accounting policies, may be transferred out of GTR without a class vote of the holders of GTR Stock.

OTHER INTERDIVISION TRANSACTIONS
From time to time, a division may engage in transactions with one or more other divisions or jointly with one or more other divisions and one or more third parties. Such transactions may include agreements by one division to provide products and services for use by another division, and joint ventures or other collaborative arrangements involving more than one division to develop new products and services jointly and with third parties. SG&A and research and development performed by one division for the benefit of another division will be charged to the division for which work is performed on a cost basis. The division performing the research will not recognize revenue as a result of performing such research. Other interdivisional transactions shall be on terms and conditions that would be obtainable in transactions negotiated with unaffiliated third parties. Any interdivisional transaction to be performed on terms and conditions other than those previously set forth and that is material to one or more of the participating divisions will require the approval of the Genzyme Board, which approval shall include a determination by the Genzyme Board that the transaction is fair and reasonable to each participating division and to holders of the common stock representing each division.

NOTE B. POLICIES GOVERNING THE RELATIONSHIP OF GENZYME'S DIVISIONS (CONTINUED)

OTHER INTERDIVISION TRANSACTIONS (CONTINUED)
If a division (the "purchasing division") requires any product or service from which another division (the "selling division") derives revenue from sales to third parties (a "commercial product or service"), the purchasing division may solicit from the selling division a bid to provide such commercial product or service in addition to any bids solicited by the purchasing division from third parties. Subject to determination by the Genzyme Board that the bid of selling division is fair and reasonable to each division and to their respective stockholders and that the purchasing division is willing to accept the selling division's bid, the purchasing division may accept any bid deemed to offer the most favorable terms and conditions for providing the commercial product or service sought by the purchasing division.

NOTE C. OTHER CHARGES
In the third quarter of 1998, Genzyme General recorded $26.9 million of charges associated with its Therapeutics and Surgical Products businesses.

The conversion of patients with Gaucher disease from Ceredase(R) enzyme to Cerezyme(R) enzyme is substantially complete. Based on its successful progress in converting patients from Ceredase(R) enzyme to Cerezyme(R) enzyme, Genzyme General determined that its existing supply of finished goods of Ceredase(R) enzyme was sufficient to meet patient needs. As a result, in the third quarter

of 1998, Genzyme General recorded a $14.8 million charge to cost of products sold for the excess inventory used to make Ceredase(R) enzyme.

During the third quarter of 1998, Genzyme General reviewed its requirements to support the Sepra Products. As a result, in the third quarter of 1998, Genzyme General recorded a $10.4 million charge to cost of products sold to write-down Sepra Products inventory amounts to net realizable value. In addition, during the third quarter of 1998, Genzyme General wrote-off certain costs related to equipment used to manufacture the Sepra Products totaling $1.7 million.

In the fourth quarter of 1997, Genzyme General recorded $29.2 million of charges mainly associated with its Pharmaceuticals and Surgical Products businesses and the sale of GDI, which was sold in 1996. The Pharmaceuticals business now focuses on products that are more consistent with Genzyme General's long-term business strategy of moving towards higher-value products and away from fine chemical and bulk pharmaceuticals. This change in strategy resulted in a $18.1 million charge to cost of products sold primarily related to the melatonin, bulk pharmaceuticals and fine chemical product lines that were discontinued. In addition, Genzyme General recorded charges of $5.5 million to cost of products sold and $3.5 million to SG&A expense primarily related to the manufacturing and selling of Sepracoat(TM) Coating Solution, which was discontinued for the U.S. market after an advisory panel of the FDA recommended against granting market approval of this product in 1997. The product is sold outside the United States. Genzyme General also recorded a $2.0 million charge to other expense related to the uncertainty of collection on certain notes receivable.

NOTE D. SALE OF RESEARCH PRODUCTS BUSINESS ASSETS

On July 1, 1998, Genzyme General completed the sale of the primary assets of its research products business to TECHNE. The purchase price consisted of $24.8 million in cash, approximately 987,000 shares of TECHNE common stock, and royalties on TECHNE's biotechnology group sales for the next five years. Royalty income will be recorded as earned. In the third quarter of 1998, Genzyme General recorded a gain of $31.2 million related to the sale of the research products business assets.

NOTE E. ACQUISITIONS

Disclosure related to the acquisitions of Neozyme II, DSP and Genetrix, Inc. are included in Note D., "Acquisitions," to Genzyme's Consolidated Financial Statements, and are incorporated herein by reference.

NOTE F. OFF-BALANCE-SHEET FINANCIAL INSTRUMENTS

The disclosures relating to off-balance sheet financial instruments are included in Note E., "Off-Balance-Sheet Financial Instruments," to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference.

NOTE G. ACCOUNTS RECEIVABLE AND INTANGIBLE ASSETS

Genzyme General's trade receivables primarily represent amounts due from healthcare service providers and companies and institutions engaged in research, development or production of pharmaceutical and biopharmaceutical products. Genzyme General performs ongoing credit evaluations of its customers and generally does not require collateral. Accounts receivable are stated at fair value after reflecting the allowance for doubtful accounts of $12.9 million and $11.3 million at December 31, 1998 and 1997, respectively.

Net intangible assets for Genzyme General as of December 31, 1998 and 1997 includes $170.9 million and $177.3 million, respectively, of goodwill primarily due to acquisitions.

As of December 31, 1998 and 1997, accumulated amortization of intangible assets was $53.5 million and $39.0 million, respectively.

NOTE H. INVENTORIES

Inventories at December 31 consist of the following:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997
<S>	<C>	<C>
Raw materials	$ 41,064	$ 48,149
Work-in-process	25,093	30,264
Finished products	41,031	59,295
Total	$ 107,188	$ 137,708

</TABLE>

GENZYME GENERAL
NOTES TO COMBINED FINANCIAL STATEMENTS

NOTE I. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment at December 31 includes the following:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997
<S>	<C>	<C>
Plant and equipment	$ 252,750	$ 232,405
Land and buildings	156,067	138,696
Leasehold improvements	68,848	63,244
Furniture and fixtures	17,460	13,522
Construction-in-progress	30,805	24,853
	525,930	472,720
Less accumulated depreciation	(146,938)	(107,383)
Property, plant and equipment, net	$ 378,992	$ 365,337

</TABLE>

Depreciation expense was $37.4 million, $31.1 million and $22.1 million in 1998, 1997 and 1996, respectively.

Genzyme General has capitalized approximately $34.6 million of gross process validation and optimization costs related to its manufacturing facilities. Genzyme General capitalized approximately $0.7 million, $0.5 million and $2.2 million of interest costs in 1998, 1997 and 1996, respectively, related to facility construction.

NOTE J. INVESTMENTS

Investments in marketable securities at December 31 consisted of the following:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998		1997	
	COST	MARKET VALUE	COST	MARKET VALUE
<S>	<C>	<C>	<C>	<C>
Cash Equivalents:				
Corporate notes	$ 8,131	$ 8,129	$ 10,829	$ 10,829
Money Market Fund	70,805	70,805	39,833	39,833
	$ 78,936	$ 78,934	$ 50,662	$ 50,662
Short Term:				
Corporate notes	$173,970	$174,421	$ 35,298	$ 35,294
Long Term:				
Corporate notes	$226,002	$226,259	69,932	$ 69,872
Federal agencies	33,412	33,581	--	--
U.S. Treasury notes	21,323	21,824	21,667	21,755

</TABLE>

	$280,737	$281,664	$ 91,599	$ 91,627
Investment in Equity securities	$ 62,244	$ 51,977	$ 29,609	$ 30,047

</TABLE>

REALIZED AND UNREALIZED GAINS AND LOSSES ON MARKETABLE SECURITIES AND INVESTMENTS:
In 1998, Genzyme recorded a gain of $3.4 million upon the sale of a portion of its TECHNE common stock received from the sale of Genzyme's research products assets to TECHNE. Genzyme recorded a charge of $3.4 million related to a write-down of a strategic equity investment whose decline in value was considered "other than temporary". Investment income for 1996 includes net realized losses of $47,000.

NOTE J. INVESTMENTS (CONTINUED)
Gross unrealized holding losses of $12.5 million and gross unrealized holding gains of $3.6 million were recorded at December 31, 1998 in division equity as compared to unrealized gross holding losses of $2.9 million and unrealized holding gains of $3.4 million recorded at December 31, 1997.

Information regarding the range of contractual maturities of investments in debt securities at December 31 is as follows:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998		1997	
	COST	MARKET VALUE	COST	MARKET VALUE
<S>	<C>	<C>	<C>	<C>
Within 1 year	$252,907	$253,355	$ 85,960	$ 85,956
After 1 year through 2 years	259,363	259,788	62,856	62,806
After 2 years through 10 years.....	21,373	21,876	28,743	28,821
	$533,643	$535,019	$177,559	$177,583

</TABLE>

Investments in marketable securities are attributed to either Genzyme General, GTR or GMO. The Company holds certain strategic investments in unconsolidated entities which may be attributed to either Genzyme General, GTR or GMO.

The disclosures related to Genzyme General's investments in the following entities are included in Note I., "Investments," to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference:

INVESTMENTS IN THE EQUITY SECURITIES OF:
- ABIOMED, Inc.
- Aronex Pharmaceuticals, Inc.
- BioMarin Pharmaceutical, Inc.
- Celtrix Pharmaceuticals, Inc.
- Dyax Corporation
- GelTex Pharmaceuticals, Inc.
- Pharming Group, N.V.
- TECHNE Corporation
- Other

INVESTMENTS IN UNCONSOLIDATED AFFILIATES AND JOINT VENTURES:
- GTC
- ATIII LLC
- RenaGel LLC
- BioMarin/Genzyme LLC
- Pharming/Genzyme LLC

NOTE K. ACCRUED EXPENSES

Accrued expenses at December 31 include the following:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997
<S>	<C>	<C>
Compensation	$21,989	$19,865
Technology access fee	10,000	-
Professional fees	5,144	7,057
Royalties	6,369	8,151
Rebates	5,663	4,575
Other	21,148	27,217
	$70,313	$66,865

</TABLE>

GENZYME GENERAL
NOTES TO COMBINED FINANCIAL STATEMENTS

NOTE L. LONG-TERM DEBT AND LEASES

LONG-TERM DEBT
Long-term debt at December 31 is comprised of the following:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997
<S>	<C>	<C>
5.25% Convertible Subordinated Notes	$ 250,000	$ --
Revolving Credit Facility	82,000	95,000
5% GGD Notes	21,559	--
Mortgage note payable, matures June 13, 1999	--	19,833
Other mortgage notes payable	3,167	3,856
	356,726	118,689
Less current portion	(82,080)	(711)
	$ 274,646	$ 117,978

</TABLE>

In February 1998, Genzyme repaid the remaining $0.7 million principal balance due on a mortgage note due January 2008.

In November 1998, Genzyme repaid the remaining $19.4 million principal balance due on a mortgage note due June 1999 plus accrued interest of $0.2 million.

Minimum annual principal repayment of long-term debt, excluding capital leases, in each of the next five years are as follows: 1999-$82,080,000, 2000-$89,000, 2001-$98,000, 2002-$109,000 and 2003-$25,920,000 and thereafter $252,590,000.

Although the Company retains responsibility for the repayment of all long-term debt obligations (see Note K., "Long-term Debt and Leases," to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference), such debt is allocated to either Genzyme General, GTR or GMO for reporting purposes based on the intended use of the funds borrowed under each instrument.

CREDIT FACILITIES, GGD NOTES, MORTGAGE NOTES AND GGD DEBENTURES: The disclosures related to Genzyme's revolving credit facility, the GGD Notes, mortgage notes and the GGD Debentures, are included in Note K, "Long-Term Debt and Leases," to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference.

OPERATING LEASES
Total rent expense under operating leases was $16.5 million, $14.4 million, and $10.7 million in 1998, 1997 and 1996, respectively. Genzyme General leases facilities and personal property under certain operating leases in excess of one year.

FUTURE MINIMUM PAYMENTS DUE UNDER OPERATING LEASES:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	OPERATING LEASES

<S>	<C>
1999	$ 19,880
2000	18,790
2001	15,827
2002	13,867
2003	13,163
Thereafter	129,191
Total minimum payments	$210,718

</TABLE>

A sixty-five year lease commenced on June 1, 1992 between a wholly owned subsidiary of Genzyme and a third party lessor. Genzyme General recorded total rent expense under this lease of $1,517,000, $1,290,000 and $886,000 in 1998, 1997 and 1996, respectively. The lease provides for escalations every five years based on the Consumer Price Index Escalation with a minimum escalation of 3% per year. Therefore, rent expense on a straight-lined basis is $1,517,000 per year.

GTR leases from Genzyme General a portion of a research and development facility. GTR is obligated to pay Genzyme General $0.6 million per year for 3 years commencing on July 1, 1998. Total rental income for 1998 was $0.3 million.

GENZYME GENERAL
NOTES TO COMBINED FINANCIAL STATEMENTS

NOTE M. DIVISION EQUITY

The following presents the division equity of Genzyme General for the periods presented:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997	1996
<S>	<C>	<C>	<C>
Balance at beginning of period	$ 980,876	$ 884,225	$ 659,281
Net income (loss)	101,132	57,026	(47,513)
Allocation of tax benefits generated by GTR	16,394	17,666	17,011
Allocation of tax benefits generated by GMO	3,527	2,755	--
Issuance of common stock under stock plans	74,360	35,963	18,581
Exercise of warrants	289	855	106,164
Allocation to GTR for GTR Designated Shares	--	(14,892)	(11,714)
Tax benefit from disqualified dispositions	18,561	4,127	3,500
Allocation of cash to GMO for GMO Designated Shares	(5,000)		
Conversion of GMO Debentures to GGD Debentures for GMO Designated Shares	(19,802)	--	--
Conversion of note receivable due from GMO into GMO Designated Shares	(2,696)	--	--
Loss on purchase of facility from GTR	(711)	--	--
Payment to GTR for research program	(250)	--	--
Shares issued in connection with acquisitions	--	--	36,991
Allocation of acquired deferred tax asset in connection with the acquisition of PharmaGenics	--	2,900	--
Issuance of common stock in connection with the conversion of 6 3/4% Convertible Subordinated Notes	--	--	101,400
Equity adjustments	387	(9,749)	524
	$ 1,167,067	$ 980,876	$ 884,225

</TABLE>

At December 31, 1998 and 1997, 200,000,000 shares of GGD Stock were authorized for issuance and approximately 81,394,000 and 77,693,000 shares, respectively, were issued and outstanding.

Included in division equity are the cumulative foreign currency translation charges of $4.8 million and $12.4 million at December 31, 1998 and 1997, respectively.

All share and per share amounts herein have been restated to reflect the 2-for-1 split of shares of GGD Stock on July 25, 1996.

At December 31, 1998, approximately 14,888,000 shares of GGD Stock were reserved for issuance under the Company's 1990 Equity Incentive Plan, as amended, 1997 Equity Incentive Plan, 1998 Director Stock Option Plan, and 1990 Employee Stock

Purchase Plan, as amended, and upon the exercise of outstanding warrants. At December 31, 1998, approximately 11,593,000 options to purchase shares of GGD Stock were outstanding.

Pursuant to the Charter, GTR and GMO Designated Shares are authorized shares of GTR Stock and GMO Stock, respectively, which are not issued and outstanding, but which the Genzyme Board may from time to time issue, sell or otherwise distribute without allocating the proceeds or other benefits of such issuance, sale or distribution to GTR or GMO, respectively. GTR and GMO Designated Shares are not eligible to receive dividends and cannot be voted by Genzyme. GTR and GMO Designated Shares are created in certain circumstances when cash or other assets are transferred from Genzyme General to GTR or GMO.

In October 1996, the Genzyme Board approved the allocation of up to a maximum of $20.0 million of cash from Genzyme General to GTR (the "GTR Equity Line") to provide initial funding for GTR's joint venture with Diacrin. As of December 31, 1997, Genzyme had allocated a total of $7.0 million of cash from Genzyme General to GTR under the GTR Equity Line and 721,455 GTR Designated Shares had been reserved for issuance.

In May 1998, the Genzyme Board increased the amount available under the GTR Equity Line from $13.0 million to $50.0 million. Under the GTR Equity Line, Genzyme Tissue Repair may draw down funds as needed each fiscal quarter in exchange for GTR Designated Shares. The rate of exchange will be determined by dividing the amount drawn under the line of credit by the average market value of one share of GTR Stock during the 20 trading days prior to the date the amount is drawn under the line of credit. As of December 31, 1998, GTR had not yet drawn any funds from the equity line.

NOTE M. DIVISION EQUITY (CONTINUED)

In 1997, the Genzyme Board approved the allocation of up to $25.0 million in cash from Genzyme General to GMO. The amount available was reduced to $5.0 million as a result of the issuance in August 1998 of $20.0 million in debentures convertible into GMO Stock, which were subsequently surrendered in exchange for the GGD Debentures in 1998. GMO drew down the remaining $5.0 million available under this equity line in 1998 in exchange for approximately 714,000 GMO Designated Shares.

In August 1998, the Genzyme Board approved the allocation of up to an additional $30.0 million in cash to GMO in exchange for an increase in the number of GMO Designated Shares.

As of December 31, 1998, there were approximately 716,000 GTR Designated Shares reserved for issuance.

As of December 31, 1998, there were approximately 696,000 GMO Designated Shares reserved for issuance. During 1998, Genzyme distributed 8,717,000 GMO Designated Shares as a dividend to Genzyme General shareholders.

PREFERRED STOCK, DIRECTORS' DEFERRED COMPENSATION PLAN, STOCK RIGHTS, STOCK OPTIONS, EMPLOYEE STOCK PURCHASE PLAN, WARRANTS, GTR DESIGNATED SHARES AND GMO DESIGNATED SHARES

Further disclosures relating to Genzyme's preferred stock, Directors' Deferred Compensation Plan, stock rights, stock options, Employee Stock Purchase Plan, warrants, GTR Designated Shares and GMO Designated Shares are included in Note L., "Stockholders' Equity," to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference.

STOCK COMPENSATION PLANS

The Company applies Accounting Principles Board Opinion 25 and related Interpretations in accounting for its four stock-based compensation plans: the 1997 Equity Incentive Plan and the 1990 Equity Incentive Plan (both of which are stock option plans), the 1990 Employee Stock Purchase Plan (a stock purchase plan), and the 1998 Director Stock Option Plan (a stock option plan) and, accordingly, no compensation expense has been recognized for shares purchased or for options granted to employees with an exercise price equal to fair market value. Had compensation expense for the stock-based compensation plans been determined based on the fair value at the grant dates for options granted and shares purchased under the plans consistent with the provisions of SFAS 123, Genzyme General's net income (loss) and earnings (loss) per share would have been as follows:

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS, EXCEPT PER SHARE DATA)	DECEMBER 31, 1998	1997	1996
<S>	<C>	<C>	<C>
GENZYME GENERAL:			
Net income (loss):			
As reported	$121,053	$77,447	$(30,502)
Pro forma	$107,478	$65,440	$(40,558)
Basic earnings per share:			
As reported	$1.53	$1.01	$(0.45)
Pro forma	$1.36	$0.86	$(0.59)
Diluted earnings per share:			
As reported	$1.48	$0.98	$(0.45)
Pro forma	$1.31	$0.83	$(0.59)

</TABLE>

For the assumptions used in the SFAS 123 calculations for Genzyme General for the years ended December 31, 1998, 1997 and 1996 (see Note L., "Stockholders Equity," to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference).

The effects of applying SFAS 123 in this pro forma disclosure are not likely to be representative of the effects on reported net income for future years. SFAS 123 does not apply to awards granted prior to 1995 and additional awards are anticipated in future years.

GENZYME GENERAL
NOTES TO COMBINED FINANCIAL STATEMENTS

NOTE N. RESEARCH AND DEVELOPMENT AGREEMENTS

Revenues from research and development agreements with related parties include the following:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997	1996
<S>	<C>	<C>	<C>
Fees for research and development activities:			
GTC	$ 3,568	$ 8,041	$ 3,212
Neozyme II	--	--	19,799
	$ 3,568	$ 8,041	$23,011

</TABLE>

The disclosures related to Neozyme II and Genzyme General's participation in research contracts are included in Note I., "Investments - GTC, RenaGel LLC, BioMarin/Genzyme LLC, and Pharming/Genzyme LLC," and Note M., "Research and Development Agreements -- Genzyme Development Partners, L.P.," to Genzyme's Consolidated Financial Statements, which are incorporated herein by reference.

NOTE O. COMMITMENTS AND CONTINGENCIES

From time to time Genzyme has been subject to legal proceedings and claims arising in connection with its business. At December 31, 1998, there were no asserted claims against Genzyme which, in the opinion of management, if adversely decided would have a material adverse effect on Genzyme General's financial position and results of operations.

NOTE P. INCOME TAXES

Income (loss) before income taxes and the related income tax expense (benefit) are as follows for the years ended December 31:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997	1996
<S>	<C>	<C>	<C>

Domestic (1)	$ 154,056	$ 81,805	$(37,615)
Foreign	9,514	8,822	10,308
Total	$ 163,570	$ 90,627	$(27,307)
Currently payable:			
Federal	$ 53,509	$ 31,102	$ 37,985
State	7,935	3,497	6,889
Foreign	4,016	2,971	3,616
Total current	65,460	37,570	48,490
Deferred:			
Federal	(2,180)	(3,723)	(28,448)
State	(842)	(246)	164
Total deferred	(3,022)	(3,969)	(28,284)
Provision for income taxes	$ 62,438	$ 33,601	$ 20,206

</TABLE>

(1) Includes $130.6 million in charges for purchased research and development and acquisition expenses in 1996.

GENZYME GENERAL
NOTES TO COMBINED FINANCIAL STATEMENTS

NOTE P. INCOME TAXES (CONTINUED)

Provisions for income taxes were at rates other than the U.S. federal statutory tax rate for the following reasons:

<TABLE>
<CAPTION>

	1998	1997	1996
<S>	<C>	<C>	<C>
Tax at U.S. statutory rate	35.0%	35.0%	35.0%
Losses in less than 80%-owned subsidiaries with no current tax benefit	1.1	1.1	0.8
State taxes, net	3.2	3.0	5.2
Foreign sales corporation	(2.0)	(2.4)	(2.1)
Nondeductible amortization	1.8	3.1	2.1
Benefit of tax credits	(1.3)	(1.8)	--
Other, net	0.4	(0.9)	2.2
Utilization of operating loss carryforwards	--	--	(2.6)
Effective tax rate before certain charges	38.2	37.1	40.6
Gross charge for purchased research and development net of related tax benefits	--	--	33.4
	38.2	37.1	74.0
Allocated tax benefits generated by Genzyme Tissue Repair	(10.0)	(19.5)	(62.3)
Allocated tax benefits generated by Genzyme Molecular Oncology	(2.2)	(3.1)	--
Effective tax rate attributable to GGD Stock	26.0%	14.5%	11.7%

</TABLE>

At December 31 the components of net deferred tax assets were as follows:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997

	<C>	<C>
Deferred tax assets:		
Net operating loss carryforwards	$ 4,254	$ 4,909
Tax credits	3,714	5,091
Deferred gain	2,002	2,237
Intangible amortization	32,259	28,730
Investments in unconsolidated subsidiaries	3,108	1,323
Realized and unrealized capital losses	10,139	16,987
Reserves and other	39,553	23,716
Allocation of tax benefit from Genzyme Tissue Repair	15,621	15,515
Allocation of tax benefit from Genzyme Molecular Oncology	2,648	3,252
Gross deferred tax asset	113,298	101,760
Valuation allowance	(16,700)	(14,914)
Net deferred tax asset	96,598	86,846
Deferred tax liabilities:		
Depreciable assets	(28,735)	(23,257)
Net deferred tax asset	$ 67,863	$ 63,589

</TABLE>

Due to uncertainty surrounding the realization of certain favorable tax attributes primarily relating to capital losses related to the purchase of in-process research and development, the Company placed a valuation allowance of $16.7 million and $14.9 million for December 31, 1998 and December 31, 1997, respectively, against otherwise recognizable deferred tax assets.

NOTE P. INCOME TAXES (CONTINUED)

Realization of the net deferred tax assets is dependent on generating sufficient taxable income prior to the expiration of loss carryforwards. Although realization is not assured, management believes that it is more likely than not that all of the net deferred tax assets will be realized. The amount of the deferred tax asset considered realizable, however, could be reduced in the near term if estimates of future taxable income during the carryforward period are reduced.

At December 31, 1998 Genzyme General had U.S. net operating loss and tax credit carryforwards of $12.1 million and $3.7 million, respectively, for income tax purposes. These carryforwards expire from 2003 to 2013. Utilization of tax net operating loss carryforwards may be limited under Section 382 of the Internal Revenue Code of 1986, as amended (the "Code"). Tax credits of $3.7 million carry forward indefinitely.

NOTE Q. BENEFIT PLANS

The disclosures relating to Genzyme's domestic employee savings plan under Section 401(k) of the Code (the "401(k) Plan") and defined-benefit pension plans are included in Note P., "Benefit Plans," to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference. Genzyme General contributed $3.7 million, $2.1 million and $1.1 million to the 401(k) Plan in 1998, 1997 and 1996, respectively.

The Company has defined-benefit pension plans covering substantially all the employees of DSP and certain of Genzyme's foreign subsidiaries. Pension expense for Genzyme General related to these plans was approximately $1.1 million, $1.1 million and $0.6 million in 1998, 1997 and 1996, respectively. Pension costs are funded as accrued. Actuarial and other disclosures regarding the plans are not presented because the plans are not material.

NOTE R. SEGMENT REPORTING

Genzyme General's reportable segments are strategic business units that offer different products and services. Genzyme General has three reportable segments:

- The Therapeutics business unit, which develops, manufactures and distributes

human therapeutic products for significant unmet medical needs. The business derives substantially all of its revenue from Cerezyme(R) enzyme and Ceredase(R) enzyme sales.

- The Surgical Products business unit, which commenced operations in July 1996 upon the acquisition of DSP, develops manufactures and markets surgical products for three principal business lines: (i) cardiovascular surgery; (ii) general surgery; and (iii) plastic surgery.

- The Diagnostic Products business unit, which provides diagnostic products to niche markets focusing on in vitro diagnostics.

Information concerning the operations in these reportable segments is as follows (dollars in thousands):

<TABLE>
<CAPTION>

	1998	1997	1996
<S>	<C>	<C>	<C>
REVENUES:			
Therapeutics	$ 413,645	$332,712	$264,588
Surgical Products	103,958	100,835	50,715
Diagnostic Products	65,683	66,288	65,789
Other	85,846	86,927	107,162
Eliminations/Adjustments	4,145	10,441	23,188
Total	$ 673,277	$597,203	$511,442
DEPRECIATION AND AMORTIZATION EXPENSE:			
Therapeutics	$ 10,862	$ 10,054	$ 1,700
Surgical Products	8,449	8,220	4,520
Diagnostic Products	4,715	4,540	7,487
Other	11,470	7,410	7,161
Eliminations/Adjustments	10,269	13,429	8,389
Total	$ 45,765	$ 43,653	$ 29,257
EQUITY IN NET LOSS OF UNCONSOLIDATED AFFILIATES:			
Therapeutics	$ (12,480)	$ (2,310)	$ --
Surgical Products	--	--	--
Diagnostic Products	--	--	--
Other	(107)	(71)	(174)
Eliminations/Adjustments	(7,098)	(2,900)	(3,472)
Total	$ (19,685)	$(5,281)	$ (3,646)

</TABLE>

<TABLE>
<CAPTION>

	1998	1997	1996
<S>	<C>	<C>	<C>
INCOME TAX (EXPENSE) BENEFIT:			
Therapeutics	$ (76,606)	$ (61,389)	$ (57,145)
Surgical Products	19,653	10,210	18,514
Diagnostic Products	(13,755)	(1,409)	(2,430)
Other	2,134	8,658	621
Eliminations/Adjustments	6,136	10,329	20,234
Total	$ (62,438)	$ (33,601)	$ (20,206)
NET INCOME:			
Therapeutics	$ 120,832	$ 104,527	$ 82,232
Surgical Products	(31,000)	(17,384)	(26,642)
Diagnostic Products(1)	21,694	2,400	3,499
Other	(3,367)	(14,741)	(895)
Eliminations/Adjustments	(7,027)	(17,776)	(105,707)
Total	$ 101,132	$ 57,026	$ (47,513)
SEGMENT ASSETS:			
Therapeutics	$ 326,305	$ 315,775	
Surgical Products	277,578	282,379	
Diagnostic Products	49,430	54,132	
Other	94,930	92,605	
Eliminations/Adjustments	898,064	458,165	
Total	$1,646,307	$1,203,056	

</TABLE>

(1) Includes a gain on sale of product line in 1998 totaling $31.2 million.

The amounts in the category Other consist primarily of amounts derived in Genzyme General's genetic testing and Pharmaceuticals business units. There are no transactions between reportable segments. The difference between the reportable segment's Net Income and Segment Assets and the Combined Net Income and the Combined Total Assets for Genzyme General is included in the category Eliminations/Adjustments. The amounts in Eliminations/Adjustments for the category Net Income primarily consists of Genzyme General's interest income and interest expense and certain other income and expense amounts not allocated to the segments. Eliminations/Adjustments in the category Net Income for 1996 included a $106.5 million charge for in-process technology. Segment Assets for reportable segments include the following: Accounts Receivable, Inventory, certain Fixed Assets and certain Intangible Assets. Therefore, the amounts in Elimination/Adjustments for Segment Assets consist of the following:

<TABLE>
<CAPTION>

	1998	1997
<S>	<C>	<C>
Cash, cash equivalents, short and long term investments	$556,097	$193,197
Intangibles, net	41,556	26,488
Property, plant and equipment, net	133,995	110,305
Investment in equity securities	51,977	30,047
Other	114,439	98,128
Total Eliminations/Adjustments	$898,064	$458,165

</TABLE>

Genzyme General operates in the healthcare industry and primarily manufactures and markets its products in two major geographic areas-the United States and Europe. Genzyme General's principal manufacturing facilities are located in the United States, United Kingdom, Switzerland and Germany. Genzyme General purchases products from its British and Swiss subsidiaries for sale to customers in the United States. Transfer prices from the foreign subsidiaries are intended to allow Genzyme to produce profit margins commensurate with its sales and marketing effort. Genzyme's Netherlands subsidiary is the primary European distributor of Genzyme General's therapeutic products.

Certain information by geographic area follows (dollars in thousands):

<TABLE>
<CAPTION>

	Revenues	Long-Lived Assets
<S>	<C>	<C>
1998		
United States	$445,659	$ 951,318
Netherlands	31,931	730
Other	195,687	56,517
Total	$673,277	$1,008,565
1997		
United States	$435,353	$ 707,196
Netherlands	40,436	652
Other	121,414	53,697
Total	$597,203	$ 761,545
1996		
United States	$379,644	
Netherlands	56,685	
Other	75,113	
Total	$511,442	

</TABLE>

Genzyme General's results of operations are highly dependent upon the sales of Cerezyme(R) enzyme and Ceredase(R) enzyme. For the years ended December 31, 1998, 1997 and 1996, sales of Cerezyme(R) enzyme and Ceredase(R) enzyme represented 67%, 63% and 62% of total product sales. In 1998, 1997 and 1996, Genzyme marketed Cerezyme(R) enzyme and Ceredase(R) enzyme directly to

physicians, hospitals and treatment centers, and sold products representing approximately 12%, 18% and 12%, respectively, of net revenue to an unaffiliated distributor. The credit risk associated with trade receivables is mitigated due to the large number of customers and their broad dispersion over different industries and geographic areas.

GENZYME GENERAL
NOTES TO COMBINED FINANCIAL STATEMENTS

NOTE S. QUARTERLY RESULTS (UNAUDITED)

Summarized quarterly financial data (in thousands of dollars except per share amounts) for the years ended December 31, 1998 and 1997 are displayed in the following table.

<TABLE>
<CAPTION>

	1ST QUARTER	2ND QUARTER	3RD QUARTER	4TH QUARTER
1998				
<S>	<C>	<C>	<C>	<C>
Net sales	$ 154,123	$ 168,980	$ 167,129	$ 183,045
Gross profit	98,593	110,802	85,627	128,792
Net income (1,2)	24,938	31,200	32,233	32,682
Income per share:				
Basic	0.32	0.40	0.41	0.40
Diluted	0.31	0.39	0.40	0.39
1997				
Net sales	$ 144,606	$ 147,614	$ 148,841	$ 156,142
Gross profit	87,084	91,454	94,387	71,358
Net income (1,2)	21,238	23,283	24,357	8,569
Income per share:				
Basic	0.28	0.31	0.32	0.11
Diluted	0.27	0.30	0.31	0.11

</TABLE>

---

(1) Includes pre-tax charges in the third quarter of 1998 of $26.9 million resulting from certain other charges (see Note C., "Other Charges" above) and a pre-tax gain on the sale of the research products business assets of $31.2 million, also recorded in the third quarter of 1998 (see Note D., "Sale of Research Products Business Assets" above).

(2) Includes pre-tax charges in the fourth quarter of 1997 of $29.2 million related to certain other charges recorded in December 1997 (see Note C., "Other Charges" above).

NOTE T. SUBSEQUENT EVENTS

In March 1999, Genzyme announced that it intends to create a separate division, with its own series of common stock, for the existing surgical products business that is currently part of Genzyme General, subject to approval of the Genzyme Board.

In March 1999, Genzyme announced that it plans to reallocate Genzyme's interest in Diacrin/Genzyme LLC from GTR to Genzyme General. The transfer of interest in Diacrin/Genzyme LLC is subject to the approval of GTR's shareholders.

GENZYME GENERAL

REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and Stockholders of Genzyme Corporation:

In our opinion, the accompanying combined balance sheets and the related combined statements of operations and of cash flows present fairly, in all

material respects, the financial position of Genzyme General (as described in Note A) at December 31, 1998 and 1997, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 1998, in conformity with generally accepted accounting principles. In addition, in our opinion, the financial statement schedule presents fairly, in all material respects, the information set forth therein when read in conjunction with the related combined financial statements. These financial statements and financial statement schedule 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 require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and 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.

As more fully described in Note A to these financial statements, Genzyme General is a division of Genzyme Corporation; accordingly, the combined financial statements of Genzyme General should be read in conjunction with the audited consolidated financial statements of Genzyme Corporation and Subsidiaries.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

Boston, Massachusetts
February 23, 1999

GENZYME GENERAL DIVISION
SCHEDULE II -- VALUATION AND QUALIFYING ACCOUNTS

FOR THE YEARS ENDED DECEMBER 31, 1998, 1997 AND 1996

<TABLE>
<CAPTION>

COLUMN A	COLUMN B	COLUMN C		COLUMN D	COLUMN E
		ADDITIONS			
DESCRIPTION	BALANCE AT BEGINNING OF PERIOD	CHARGED TO COSTS AND EXPENSES	CHARGED TO OTHER ACCOUNTS	DEDUCTIONS	BALANCE AT END OF PERIOD
<S>	<C>	<C>	<C>	<C>	<C>
Year ended December 31, 1998:					
Allowance for doubtful accounts.....	$11,299,000	$ 5,225,000	$ --	$ 3,665,000	$12,859,000
Inventory Reserve	$14,992,000	$ 3,780,000	$ --	$17,393,000	$ 1,379,000
Year ended December 31, 1997:					
Allowance for doubtful accounts.....	$16,100,400	$ 2,355,000	--	$ 7,156,400	$11,299,000
Inventory Reserve	$ 3,247,200	$15,585,000(1)	--	$ 3,840,000	$14,992,200
Year ended December 31, 1996:					
Allowance for doubtful accounts.....	$ 7,833,800	$ 8,093,600	$ 2,534,000(3)	$ 2,361,000(2)	$16,100,400
Inventory Reserve	$ 3,082,200	$ 1,426,600	--	$ 1,261,600	$ 3,247,200

</TABLE>

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(1) Includes $13.4 million of strategic financial provisions (See Note C, "Other Changes" to Genzyme General's Combined Financial Statements).

(2) Uncollectable accounts written off, net of recoveries.

(3) Reserve acquired in acquisition.

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GENZYME CORPORATION
CONSOLIDATED SELECTED FINANCIAL DATA

The following Selected Financial Data reflects the results of operations and financial position of Genzyme Corporation ("Genzyme" or the "Company") and should be read in conjunction with the financial statements of Genzyme Corporation and Subsidiaries and accompanying footnotes.

<TABLE>
<CAPTION>
CONSOLIDATED STATEMENTS OF OPERATIONS DATA
(AMOUNTS IN THOUSANDS)

	FOR THE YEARS ENDED DECEMBER 31,				
	1998	1997	1996	1995	1994
<S>	<C>	<C>	<C>	<C>	<C>
Revenues:					
Net product sales	$ 613,685	$ 529,927	$ 424,483	$ 304,373	$ 238,645
Net service sales	74,791	67,158	68,950	52,450	50,010
Revenues from research and development contracts:					
Related parties	5,745	8,356	23,011	26,758	20,883
Other	15,114	3,400	2,310	202	1,513
Total revenues	709,335	608,841	518,754	383,783	311,051
Operating costs and expenses:					
Cost of products sold	211,076	206,028	155,930	113,964	92,226
Cost of services sold	48,586	47,289	54,082	35,868	32,403
Selling, general and administrative	215,203	200,476	162,264	110,447	80,990
Research and development (including research and development related to contracts)	119,005	89,558	80,849	68,845	55,334
Amortization of intangibles	24,334	17,245	8,849	4,647	4,741
Purchase of in-process research and development	--	7,000	130,639	14,216	11,215
Other	--	--	1,465	--	--
Total operating costs and expenses	618,204	567,596	594,078	347,987	276,909
Operating income (loss)	91,131	41,245	(75,324)	35,796	34,142
Other income (expenses):					
Equity in net loss of unconsolidated subsidiaries	(29,006)	(12,258)	(5,373)	(1,810)	(1,353)
Gain on affiliate sale of stock	2,369	--	1,013	--	--
Minority interest	4,285	--	--	1,608	1,659
Gain on sale of product line	31,202	--	--	--	--
Gain on sale of investment	3,391	--	1,711	--	--
Charge for impaired investments	(3,397)	--	--	--	(9,431)
Other	--	(2,000)	--	--	(1,980)
Investment income	25,055	11,409	15,341	8,814	9,101
Interest expense	(22,593)	(12,667)	(6,990)	(1,109)	(1,354)
Total other income (expenses)	11,306	(15,516)	5,702	7,503	(3,358)
Income (loss) before income taxes	102,437	25,729	(69,622)	43,299	30,784
Provision for income taxes	(39,870)	(12,100)	(3,195)	(21,649)	(14,481)
Net income (loss)	$ 62,567	$ 13,629	$ (72,817)	$ 21,650	$ 16,303

</TABLE>

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GENZYME CORPORATION
CONSOLIDATED SELECTED FINANCIAL DATA (CONTINUED)

<TABLE>
<CAPTION>
CONSOLIDATED STATEMENTS OF OPERATIONS DATA (CONTINUED)
(AMOUNTS IN THOUSANDS, EXCEPT PER SHARE AMOUNTS)

	FOR THE YEARS ENDED DECEMBER 31,				
	1998	1997	1996	1995	1994
<S>	<C>	<C>	<C>	<C>	<C>
COMMON SHARE DATA:					
ATTRIBUTABLE TO GENZYME GENERAL:					
Net income (loss)	$ 121,053	$ 77,447	$(30,502)	$ 43,680	$ 32,054

Per Genzyme General common share - basic:					
Net income (loss)	$ 1.53	$ 1.01	$ (0.45)	$ 0.79	$ 0.67
Weighted average shares outstanding	79,063	76,531	68,289	55,531	48,141
Per Genzyme General common and common equivalent share-diluted:					
Net income (loss)	$ 1.48	$ 0.98	$ (0.45)	$ 0.68	$ 0.58
Adjusted weighted average shares outstanding	81,734	78,925	68,289	63,967	55,321
ATTRIBUTABLE TO GENZYME TISSUE REPAIR:					
Net loss	$ (40,386)	$(45,984)	$(42,315)	$(22,030)	$(15,751)
Per Genzyme Tissue Repair basic and diluted common share:					
Net loss	$ (1.99)	$ (3.07)	$ (3.38)	$ (2.28)	$ (4.40)
Weighted average shares outstanding	20,227	14,976	12,525	9,659	3,578
ATTRIBUTABLE TO GENZYME MOLECULAR ONCOLOGY:					
Net loss	$ (19,107)	$(19,578)	$ (1,003)	$ (464)	$ (37)
Per Genzyme Molecular Oncology basic and diluted common share:					
Net loss	$ (3.81)				
Weighted average shares outstanding	5,019				
Pro forma per Genzyme Molecular Oncology basic and diluted common share:					
Pro forma net loss		$ (4.98)	$ (0.26)	$ (0.12)	$ (0.01)
Pro forma weighted average shares outstanding		3,929	3,929	3,929	3,929

CONSOLIDATED BALANCE SHEET DATA:

	DECEMBER 31,				
	1998	1997	1996	1995	1994
Cash, cash equivalents, short- and long-term investments	$ 575,729	$ 246,341	$ 187,955	$326,236	$153,460
Working capital	415,428	350,822	395,605	352,410	103,871
Total assets	1,690,554	1,295,453	1,270,508	905,201	658,408
Long-term debt and convertible debt	287,225	170,276	241,998	124,473	126,729
Stockholders' equity	1,172,547	1,012,050	902,309	705,207	418,964

There were no cash dividends paid.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF GENZYME CORPORATION AND SUBSIDIARIES' FINANCIAL CONDITION AND RESULTS OF OPERATIONS

INTRODUCTION

This discussion contains forward-looking statements. These forward-looking statements represent the expectations of the management of Genzyme as of the filing date of this Annual Report. The actual results for Genzyme could differ materially from those anticipated by the forward-looking statements due to the risks and uncertainties described under the caption "Factors Affecting Future Operating Results" included elsewhere in this Annual Report. Stockholders and

potential investors should consider carefully each of these risks and uncertainties in evaluating the financial condition and results of operations of Genzyme.

Genzyme is a biotechnology company that develops innovative products and services to address significant unmet medical needs. Genzyme has three divisions: Genzyme General Division ("Genzyme General"), which develops and markets therapeutic and surgical products and diagnostic products and services; Genzyme Tissue Repair Division ("GTR"), which develops and markets biological products for the treatment of cartilage damage, severe burns, chronic skin ulcers and neurodegenerative diseases; and Genzyme Molecular Oncology Division ("Genzyme Molecular Oncology" or "GMO"), which was formed in June 1997 in connection with the acquisition of PharmaGenics and develops gene-based approaches to cancer therapy through genomics, gene therapy and a small molecule drug discovery program. Genzyme owns approximately 40% of the outstanding shares of the common stock of Genzyme Transgenics Corporation ("GTC"). GTC applies transgenic technology to enable the development and production of recombinant proteins and monocolonal antibodies for medical uses. Primedica Corporation, GTC's contract research organization, provides preclinical development and testing services to pharmaceutical, biotechnology, medical device and other companies. GTC is also developing idiotypic vaccines in collaboration with the National Cancer Institute.

Genzyme Corporation provides separate financial statements for the Company and its subsidiaries on a consolidated basis and for each of Genzyme General, GTR and GMO. The financial statements of each division include the financial position, results of operations and cash flows of programs and products allocated to the division under the Company's Restated Articles of Organization, as amended (the "Charter"), and the management and accounting policies adopted by Genzyme's Board of Directors (the "Genzyme Board") to govern the relationship of the divisions. The financial information of Genzyme General, GTR and GMO, taken together, include all accounts which comprise the consolidated financial information presented for Genzyme and its subsidiaries.

For purposes of financial statement presentation, all of Genzyme's programs and products are allocated to Genzyme General, GTR or GMO. Notwithstanding this allocation, Genzyme continues to hold title to all of the assets and is responsible for all of the liabilities allocated to each of the divisions. Holders of Genzyme General Division Common Stock ("GGD Stock"), Genzyme Tissue Repair Division Common Stock ("GTR Stock") and Genzyme Molecular Oncology Division Common Stock ("GMO Stock") have no specific claim against the assets attributed to the division whose performance is associated with the series of stock they hold. Liabilities or contingencies of one division that affect Genzyme's resources or financial condition could affect the financial condition or results of operations of any other division.

Stockholders and potential investors should, therefore, read this discussion and analysis of Genzyme's financial position and results of operations in conjunction with the financial statements and related notes of Genzyme, all of which are included with this Annual Report.

RESULTS OF OPERATIONS

The following discussion summarizes the key factors management considers necessary in reviewing Genzyme's consolidated results of operations. Detailed discussion and analysis of each division's results of operations are provided in the Management's Discussion and Analysis of Results of Operations and Financial Condition for each division.

1998 AS COMPARED TO 1997

REVENUES. Total revenues for 1998 were $709.3 million compared to $608.8 million in 1997, an increase of 17%. Product and service revenues were $688.5 million in 1998, compared to $597.1 million in 1997, an increase of 15%. Revenues from research and development contracts for 1998 were $20.9 million compared to $11.8 million in 1997, an increase of 77%.

Product revenues consist of sales by Genzyme General. Product revenues in 1998 increased 16% to $613.7 million from $529.9 million in 1997, due primarily to increased sales of Cerezyme(R) enzyme.

In 1998, sales of products by Genzyme General's Therapeutics business unit consisted primarily of sales of Cerezyme(R) enzyme and Ceredase(R) enzyme. Sales of Cerezyme(R) enzyme and Ceredase(R) enzyme increased 24% to $411.1 million from $332.7 million in 1997, due to continued growth in new patient accruals in existing markets and strong international sales. Genzyme's results of operations are highly dependent on sales of Cerezyme(R) enzyme and Ceredase(R) enzyme, which together represented 67% of Genzyme General's product sales in 1998 compared to 63% in 1997.

The Surgical Products business unit was formed in July 1996 following the acquisition of Deknatel Snowden Pencer, Inc. ("DSP") and combined the business of DSP with Genzyme General's hyaluronic acid-based products designed to limit the incidence and occurrence of post-operative adhesions (the "Sepra Products").

Revenues from Sepra Products primarily consist of sales of Seprafilm(R) Bioresorbable Membrane. Product sales by the Surgical Products business unit for 1998 were $104.0 million as compared to $100.8 million for 1997. Surgical Products sales consisted primarily of sales of cardiovascular fluid management products, surgical closures and surgical instruments. These product sales (excluding sales of Sepra Products) were up slightly in 1998 as compared to 1997. Sales of Sepra Products increased 88% in 1998 as compared to 1997.

Seprafilm(R) Bioresorbable Membrane is being marketed in the United States and Canada by Genzyme General on behalf of Genzyme Ventures II ("GVII"), a joint venture between Genzyme and Genzyme Development Partners, L.P. ("GDP"). In March 1997, Genzyme and GDP reached agreement concerning the operation of and allocations of profits and losses from GVII. Under the terms of this agreement, Genzyme purchases product from GVII for resale by Genzyme. Genzyme funds the activities of GVII and is reimbursed at cost for selling, general and administrative ("SG&A") expenses. The first $200,000 of losses generated by GVII were allocated to GDP and thereafter losses are allocated 40% to GDP and 60% to Genzyme, except that if losses would be allocated to the general partner of GDP rather than the limited partners, all of such losses are allocated to Genzyme. GDP will receive the first $5.6 million in profits generated by GVII, Genzyme General will receive the next $8.4 million in profits and, thereafter, Genzyme General and GDP will receive 60% and 40%, respectively, in the profits of GVII. In 1997, Genzyme General contributed an additional $1.5 million to GVII through GDP. There were no capital contributions in 1998.

Revenues from the Diagnostics business unit consist of product sales and genetic testing service revenues. On July 1, 1998, Genzyme completed the sale of substantially all of the assets of its research products business to TECHNE Corp. and its wholly-owned subsidiary, Research and Diagnostic Systems, Inc. (the "TECHNE Sale"). The research products business contributed $9.1 million and $15.8 million of revenue in 1998 and 1997, respectively. Despite the sale of these assets, product sales of diagnostic products in 1998 were level with 1997. Service revenues in 1998 were level with 1997.

Service revenues primarily consist of genetic testing services by Genzyme General and sales of GTR's autologous cultured chondrocytes ("Carticel(R) AuCC") and Epicel(TM) skin grafts services. Service revenues for genetic testing in 1998 were level with 1997. Service revenues related to Carticel(R) AuCC and Epicel(TM) skin grafts increased to $17.1 million in 1998 from $10.9 million in 1997 or 57%. The growth in sales of Carticel(R) AuCC is primarily attributable to increased acceptance by orthopedic surgeons and insurance companies, most notably following the issuance by the FDA of a biologics license to GTR in August 1997 for Carticel(R) AuCC, and a continued increase in the number of orthopedic surgeons trained in the implantation procedure. The increase in sales of Epicel(TM) skin grafts was due to penetration of Epicel(TM) skin grafts into the catastrophic burn market. The increased market share resulted from increased surgeon awareness and from product improvements designed to ease the surgical procedure.

International sales as a percentage of total sales in 1998 increased to 41% from 36% in 1997, due primarily to a 32% increase in combined international sales of Cerezyme(R) enzyme and Ceredase(R) enzyme.

Revenues from research and development contracts are attributable to Genzyme General and GMO. Revenues from research and development contracts for 1998 increased 77% to $20.9 million from $11.8 million in 1997, due primarily to increased research and development revenue from GMO primarily due to $13.0 million in revenue recorded by GMO in connection with two research agreements with a large pharmaceutical company.

MARGINS AND OPERATING EXPENSES. Total gross margins for 1998 were 62%, as compared to 58% in 1997. Excluding other charges, gross margins for 1998 were 66% in 1998 compared to 62% in 1997. Genzyme provides a broad range of health care products and services, resulting in a range of gross margins depending on the particular market conditions of each product or service. Product margins for 1998 were 66%, including certain other charges, compared to 61% in 1997, including certain other charges. The increase in product margins in 1998 is primarily due to increased sales of Cerezyme(R) enzyme.

In the third quarter of 1998, Genzyme General recorded charges of $25.2 million associated with the write-down of inventories in the Therapeutics and Surgical Products business units. The conversion of U.S. patients with Gaucher disease from Ceredase(R) enzyme to Cerezyme(R) enzyme is substantially complete. Based on its successful progress in converting patients from Ceredase(R) enzyme to Cerezyme(R) enzyme, Genzyme determined that its existing supply of finished goods of Ceredase(R) enzyme was sufficient to meet patient needs. As a result, in the third quarter of 1998, Genzyme recorded a $14.8 million charge to cost of products sold primarily for the excess inventory used to make Ceredase(R) enzyme. In addition, during the third quarter of 1998, Genzyme reviewed its requirements to support the Sepra Products. As a result, in the third quarter of

1998, Genzyme recorded a $10.4 million charge to cost of products sold to write down Sepra Products inventory amounts to net realizable value.

Without these other charges, product margins in 1998 would have been 70% compared to 66% in 1997. Product margins, without other charges, increased in 1998 due to increased sales of Cerezyme(R) enzyme. Service margins for 1998 were 35% compared to 30% in 1997. The improvement in service margins is primarily attributable to increased margins on the sales Carticel(R) AuCC by GTR.

SG&A expenses and amortization of intangibles for 1998 were $239.5 million compared to $217.7 million in 1997, an increase of 10%. The increase was due primarily to increased sales and marketing expenses in Genzyme General related to the product launch of Thyrogen(R) hormone and increased expenditures in support of Cerezyme(R) enzyme.

Research and development expenses for 1998 were $119.0 million compared to $89.6 million in 1997, an increase of 33%. The increase was primarily due to increased research and development expenditures in 1998 at GMO and $12.0 million additional research and development expenses resulting from the consolidation of the results of ATIII LLC, for which there were no comparable amounts in 1997. ATIII LLC is the joint venture between Genzyme and GTC for the development and commercialization of transgenic recombinant human antithrombin III ("ATIII").

OTHER INCOME AND EXPENSES. Other income and expenses for 1998 was a net income of $11.3 million compared to a net other expense of $15.5 million in 1997. The 1997 amount includes $2.0 million of other charges.

Other income and expenses includes $29.0 million in equity in net loss of unconsolidated affiliates in 1998 compared to $12.3 million in equity in net loss of unconsolidated affiliates in 1997. The increase in equity in net loss of unconsolidated affiliates was primarily due to (i) increased losses from GTC; (ii) increased losses resulting from RenaGel LLC, Genzyme's joint venture with GelTex Pharmaceuticals, Inc. ("GelTex") for the development and commercialization of Renagel(R) Capsules (sevelamer hydrochloride), which was established on June 17, 1997; (iii) increased losses resulting from Diacrin/Genzyme LLC, Genzyme's joint venture with Diacrin, Inc. for the development and commercialization of products and processes using porcine fetal cells for the treatment of Parkinson's and Huntington's diseases in humans which was established on October 1, 1996; and (iv) Genzyme's portion of the losses resulting from Pharming/Genzyme LLC, Genzyme's joint venture with Pharming Group N.V. ("Pharming") for the development and commercialization of human alpha glucosidase ("hAG") as a treatment for Pompe's disease, which became effective on October 9, 1998; and (v) Genzyme's portion of the losses resulting from BioMarin/Genzyme LLC, Genzyme's joint venture with BioMarin Pharmaceuticals Inc. ("BioMarin") for the development and commercialization of alpha-L-iduronidase for the treatment of mucopolysaccharidosis ("MPS I"), which was established on September 14, 1998.

Other income and expense includes a gain of $2.4 million on Genzyme's investment in GTC due to the issuance by GTC of shares of its common stock, which was recorded in June 1998.

For the year ended December 31, 1998, Genzyme General recorded minority interest in the results of ATIII LLC of $4.3 million, representing GTC's portion of the losses of the joint venture for 1998. There was no comparable amount in the corresponding period of 1997.

In July 1998, Genzyme General recorded a gain of $31.2 million on the TECHNE Sale. In addition, a gain on sale of investment of $3.4 million was recorded in December 1998 upon the sale of a portion of the shares of TECHNE common stock acquired in that transaction. There was no comparable amount in the corresponding period of last year.

Genzyme General recorded a charge for an impaired investment of $3.4 million related to a strategic investment in a company whose common stock price decline was considered "other than temporary".

Investment income for 1998 was $25.1 million, compared with $11.4 million for 1997. The increase was due to higher average cash balances resulting primarily from the proceeds from the issuance of $250.0 million in principal amount of 5 1/4% Convertible Subordinated Notes due June 1, 2005 (the "GGD Notes") in May 1998. Interest expense for 1998 was $22.6 million, compared to $12.7 million in 1997. The increase was due to additional interest expense related to the issuance of the GGD Notes and a full year of interest related to the $21.2 million in principal amount of 5% convertible debentures due 2003 (the "GGD Debentures").

The tax provision for 1998 varies from the U.S. statutory tax rate because of the provision for state income taxes, nondeductible interest, the foreign sales corporation, nondeductible amortization of intangibles, tax credits and Genzyme's share of the losses of unconsolidated affiliates. In 1998, the

effective tax rate was 39%, compared to 37% in 1997. The increase in the rate was due to an increase in non-deductible amortization of intangibles and an increase in 1998 foreign tax rates.

1997 AS COMPARED TO 1996

In the fourth quarter of 1997, Genzyme General recorded $29.2 million of charges mainly associated with its Pharmaceuticals and Surgical Products businesses and the sale of Genetic Design, Inc ("GDI") which was sold in 1996. The Pharmaceuticals business now focuses on products that are more consistent with Genzyme General's long-term business strategy of moving towards higher-value products and away from fine chemical and bulk pharmaceuticals. This change in strategy resulted in a $18.1 million charge to cost of products sold, primarily related to the melatonin, bulk pharmaceuticals and fine chemical product lines that were discontinued. In addition, Genzyme General recorded charges of $5.5 million to cost of products sold and $3.5 million to SG&A expense primarily related to the manufacturing and selling of Sepracoat(TM) Coating Solution, which was discontinued for the U.S. market after an advisory panel of the U.S. Food and Drug Administration ("FDA") recommended against granting marketing approval of this product in 1997. The product is sold outside of the United States. Genzyme General also recorded a $2.0 million charge to other expense related to the uncertainty of collection on certain notes receivable.

REVENUES. Total revenues for 1997 were $608.8 million compared to $518.8 million in 1996, an increase of 17%. Product and service revenues were $597.1 million in 1997, compared to $493.4 million in 1996, an increase of 21%. Revenues from research and development contracts for 1997 were $11.8 million compared to $25.3 million in 1996, a decrease of 53%.

Product revenues consist of sales by Genzyme General. Product revenues in 1997 increased 25% to $529.9 million from $424.5 million in 1996, due primarily to increased sales of Cerezyme(R) enzyme and a full year of sales by DSP, which was acquired by the Company in July 1996.

Sales of Cerezyme(R) enzyme and Ceredase(R) enzyme by Genzyme General increased 26% to $332.7 million in 1997 from $264.6 million in 1996, due to continued growth in new patient accruals in existing markets. Sales of Cerezyme(R) enzyme and Ceredase(R) enzyme together represented 63% of consolidated product sales in 1997 compared to 62% in 1996.

Pharmaceuticals 1997 product sales decreased 31% from 1996 due primarily to a significant decline in sales of melatonin. Melatonin sales began to decline materially during the second half of 1996 due to reduced demand and Genzyme discontinued this product line in the fourth quarter of 1997.

Revenues from Sepra Products primarily consist of sales of Seprafilm(R) Bioresorbable Membrane. Product sales by the Surgical Products business unit for 1997 were $100.8 million as compared to $50.7 million for the period from July 1, 1996, the date of the acquisition of DSP, through December 31, 1996. Surgical Products sales consisted primarily of sales of cardiovascular fluid management products, surgical closures and surgical instruments. These product sales (excluding sales of Sepra Products) declined 12% in the second half of 1997 in comparison to the same period of 1996 due to a loss of volume and price competition in the fluid management business. DSP's product sales for the first half of 1996, which are not included in the results of Genzyme General, were $53.2 million.

Service revenues primarily consist of genetic testing services by Genzyme General and sales of GTR's Carticel(R) AuCC and Epicel (TM) skin grafts. Service revenues for genetic testing in 1997 decreased 9% primarily due to the loss of revenue from GDI, which was sold in November 1996, offset in part by higher unit volumes that were primarily attributable to the acquisition of Genetrix, Inc. which was included in Genzyme General's results of operations from May 1, 1996 forward.

International sales as a percentage of total sales in 1997 increased to 36% from 35% in 1996, due primarily to a 32% increase in combined international sales of Cerezyme(R) enzyme and Ceredase(R) enzyme, offset in part by additional domestic sales by the Surgical Products business unit.

Revenues from research and development contracts are primarily attributable to Genzyme General. Revenues from research and development contracts for 1997 decreased 53% to $11.8 million from $25.3 million in 1996, due primarily to the absence of revenue from Neozyme II Corporation, which was acquired by

Genzyme in the fourth quarter of 1996. This decrease was offset in part by increases in revenues from research and development contracts with third parties. Revenues from Neozyme II were $19.8 million in 1996.

MARGINS AND OPERATING EXPENSES. Total gross margins for 1997 were 58%, as compared to 57% in 1996. Excluding the effects of special charges, gross margins were 62% in 1997 compared to 57% in 1996. Genzyme provides a broad range of health care products and services, resulting in a range of gross margins depending on the particular market conditions of each product or service. Product margins for 1997 decreased to 61% from 63% in 1996. Excluding the effects of special charges, product margins in 1997 were 66%. The increase in product margins before special charges in 1997 is primarily due to increased sales volume of Cerezyme(R) enzyme offset in part by a full year of sales of lower margin DSP products. Service margins for 1997 were 30%, compared to 22% in 1996 due to the consolidation of Genetrix, the sale of GDI in 1996 and the resulting elimination of redundant facilities and staffing.

SG&A expenses and amortization of intangibles for 1997 were $217.7 million compared to $171.1 million in 1996, an increase of 27%. Excluding special charges, SG&A expenses increased in 1997 by 21% over 1996. The increase was due primarily to the acquisition of DSP and increased staffing in support of the growth in several product lines, most notably in support of the North American introduction of Seprafilm(R) Bioresorbable Membrane and increased surgeon training costs related to Carticel(R) AuCC. DSP added $16.7 million in SG&A expenses and amortization of intangibles in the first half of 1997 for which comparable amounts were not included in the results of Genzyme General in 1996. The acquisition of Genetrix did not materially affect SG&A expenses in 1996 and 1997 due to the consolidation of operations. GMO incurred $5.1 million in amortization of intangibles in 1997 as a result of the acquisition of PharmaGenics, and there was no similar amount in 1996.

In 1997, GMO recorded a $7.0 million charge for the purchase of in-process technology, which represents the value assigned to the PharmaGenics's programs which are still in the development stage and for which there is no future use.

Research and development expenses for 1997 were $89.6 million compared to $80.8 million in 1996, an increase of 11%, due to Genzyme General's commitment to fund development costs of the ATIII development program being conducted by GTC and increased spending on internal programs, most notably the Thyrogen(R) hormone program.

OTHER INCOME AND EXPENSES. Other income and expenses was a net other expense of $15.5 million (which includes a $2.0 million special charge) compared to other income of $5.7 million in 1996. The change was due primarily to a decrease in investment income and an increase in interest expense as well as increased equity in net losses of unconsolidated affiliates. Investment income for 1997 was $11.4 million, compared with $15.3 million for 1996. The decrease resulted from lower average cash and investment balances. Investment income for 1997 did not include any material gain or loss from sales of securities. Interest expense for 1997 was $12.7 million, compared to $7.0 million in 1996. The increase resulted from interest on funds borrowed to finance portions of the acquisitions of DSP and Neozyme II and interest related to convertible notes of GTR and GMO issued in 1997. Equity in net loss of unconsolidated affiliates increased from $4.3 million in 1996 to $12.3 million in 1997. The change is primarily due to increased losses from Diacrin/Genzyme LLC and RenaGel LLC.

The tax provision for 1997 varies from the U.S. statutory tax rate because of the provision for state income taxes, nondeductible interest, the foreign sales corporation, nondeductible amortization of intangibles, tax credits and Genzyme's share of the losses of unconsolidated affiliates. In 1997, the effective tax rate was 37%, compared to 41% in 1996. The decrease in the rate was due to additional tax credits in 1997 as well as a change in Massachusetts state law.

LIQUIDITY AND CAPITAL RESOURCES

GENZYME CORPORATION AND SUBSIDIARIES

As of December 31, 1998, Genzyme had cash, cash equivalents and investments (excluding equity securities) of $575.7 million compared to $246.3 million as of December 31, 1997, an increase of 134%. In 1998 operating and financing activities provided $111.1 million and $289.9 million of cash, respectively, investing activities used $385.1 million and fluctuations in exchange rates caused an increase in cash of $0.3 million. In 1998, financing activities provided $76.9 million of cash proceeds from the exercise of stock options and warrants and the issuance of stock under the employee stock purchase plan, and $250.0 million from the issuance of debt, and used $38.8 million for the repayment of debt and capital lease obligations. In 1998, investing activities used $304.9 million of cash for net purchases of investments and $39.5 million was used to finance capital expenditures.

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At December 31, 1998, accounts receivable increased 38% to $163.0 million from $118.3 million primarily due to increased revenue in 1998. At December 31, 1998, inventories had decreased 21% to $109.8 million from $139.7 million at December 31, 1997, primarily due to $25.2 million charge to write-down inventory in Genzyme General's Therapeutics and Surgical Products business units.

In May 1998, Genzyme raised approximately $243.0 million, net of the initial purchasers' discount and offering costs, from the issuance of the GGD Notes. The GGD Notes bear interest at 5.25% per annum and interest is payable semi-annually on June 1 and December 1 of each year, commencing on December 1, 1998. The GGD Notes are convertible, at any time at or before maturity (unless previously redeemed) into shares of GGD Stock at a conversion price of $39.60 per share, subject to adjustment in certain events. Holders of the GGD Notes will also be entitled to receive 0.10805 share of GMO Stock for each share of GGD Stock issued upon conversion. The GGD Notes may not be redeemed prior to June 10, 2001 and are redeemable, subject to certain subordination provisions, on such date and thereafter at the option of Genzyme, as a whole or from time to time in part, at the following prices (expressed as percentages of the principal amount) plus accrued interest to, but not including, the redemption date: 102.63% if redeemed on or before May 31, 2002; 101.75% if redeemed between June 1, 2002 and May 31, 2003; 100.88% if redeemed between June 1, 2003 and May 31, 2004; and 100% if redeemed on or after June 1, 2004.

On November 16, 1998 Genzyme distributed approximately 8,717,000 shares of GMO Stock to holders of GGD Stock and released from escrow approximately 3,929,000 shares of GMO Stock held by former PharmaGenics shareholders (the "GMO Dividend").

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On November 2, 1998, Genzyme General and GelTex announced that the FDA granted marketing approval for Renagel(R) Capsules for the reduction of serum phosphorus in patients with end-stage renal disease. Genzyme made a $15.0 million payment to GelTex in connection with the receipt of FDA approval of Renagel(R) Capsules, and is required to make an additional $10.0 million milestone payment to GelTex in October 1999.

In February 1997, Genzyme issued a $13.0 million note convertible into shares of GTR Stock (the "GTR Note"). The GTR Note bears interest at the rate of 5% per year. On November 2, 1998, the holder of the GTR Note converted $600,000 of the principal amount of the GTR Note in exchange for 223,405 shares of GTR Stock. GTR paid $1.1 million of accrued interest in cash to the holder in connection with this conversion.

Genzyme holds an option to acquire all of the partnership interests in Genzyme Development Partners, L.P. ("GDP") for approximately $26.0 million plus a continuing royalty payment for a period of ten years on certain sales of Sepra Products. Genzyme's decision regarding the exercise of this option will be based, in part, on the progress in the development and Genzyme's evaluation of the potential commercial success of the Sepra Products. The exercise price for the purchase option is payable in cash, shares of Genzyme common stock or a combination of the two, as determined by Genzyme at the time the option is exercised.

Genzyme believes that its available cash, investments and cash flow from operations will be sufficient to finance its planned operations and capital requirements for the foreseeable future. Although Genzyme currently has substantial cash resources, it has committed to utilize a portion of its resources for certain purposes, such as (i) paying strategic collaborators and funding joint venture obligations, including a $10.0 million milestone payment to GelTex in October 1999; (ii) product development and marketing; (iii) expanding facilities; and (iv) marketing Carticel(R) AuCC and the Sepra Products. Genzyme's cash resources will be further reduced to pay principal and interest on the following debt: (i) $100.0 million payable in November 1999 under Genzyme's revolving credit facility with a syndicate of commercial banks, $82.0 million of which is allocated to Genzyme General and $18.0 million of which is allocated to GTR; (ii) $21.2 million in principal amount under the GGD Debentures, which mature on August 29, 2003; (iii) $9.4 million in principal amount under the GTR Note, which matures on February 27, 2000; and (iv) $250.0 million in principal amount under the GGD Notes, which mature on June 1, 2005. To the extent cash is used to repay or redeem these debt instruments, including the interest payable thereon, Genzyme's cash reserves will also be diminished. Genzyme may require additional capital to finance any such activities. There can be no assurance, however, that such capital will be available on terms reasonably acceptable to Genzyme.

NEW ACCOUNTING PRONOUNCEMENTS, EURO, YEAR 2000 AND MARKET RISK

In April 1998, the Accounting Standards Executive Committee of the American Institute of Certified Public Accountants issued SOP 98-5. SOP 98-5 requires all costs of start-up activities (as defined by SOP 98-5) to be expensed as incurred. The impact of SOP 98-5 on Genzyme's consolidated financial statements was not material.

In June 1998, the Financial Accounting Standards Board issued SFAS 133. SFAS 133 establishes accounting and reporting standards for derivative instruments, including certain derivative instruments embedded in other contracts (collectively referred to as derivatives), and for hedging activities. SFAS 133 requires companies to recognize all derivatives as either assets or liabilities, with the instruments measured at fair value. The accounting for changes in fair value, gains or losses, depends on the intended use of the derivative and its resulting designation. The statement is effective for all fiscal quarters of fiscal years beginning after June 15, 1999. Genzyme will adopt SFAS 133 by January 1, 2000. Genzyme is evaluating SFAS 133 to determine its impact on its consolidated financial statements.

EURO-THE NEW EUROPEAN CURRENCY

On January 1, 1999, eleven of the fifteen member countries of the European Union established fixed conversion rates between their existing sovereign currencies and the Euro and adopted the Euro as their common legal currency. The Euro trades on currency exchanges and is available for non-cash transactions. These participating countries now issue sovereign debt exclusively in Euros, and have redenominated their outstanding sovereign debt. These countries no longer control their own monetary policies by directing independent interest rates for their legacy currencies. Instead, the authority to direct monetary policy, including money supply and official interest rates for the Euro, is exercised by the new European Central Bank.

The legacy currencies of these 11 countries are scheduled to remain legal tender in those countries as denominations of the Euro until January 1, 2002. Until that date, public and private parties may pay for goods and services using either the Euro or the participating country's legacy currency on a "no compulsion, no prohibition" basis.

Genzyme has formed committees to address the business implications of the Euro conversion, communicate information about the conversion throughout the organization, create global coordination among functional areas and address specific accounting, treasury and tax issues relating to the Euro.

Management believes that the Euro conversion will not affect any of Genzyme's outstanding derivatives and forward contracts, or any other material commercial contracts. Similarly, management does not foresee any increased currency exchange rate risk as a result of the Euro conversion.

Genzyme is assessing whether there are any long term competitive implications of the Euro conversion. While no material risks have been identified to date, individual European governments may pressure Genzyme to have consistent European pricing, and individual customers and distributors in Europe may choose to begin purchasing products in the country where the Euro price is lowest.

Because the Internal Revenue Service has not yet issued final regulations regarding the Euro, no assessment can be made as to the tax consequences of the conversion at this time. If the temporary regulations currently in place are adopted in their entirety, management believes that there will be no material tax consequences of the conversion.

Because Genzyme's existing accounting and finance software is currently able to use Euro-based accounts, management believes that the cost of upgrading software and other information systems for the conversion will be immaterial.

YEAR 2000

Many computer systems and other equipment with embedded chips or processors experience problems handling dates beyond the year 1999. As a result, older programs may experience operating difficulties that cause date-sensitive transaction errors or failures unless they are modified or upgraded to adequately address the problem. The potential impact of the Year 2000 problem cannot be fully appreciated at this time.

The Company has implemented a Year 2000 compliance program intended to identify and minimize exposure to Year 2000 problems. This program involves four phases: (a) conducting an inventory of the Company's Year 2000 issues; (b) prioritizing identified systems, programs and equipment based on materiality to the Company's operations; (c) assessing Year 2000 compliance; and (d) resolving Year 2000 issues through upgrades, replacements or repairs. The Company places each identified system or piece of equipment in one of seven categories; (i) mission critical, (ii) mission important, (iii) process critical, (iv) process

important, (v) process convenient, (vi) reporting and (vii) other. The compliance program is a coordinated effort being conducted by each division, business unit and department within the Company.

The Company is in the fourth phase of the compliance program for its own systems, programs and equipment. Its Year 2000 exposures are primarily in the areas of information systems, financial and administrative applications, manufacturing applications and equipment, and research and development support systems, programs and equipment. The Company is also currently assessing compliance of identified systems, programs and equipment. The first three phases were substantially completed in the first quarter of 1999 for all systems, programs and equipment deemed critical or important under the Company's operations categories (i)-(iii), and the Company plans to resolve the Year 2000 issues for such systems, programs and equipment by mid-1999. The Company is also developing contingency plans with respect to categories (i) and (ii). The Company plans to resolve Year 2000 issues for systems, programs and equipment in categories (iv) and (v) by the end of the fourth quarter of 1999, and for systems, programs and requirements in categories (vi) and (vii) as time permits.

Concurrently with the conduct of the Company's internal compliance program, the Company is also in the process of surveying certain third parties with whom the Company conducts business about their Year 2000 readiness. These third parties include significant customers, suppliers, research or collaborative partners, service providers and distributors considered to be critical to the Company's business. To date, the Company has received responses from approximately half of the third parties surveyed and expects to complete the survey by the end of the third quarter of 1999. The Company will attempt to mitigate its risks with respect to such third parties' Year 2000 compliance. This may involve efforts such as identifying and securing alternative resources, stock-piling raw materials, and developing joint contingency plans with critical suppliers and distributors.

The Company may incur significant costs in assessing, resolving and mitigating Year 2000 compliance issues. Each department, business unit and division of the Company incurs its own costs in connection with readiness efforts. The Company does not separately track the internal costs of its Year 2000 compliance efforts and, therefore, these costs are unknown. The Company estimates that to date it has spent approximately $0.5 million in replacing, upgrading or repairing systems, programs or equipment. Although the aggregate additional costs of the Company's Year 2000 program cannot be known at this time, it is currently expected to be less than $1.5 million. The actual costs will depend on numerous factors, including without limitation, the costs of replacing, upgrading or repairing systems, software and equipment, internal staff costs, and consulting fees and expenses. All costs are expected to be funded through operations.

There can be no assurance that the Company's Year 2000 issues will be resolved by the end of 1999. Failure to identify and resolve all significant Year 2000 issues in a timely manner could result in interruptions in, or failures of, certain normal business activities or operations that may have a material adverse effect on the Company's business, results of operations and financial condition. The Company's compliance program is an ongoing process, and the estimated costs and timetables discussed above are subject to change. The failure of third parties that are significant to the Company's business to be Year 2000 compliant could also have a material adverse effect on the Company's business, results of operations and financial condition.

MARKET RISK

Genzyme is exposed to potential loss from financial market risks which may occur due to changes in interest rates, equity prices and foreign exchange rates. At December 31, 1998, Genzyme held one derivative security, an interest rate swap. Genzyme also held investments in various financial instruments, principally marketable debt and equity securities, and had balances outstanding under several debt securities.

The Company generally invests in investment-grade securities to mitigate risk. The Company's investments are described in greater detail in Note E, "Off-Balance Sheet Financial Instruments" and Note I, "Investments," below. Genzyme's financing strategy is to minimize its cost of capital while mitigating risk through the use of a variety of debt instruments including convertible debt securities.

INTEREST RATE RISK

Genzyme's exposure to interest rate risk is primarily related to potential fluctuations in domestic interest rates as they pertain to the Company's outstanding debt and its investments in fixed income securities. The Company has an interest rate swap which it uses to fix the interest exposure on $100.0 million of variable rate debt issued under a credit facility. Genzyme has issued fixed rate convertible debt with repayment and conversion terms summarized in Note K, "Long-term Debt and Leases," below. The expected repayment of all debt securities varies between one and six years. Investments in marketable securities with interest rate risk include short term deposits and investments

and long term investments. The average duration of all fixed income investments varies from time to time and is never greater than three years.

The Company performed a sensitivity analysis to estimate the potential loss in fair value on investments and the credit facility borrowings due to changes in interest rates. A 100 basis point increase in interest rates across the yield curve at year-end was used to estimate the potential loss in fair value. On this basis, the potential net loss in fair value on both assets and liabilities from changes in interest rates is estimated at $5.0 million, essentially all of which is attributable to Genzyme General. The following assumptions were used in preparing the sensitivity analysis: (i) all of the convertible debt instruments are "in-the-money" at year-end and are therefore considered equity securities and excluded; (ii) the interest rate swap is a fully effective hedge of an underlying borrowing under a credit facility and the combination is treated as a fixed rate borrowing with an underlying maturity equal to that of the swap; and (iii) financial instruments contain no call or leverage features material to the analysis. Based on a 100 basis point decline in interest rates, applied as above, the net potential net gain in fair value on both assets and liabilities is estimated at $5.0 million.

Changes in fair value of the investment portfolio and the interest rate swap are monitored monthly. The estimated net potential loss in fair value was never exceeded during the fiscal year.

EQUITY PRICE RISK

The Company holds investments in a limited number of domestic and European equity securities which are allocated to Genzyme General. The investments are described in Note I, "Investments," below. The potential loss in fair value due to a 10% decrease in equity prices of each security held at year-end is estimated at $5.0 million, all of which is attributable to Genzyme General. This estimate assumes no change in foreign exchange rates from year end spot rates.

The changes in fair value of the equity portfolio measured on a monthly basis over the fiscal year exceeded this amount one time.

FOREIGN EXCHANGE RISK

As a result of the company's worldwide operations, the Company faces exposure to adverse movements in foreign currency exchange rates, primarily to component currencies of the Euro, British pounds and Japanese yen. These exposures are reflected in market risk sensitive instruments including foreign currency receivables and payables and investments in marketable securities. Genzyme has no foreign currency derivatives outstanding at year end. The Company's risk management strategy related to foreign exchange exposure, periodically includes the use of forward contracts. These exposures may change over time as business practices evolve and could have a material adverse effect on the Company's financial results in the future.

FACTORS AFFECTING FUTURE OPERATING RESULTS

The future operating results of Genzyme Corporation and its subsidiaries could differ materially from the results described above due to the following risks and uncertainties.

DEPENDENCE ON CEREZYME(R) ENZYME AND CEREDASE(R) ENZYME SALES. Genzyme's results of operations are highly dependent upon the sales of Cerezyme(R) enzyme and Ceredase(R) enzyme, both of which treat Gaucher disease. Sales of Cerezyme(R) enzyme and Ceredase(R) enzyme in 1998 were $411.1 million, representing 67% of Genzyme's consolidated product sales in 1998. In 1994, Genzyme General developed Cerezyme(R) enzyme, a recombinant form of the enzyme, to replace Ceredase(R) enzyme, production of which is subject to supply constraints. Genzyme ceased producing Ceredase(R) enzyme in 1998, after substantially all of the patients previously using Ceredase(R) enzyme had converted to Cerezyme(R) enzyme.

Certain companies have initiated, and other companies in the future may initiate, efforts to develop competitive products to treat Gaucher disease. Although management believes its regulatory position, manufacturing capability and patient and physician relationships provide Cerezyme(R) enzyme with a strong competitive position, there can be no assurance that any competitive products which are developed will not gain market acceptance. A reduction in revenue from sales of Cerezyme(R) enzyme would adversely affect Genzyme's results of operations.

RISKS INHERENT IN INTERNATIONAL OPERATIONS. Genzyme has direct investments in a number of subsidiaries in foreign countries (primarily in Europe and Japan). Fluctuations in the value of foreign currencies affect the dollar value of Genzyme's net investment in these foreign subsidiaries. As of December 31, 1998, Genzyme has reduced Genzyme General's stockholders' equity by $4.8 million to reflect foreign currency translation adjustments. Reduction in the dollar value of Genzyme's foreign holdings reduces the dollar returns Genzyme can

expect to realize upon any sales of foreign investments. Genzyme does not currently hedge net foreign investments. If the Genzyme Board approves hedging of net foreign investments in the future, there can be no assurance that such hedging will be successful.

Genzyme's foreign operations accounted for 41% of consolidated sales in 1998. These operations accounted for 36% of consolidated sales in 1997. For financial statement purposes, Genzyme translates operating results of

foreign subsidiaries into dollars at average monthly exchange rates. Reported revenues, therefore, may be depressed or inflated by exchange rate trends.

Exchange rates also determine the dollar value of transactions denominated in foreign currencies and the number of dollars Genzyme receives upon repatriation of amounts earned in foreign currencies.

Currently, Genzyme's largest foreign currency exposures are in Euros, British pounds and Japanese yen.

UNCERTAINTY REGARDING SUCCESS OF CLINICAL TRIALS. Several of Genzyme's products, including those to address lysosomal storage disorders, are currently in or will require clinical trials to test their safety and efficacy in humans. There can be no assurance that Genzyme will not encounter problems in clinical trials that will cause it to delay or suspend these clinical trials. In addition, there can be no assurance that such clinical testing, if completed, will ultimately show these products to be safe and efficacious.

RAPID TECHNOLOGICAL CHANGE. The field of biotechnology is expected to continue to undergo significant and rapid technological change. Although Genzyme will seek to expand its technological capabilities in order to remain competitive, there can be no assurance that research and discoveries by others will not render Genzyme's products or services obsolete.

INTENSE COMPETITION. The human health care products and services industry is extremely competitive. Major pharmaceutical companies and other biotechnology companies compete with Genzyme. Some of these competitors have superior research and development, marketing and production capabilities. Some competitors also have greater financial resources than Genzyme. Genzyme incurs significant costs developing and marketing new products without any guarantee that they will be commercially successful. Genzyme's future success will depend on its ability to effectively develop and market its products against those of its competitors.

FUTURE CAPITAL NEEDS. As of December 31, 1998, Genzyme had approximately $575.7 million in cash, cash equivalents, and short and long-term investments (excluding investments in equity securities). Although Genzyme has substantial cash resources, it has committed to utilize a portion of these funds for certain purposes, such as (i) paying strategic collaborators and funding joint venture obligations, including a $10.0 million milestone payment to GelTex in October 1999; (ii) product development and marketing; (iii) expanding facilities; and (iv) marketing Carticel(R) AuCC and the Sepra Products.

Genzyme's cash reserves will be further reduced to pay principal and interest on the following debt: (i) $100.0 million outstanding under a $225 million revolving credit facility with a syndicate of commercial banks, $82.0 million of which is allocated to Genzyme General and $18.0 million of which is allocated to Genzyme Tissue Repair, which must be repaid by November 15, 1999; (ii) $9.4 million in principal amount under the GTR Note, which matures on February 27, 2000; (iii) $21.2 million in principal amount under the GGD Debentures, which mature on August 29, 2003; and (iv) $250.0 million in principal amount under the GGD Notes, which mature on June 1, 2005. To the extent cash is used to repay or redeem these debt instruments, including the interest payable thereon, Genzyme's cash reserves will also be diminished.

As a result of these and other commitments, Genzyme may have to obtain additional financing. There can be no assurance that any such financing will be available on favorable terms, if at all.

THIRD PARTY REIMBURSEMENT AND HEALTH CARE COST CONTAINMENT INITIATIVES. A majority of Genzyme's revenues is attributable directly or indirectly to payments received from third party payers, including government health administration authorities and private health insurers. Significant uncertainty exists as to the reimbursement status of newly approved health care products, and third party payers are increasingly challenging the prices charged for health care products and services. Third party payers are also increasingly attempting to contain health care costs by limiting both coverage and the level of reimbursement for new therapeutic products and for approved products that are considered experimental or investigational by such payers, and by refusing in some cases to provide coverage for uses of approved products for disease indications for which the FDA has not granted marketing approval. There can be

no assurance that third party insurance coverage will be available for any products or services under development by Genzyme. If adequate coverage and reimbursement are not provided by government and other third party payers for Genzyme's products and services, its results of operations may be materially adversely affected.

In addition, Congress has from time to time discussed the possible implementation of broad-based health care cost containment measures. While these discussions have not led to the enactment of any specific health care cost containment legislation, it is possible that health care measures will again be proposed in Congress. The effects on Genzyme of any such measures that are ultimately adopted cannot be predicted at this time.

UNCERTAINTY REGARDING PATENTS AND PROTECTION OF PROPRIETARY TECHNOLOGY. Genzyme's success depends, to a large extent, on its ability to maintain a competitive technological position in its product areas. Proprietary rights relating to Genzyme's products and services are protected from unauthorized use by third parties only to the extent that they are covered by patents or are maintained in confidence as trade secrets. Genzyme has filed for patents and has rights to numerous patents and patent

applications worldwide. While certain of Genzyme's patents have been allowed or issued, there can be no assurance that these allowed and issued patents or additional patents allowed or issued to Genzyme will effectively protect the proprietary technology of Genzyme. In addition, patent litigation is widespread in the biotechnology industry and it is not possible to predict how any such litigation will affect Genzyme.

No consistent policy has emerged from the U.S. Patent and Trademark Office regarding the breadth of claims allowed in biotechnology patents and, therefore, the degree of future protection for Genzyme's proprietary rights is uncertain. The allowance of broader claims may increase the incidence and cost of patent interference proceedings in the U.S. and the risk of infringement litigation in the U.S. and abroad. Conversely, the allowance or narrower claims, while reducing the risk of infringement, may limit the value of Genzyme's proprietary rights under its patents, licenses and pending patent applications.

Genzyme attempts to monitor the patent filings of its competitors in an effort to guide the design and development of its products to avoid infringement. Notwithstanding these efforts, there can by no assurance that the patents issued or licensed to Genzyme will remain free of challenge by third parties. In addition, patent rights filed by third parties may, if issued, cover Genzyme's products and services as ultimately developed, which could have an adverse impact on Genzyme's results of operations in amounts that cannot presently be determined. Genzyme may, depending on the final formulation of such products and services, need to acquire license to, or contest the validity of, such patents. The extent to which Genzyme may need to license rights or contest the validity of patents depends on the scope and validity of such patents and ultimately on the final design or formulation of its products and services under development. The cost and ability to license any such rights and the likelihood of successfully contesting the validity of such patents are uncertain.

Genzyme also relies upon trade secrets, proprietary know-how and continuing technological innovation to develop and maintain its competitive position. There can be no assurance that others will not independently develop such know-how or otherwise obtain access to Genzyme's technology. While Genzyme's employees, consultants and corporate partners with access to proprietary information are generally required to enter into confidentiality agreements, there can be no assurance that these agreements will be honored. Certain of Genzyme's consultants have developed portions of Genzyme's proprietary technology at their respective universities or governmental laboratories. There can be no assurance that such universities or governmental authorities will not assert rights to intellectual property arising out of university or government based research conducted by such consultants.

GOVERNMENT REGULATION; NO ASSURANCE OF REGULATORY APPROVALS. The production and sale of health care products and provision of health care services are highly regulated. In particular, human therapeutic and diagnostic products are subject to pre-marketing approval by the FDA and comparable agencies in foreign countries. The process of obtaining these approvals varies according to the nature and use of the product and can involve lengthy and detailed laboratory and clinical testing, sampling activities and other costly and time-consuming procedures. Regulation of Genzyme's products and services could also limit Genzyme's reimbursement for its products and services and otherwise materially affect the results of operations of Genzyme. Additional regulatory regimes, in the U.S. and internationally, affect the Company's work in gene therapy and the provision of cancer diagnostic services. There can be no assurance that any of the required regulatory approvals will be granted on a timely basis, if at all.

Certain of Genzyme's products, including Cerezyme(R) enzyme, have been

designated as orphan drugs under the Orphan Drug Act, which provides incentives to manufacturers to develop and market drugs for rare diseases. The Orphan Drug Act generally entitles the first developer to receive FDA marketing approval for an orphan drug to a seven-year exclusive marketing period in the United States for that product. The exclusive marketing period for Cerezyme(R) enzyme expires in 2001. Legislation has been periodically introduced in recent years to amend the Orphan Drug Act by shortening the period of automatic market exclusivity and granting certain market rights to simultaneous developers of a drug. The effect on Genzyme of any amendments ultimately adopted cannot be assessed at this time.

PRODUCT LIABILITY AND LIMITATIONS OF INSURANCE. Genzyme may be subject to product liability claims in connection with the use or misuse of its products during testing or after commercialization. While Genzyme has taken, and continues to take, what it believes are appropriate precautions, there can be no assurance that Genzyme will avoid significant liability exposure. Genzyme has only limited amounts of product liability insurance and there can be no assurance that such insurance will provide sufficient coverage against any or all potential product liability claims. If Genzyme attempts to obtain additional insurance in the future, there can be no assurance that it will be able to do so on acceptable terms, if at all, or that such insurance will provide adequate coverage against claims asserted.

POSSIBLE ADVERSE EFFECT OF THE EURO CONVERSION. On January 1, 1999, 11 of the 15 member countries of the European Union established fixed conversion rates between their existing currencies and a new common currency called the "euro." This represents an initial step in a process expected to culminate in the replacement of the existing currencies with the euro. The conversion to the euro will have operational and legal implications for certain of Genzyme's international business activities. Genzyme has begun evaluating these implications, but has yet to estimate the potential impact on Genzyme's financial condition or operating results. Management believes, however, that the nature of Genzyme's business and customers makes a material impact unlikely.

UNCERTAINTY REGARDING YEAR 2000 COMPLIANCE. Many currently installed computer systems, software products and equipment with embedded chips or processors are programmed to accept only two digit entries in the date code field. These date code fields will need to accept four digit entries to distinguish 21st century dates from 20th century dates. As a result, Genzyme's software and computer systems may need to be upgraded or replaced in order to comply with "Year 2000" requirements. Genzyme has implemented a Year 2000 compliance program to identify and minimize exposure to Year 2000 problems, which includes an assessment of internal readiness as well as the readiness of third parties that are critical to our with whom Genzyme does business. Genzyme may incur significant costs in identifying, resolving and mitigating Year 2000 compliance issues. In addition, there can be no assurance that Genzyme's Year 2000 issues will be fully identified and resolved by the end of 1999. The failure to identify and resolve these issues could result in interruptions in, or failures of, certain normal business activities or operations that may have an adverse effect on Genzyme's business, results of operations and financial condition. The failure of third parties that are significant to Genzyme's business to be Year 2000 compliant could also have an adverse effect on Genzyme's business, results of operations and financial condition.

POSSIBLE VOLATILITY OF SHARE PRICE AND ABSENCE OF DIVIDENDS. The market prices for securities of biotechnology companies have been volatile. Factors such as announcements of technological innovations or new commercial products by Genzyme or its competitors, governmental regulation, patent or proprietary rights developments, public concern as to the safety or other implications of biotechnology products and market conditions in general may have a significant impact on the market price of Genzyme common stock. No cash dividends have been paid to date on any series of Genzyme common stock, nor does Genzyme anticipate paying cash dividends on its common stock in the foreseeable future.

RISKS RELATED TO GENZYME TRACKING STOCK

Genzyme currently has three series of common stock outstanding: GGD Stock, GTR Stock and GMO Stock, which are intended to reflect the value and track the performance of Genzyme's three divisions: Genzyme General, Genzyme Tissue Repair and Genzyme Molecular Oncology. Stockholders should carefully consider the following risks relating to their investment in Genzyme "tracking stock."

STOCKHOLDERS OF ONE COMPANY; FINANCIAL IMPACTS ON ONE DIVISION COULD AFFECT THE OTHERS. Notwithstanding the allocation of Genzyme's products and programs between divisions for purposes of financial statement presentation and allocation of equity interests, Genzyme continues to hold title to all of the assets and is responsible for all of the liabilities allocated to each of its divisions. Holders of each series of Genzyme common stock have no specific claim against the assets attributed for financial statement presentation purposes to the division whose performance is associated with the series of stock they hold. Liabilities or contingencies of any division that affect Genzyme's resources or financial condition could affect the financial condition or results of

operations of the other divisions.

NO RIGHTS OR ADDITIONAL DUTIES WITH RESPECT TO THE DIVISIONS; POTENTIAL CONFLICTS. Holders of each series of Genzyme common stock have only the rights of stockholders of Genzyme, and, except in limited circumstances, do not have any rights specifically related to the division to which such series of common stock relates. The existence of separate series of common stock may give rise to occasions when the interests of holders of each series of Genzyme common stock may diverge or appear to diverge. Although Genzyme is aware of no precedent concerning the manner in which Massachusetts law would be applied to the duties of a board of directors in the context of three series of common stock with divergent interests, Genzyme believes, based on the advice of counsel, that a Massachusetts court would hold that a board of directors owes an equal duty to all stockholders regardless of class or series and does not have separate or additional duties to any group of stockholders. That duty is the fiduciary duty to act in good faith and in a manner it reasonably believes to be in the best interests of the corporation. Genzyme has been advised that, under Massachusetts law, a good faith determination by a disinterested and adequately informed board of directors that an action is in the best interests of the corporation, taking into account the interests of the holders of each series of common stock and the alternatives reasonably available, should represent an appropriate defense to any challenge by or on behalf of the holders of any series of common stock that such action could have a disparate effect on different series of common stock. However, a Massachusetts court hearing a case involving such a challenge may decide to apply principles of Massachusetts law other than those described above, or may develop new principles of Massachusetts law to decide such a case.

Disproportionate ownership interests of members of the Genzyme Board in any series of common stock or disparities in the value of such stock could create or appear to create potential conflicts of interest when directors are faced with decisions that could have different implications for each series of common stock. Nevertheless, Genzyme believes that a director would be able to discharge his

or her fiduciary responsibilities even if his or her interest in shares of such series were disproportionate or had disparate values. The Genzyme Board may also from time to time establish one or more committees to review matters presented to it that raise conflict issues, which committee(s) would report to the full Genzyme Board on such matters.

NO ADDITIONAL SEPARATE VOTING RIGHTS. Holders of each series of Genzyme common stock vote together as a single class on all matters as to which common stockholders generally are entitled to vote (including the election of directors). Except in certain limited circumstances provided under Massachusetts law, in the Genzyme Charter and in the management and accounting policies adopted by the Genzyme Board, holders of each series of common stock have no rights to vote on matters separately. Accordingly, except in limited circumstances, holders of shares of one series of common stock could not bring a proposal to a vote of the holders of that series of common stock only, but would be required to bring any proposal to a vote of all common stockholders.

On all matters as to which common stockholders generally are entitled to vote, each share of GGD Stock has one vote, each share of GTR Stock has, through December 31, 2000, .06 vote and each share of GMO Stock has, through December 31, 2000, .08 vote. On January 1, 2001 and on January 1 every two years thereafter, the number of votes to which each share of GTR Stock is entitled will be adjusted to equal the ratio of the Fair Market Value (as defined herein) of one share of GTR Stock to the Fair Market Value of one share of GGD Stock as of such date. The number of votes to which each share of GMO Stock is entitled will also be adjusted on such dates to equal the ratio of the Fair Market Value of one share of GMO Stock to the Fair Market Value of one share of GGD Stock. "Fair Market Value" as of any date means the average of the daily closing prices as reported by the Nasdaq National Market (or the appropriate exchange on which such shares are traded) for the 20 consecutive trading days commencing on the 30th trading day prior to such date. In the event such closing prices are unavailable, Fair Market Value will be determined by the Genzyme Board.

Certain matters as to which the holders of common stock are entitled to vote may involve a divergence or the appearance of a divergence in the interests of holders of each series of Genzyme common stock. If, when a stockholder vote is taken on any matter as to which a separate vote by each series is not required and the holders of any series of common stock would have more than the number of votes required to approve any such matter, the holders of that series would control the outcome of the vote on such matter, As of January 1, 1999, holders of GGD Stock, GTR Stock and GMO Stock had approximately 97.3%, 1.5% and 1.2%, respectively, of the total voting power of Genzyme. As a result, on matters which are submitted to a vote of the common stockholders, the preferences of the holders of GGD Stock are likely to dominate and determine the outcome of such vote unless and until the relative number of shares outstanding and/or the market value of each series of Genzyme common stock materially changes.

EXCHANGE OF GTR STOCK AND GMO STOCK. The Genzyme Board can, in its sole discretion, determine to exchange shares of GTR Stock and GMO Stock for cash or shares of GGD Stock (or any combination thereof) at a 30% premium over Fair Market Value of the GTR Stock or GMO Stock at any time. In addition, following a disposition of all or substantially all of the assets of Genzyme Tissue Repair or Genzyme Molecular Oncology, the shares of GTR Stock or GMO Stock, as the case may be, are subject to mandatory exchange by Genzyme for cash and/or shares of GGD Stock at a 30% premium over Fair Market Value of such series of common stock as determined by the trading prices during a specified period prior to public announcement of the disposition. Consequently, holders of GTR Stock and GMO Stock may receive a greater or lesser premium for their shares than any premium paid by a third party buyer of all or substantially all of the assets of Genzyme Tissue Repair or Genzyme Molecular Oncology. In addition, the right of the Genzyme Board to exchange shares of GTR Stock or GMO Stock at a 30% premium over the Fair Market Value of such shares does not preclude the Genzyme Board from making an offer to exchange such shares on terms other than those provided in the Genzyme Charter. Although any alternative offer would be subject to acceptance by the holders of the shares to be exchanged, such offer could be made on terms less favorable than those provided in the Genzyme Charter. Any exchange of shares for GGD Stock could be made at a time when the GGD Stock may be considered to be undervalued and, if such exchange is perceived as dilutive, the market price of GGD Stock may be adversely affected. See "Management and Accounting Policies Governing the Relationship of Genzyme Divisions -- Open Market Purchases of Shares of Common Stock" set forth in Exhibit 99.1 to Genzyme's Annual Report on Form 10-K for the fiscal year ended December 31, 1998 (the "1998 Form 10-K").

NO ADJUSTMENT TO LIQUIDATING DISTRIBUTIONS. In the event of a voluntary or involuntary dissolution, liquidation or winding up of the affairs of Genzyme (other than pursuant to a merger, business combination or sale of substantially all assets), holders of outstanding shares of each series of Genzyme common stock would receive the assets, if any, remaining for distribution to common stockholders on a per share basis in proportion to the respective per share liquidation units of such series. Currently, each share of GGD Stock has 100 liquidation units, each share of GTR Stock has 58 liquidation units and each share of GMO Stock has 25 liquidation units. Because the liquidation units will not be adjusted to reflect changes in the relative market value or performance of each of the divisions of Genzyme, the per share liquidating distribution to a holder of GGD Stock, GTR Stock or GMO Stock is not likely to correspond to the value of the assets of Genzyme General, Genzyme Tissue Repair or Genzyme Molecular Oncology, respectively, at the time of a dissolution, liquidation or winding up of Genzyme.

RECENT CLINTON ADMINISTRATION PROPOSAL COULD RESULT IN TAXATION OF ISSUANCES OF GTR STOCK AND GMO STOCK

A recent tax proposal by the Clinton administration would impose a corporate level tax on the issuance of certain tracking stocks, including GTR Stock and GMO Stock. If the administration's proposal is enacted as legislation or made effective through the issuance of Treasury Regulations, Genzyme would be taxed on an amount up to the gain realized in connection with future financings in which Genzyme sells shares of GTR Stock or GMO Stock. In addition, the distribution of GTR Designated Shares and GMO Designated Shares by Genzyme to its shareholders and the use of shares of GTR Stock and GMO Stock as consideration for acquisitions by Genzyme would be taxable events to Genzyme. The adoption of such legislation or regulations would have a significant negative impact on Genzyme's ability to raise capital in the future through GTR Stock and GMO Stock, to complete tax efficient acquisitions of other companies using GTR Stock and GMO Stock and thereby to maintain its current capital structure and corporate governance. Genzyme can not predict, however, whether the proposal will be enacted by Congress, or whether legislation or regulations, if enacted or issued, will be the same as, or substantially similar to, the proposal of the Clinton administration.

If Genzyme issues any new tracking stock before the enactment of any legislation or regulations, Genzyme intends to include provisions in the terms of such tracking stock allowing Genzyme in the event of adverse tax developments to convert the new tracking stock into GGD Stock. Such conversion rights are not contained in the terms of the GTR Stock and GMO Stock. In the event of adverse tax developments, the Genzyme Board may consider and recommend to its shareholders appropriate amendments to Genzyme's charter and changes to its capital structure to avoid the potential material adverse consequences of any such legislation or regulations.

MANAGEMENT AND ACCOUNTING POLICIES SUBJECT TO CHANGE. The Genzyme Board has adopted certain management and accounting policies applicable to the preparation of the financial statements of the divisions of Genzyme, the allocation of corporate expenses, assets and liabilities, the reallocation of assets between divisions and other matters. These policies may, except as stated therein, be

modified or rescinded at the sole discretion of the Genzyme Board without the approval of Genzyme's stockholders, subject to the Genzyme Board's fiduciary duty to all holders of Genzyme's capital stock. See "Management and Accounting Policies Governing the Relationship of Genzyme Divisions" set forth in Exhibit 99.1 to the 1998 Form 10-K.

NON-COMPETE POLICY. The Genzyme Board has adopted a policy providing that the Company will not develop products and services outside of Genzyme Tissue Repair or Genzyme Molecular Oncology that compete with products and services being developed or sold by Genzyme Tissue Repair or Genzyme Molecular Oncology, other than through joint ventures in which Genzyme Tissue Repair or Genzyme Molecular Oncology participate. The scope of this policy does not extend to the entire fields of tissue repair and oncology. Accordingly, the Company is currently developing oncology products outside of Genzyme Molecular Oncology that do not compete with products and services being developed or sold by Genzyme Molecular Oncology and, in the future, may develop additional oncology and tissue repair products and services outside of Genzyme Molecular Oncology and Genzyme Tissue Repair, provided that such products and services do not compete with then-existing Genzyme Molecular Oncology or Genzyme Tissue Repair products and services. See "Management and Accounting Policies Governing the Relationship of Genzyme Divisions" set forth in Exhibit 99.1 to the 1998 Form 10-K.

USE OF TAX BENEFITS BY OTHER GENZYME DIVISIONS. Genzyme's management and accounting policies provide that, to the extent any division of Genzyme is unable to utilize its annual operating losses or other annual projected tax benefits to reduce its current or deferred income tax expense, such losses or benefits may be reallocated to another division on a quarterly basis for financial reporting purposes. Accordingly, although the actual payment of taxes is a corporate liability of Genzyme as a whole, separate financial statements will be prepared for each division and any losses that cannot be utilized by a division will be allocated among the profitable divisions rather than carried forward to reduce the future tax liability of the division generating such losses. This could result in a division (such as Genzyme Tissue Repair and Genzyme Molecular Oncology currently) being charged a greater portion of the total corporate tax liability and reporting lower earnings after taxes in the future than would have been the case if such division had retained its losses or other benefits in the form of a net operating loss carryforward.

SUBSEQUENT EVENTS

In January 1999, the holder of the GTR Note converted $3,000,000 principal amount of the GTR Note in exchange for 1,352,290 shares of GTR Stock. GTR paid $133,000 of accrued interest to the holder in connection with this conversion.

In February 1999, GTR made a $5.0 million draw under the GTR Equity Line in exchange for 1,633,399 GTR Designated Shares.

In March 1999, Genzyme announced that it intends to create a separate division, with its own series of common stock, for the existing surgical products business that is currently part of Genzyme General, subject to approval of the Genzyme Board.

In March 1999, Genzyme announced that it plans to reallocate Genzyme's interest in Diacrin/Genzyme LLC from GTR to Genzyme General. The transfer of interest in Diacrin/Genzyme LLC is subject to the approval of GTR's shareholders.

In March 1999, the Genzyme Board renewed Genzyme's shareholder rights plan, which expired on March 28, 1999. Under the renewed plan, the exercise price for the GGD Stock Rights, GTR Stock Rights and GMO Stock Rights are $300.00, $26.00 and $26.00, respectively.

GENZYME CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS)	FOR THE YEARS ENDED DECEMBER 31,		
	1998	1997	1996
<S>	<C>	<C>	<C>
Revenues:			
Net product sales	$ 613,685	$ 529,927	$ 424,483
Net service sales	74,791	67,158	68,950
Revenues from research and development contracts:			
Related parties	5,745	8,356	23,011
Other	15,114	3,400	2,310
Total revenues	709,335	608,841	518,754

Operating costs and expenses:			
Cost of products sold	211,076	206,028	155,930
Cost of services sold	48,586	47,289	54,082
Selling, general and administrative	215,203	200,476	162,264
Research and development (including research and development related to contracts)	119,005	89,558	80,849
Amortization of intangibles	24,334	17,245	8,849
Purchase of in-process research and development	--	7,000	130,639
Restructuring charges	--	--	1,465
Total operating costs and expenses	618,204	567,596	594,078
Operating income (loss)	91,131	41,245	(75,324)
Other income (expenses):			
Equity in net loss of unconsolidated affiliates	(29,006)	(12,258)	(5,373)
Gain on affiliate sale of stock	2,369	--	1,013
Minority interest	4,285	--	--
Gain on sale of product line	31,202	--	--
Gain on sale of investment	3,391	--	1,711
Charge for impaired investments	(3,397)	--	--
Other	--	(2,000)	--
Investment income	25,055	11,409	15,341
Interest expense	(22,593)	(12,667)	(6,990)
Total other income (expenses)	11,306	(15,516)	5,702
Income (loss) before income taxes	102,437	25,729	(69,622)
Provision for income taxes	(39,870)	(12,100)	(3,195)
Net income (loss)	$ 62,567	$ 13,629	$ (72,817)

</TABLE>

The accompanying notes are an integral part of these consolidated financial statements.

GENZYME CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS (CONTINUED)

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS, EXCEPT PER SHARE DATA)	FOR THE YEARS ENDED DECEMBER 31,		
	1998	1997	1996
<S>	<C>	<C>	<C>
ATTRIBUTABLE TO GENZYME GENERAL:			
Net income (loss)	101,132	57,026	(47,513)
Tax benefit allocated from Genzyme Tissue Repair	16,394	17,666	17,011
Tax benefit allocated from Genzyme Molecular Oncology	3,527	2,755	--
Net income (loss) attributable to GGD Stock	$121,053	$ 77,447	$(30,502)
Per Genzyme General common share:			
Net income (loss) per Genzyme General common share -- basic:	$ 1.53	$ 1.01	$ (0.45)
Weighted average shares outstanding	79,063	76,531	68,289
Net income (loss) per Genzyme General common and common equivalent share -- diluted:	$ 1.48	$ 0.98	$ (0.45)
Adjusted weighted average shares outstanding	81,734	78,925	68,289
ATTRIBUTABLE TO GENZYME TISSUE REPAIR:			
Net loss	$(40,386)	$(45,984)	$(42,315)
Per Genzyme Tissue Repair basic and diluted common share:			
Net loss	$ (1.99)	$ (3.07)	$ (3.38)

Weighted average shares outstanding	20,277	14,976	12,525
ATTRIBUTABLE TO GENZYME MOLECULAR ONCOLOGY:			
Net loss	$(19,107)	$(19,578)	$ (1,003)
Per Genzyme Molecular Oncology basic and diluted common share:			
Net loss	$ (3.81)		
Weighted average shares outstanding	5,019		
Pro forma per GMO basic and diluted common share:			
Pro forma net loss		$ (4.98)	$ (0.26)
Pro forma weighted average shares outstanding		3,929	3,929
COMPREHENSIVE INCOME:			
Net income (loss)	$ 62,567	$ 13,629	$(72,817)
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	7,681	(11,704)	2,845
Unrealized gains (losses) on securities:			
Unrealized gains (losses) arising during the period	(6,043)	817	(2,435)
Reclassification adjustment for gains (losses) included in net income (loss)	2,100	-	(1,077)
Unrealized gains (losses) on securities, net	(3,943)	817	(3,512)
Other comprehensive income (loss)	3,738	(10,887)	(667)
Comprehensive income (loss)	$ 66,305	$ 2,742	$(73,484)

</TABLE>

The accompanying notes are an integral part of these consolidated financial statements.

GENZYME CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS)	DECEMBER 31, 1998	1997
<S>	<C>	<C>
ASSETS		
Current assets:		
Cash and cash equivalents	$ 118,612	$ 102,406
Short-term investments	175,453	51,259
Accounts receivable, net	163,042	118,277
Inventories	109,833	139,681
Prepaid expenses and other current assets	31,467	17,361
Deferred tax assets - current	39,725	27,601
Total current assets	638,132	456,585
Property, plant and equipment, net	382,619	385,348
Long-term investments	281,664	92,676
Note receivable - related party	--	2,019
Intangibles, net	279,516	271,275
Deferred tax assets - noncurrent	24,277	29,479
Investment in equity securities	51,977	30,047
Other	32,369	28,024
Total assets	$1,690,554	$1,295,453

</TABLE>

The accompanying notes are an integral part of these

consolidated financial statements.

GENZYME CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS (CONTINUED)

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS)	DECEMBER 31, 1998	1997
<S>	<C>	<C>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 27,604	$ 19,787
Accrued expenses	74,077	72,103
Income taxes payable	16,543	11,168
Deferred revenue	2,731	1,800
Current portion of long-term debt and capital lease obligations	100,568	905
Payable to joint venture	1,181	--
Total current liabilities	222,704	105,763
Long-term debt	3,087	140,978
Convertible debentures, net	284,138	29,298
Other	8,078	7,364
Total liabilities	518,007	283,403
Commitments and contingencies (See Notes)		
Stockholders' equity:		
Preferred Stock, $0.01 par value, 10,000,000 shares authorized; no shares issued and outstanding		
Preferred Stock, Series A Junior Participating, $0.01 par value, 2,000,000 shares authorized; no shares issued and outstanding		
Preferred Stock, Series B Junior Participating, $0.01 par value, 400,000 shares authorized; no shares issued and outstanding		
Preferred Stock, Series C Junior Participating, $0.01 par value, 400,000 shares authorized; no shares issued and outstanding		
Common Stock $0.01 par value, 390,000,000 shares authorized; 115,116,547 issued and outstanding:		
Genzyme General Division Common Stock, $0.01 par value, 200,000,000 shares authorized; 81,394,000 and 77,692,550 issued and outstanding at December 31, 1998 and 1997, respectively	814	777
Genzyme Tissue Repair Division Common Stock, $0.01 par value, 40,000,000 shares authorized; 20,920,806 and 19,941,193 issued and outstanding at December 31, 1998 and 1997, respectively	209	199
Genzyme Molecular Oncology Division Common Stock, $0.01 par value, 40,000,000 shares authorized; 12,648,295 and 3,928,572 issued and outstanding at December 31, 1998 and 1997, respectively	126	39
Treasury common stock, at cost:		
Genzyme General Division Common Stock, 106,358 shares at December 31, 1998 and 1997, respectively	(901)	(901)
Additional paid-in capital -- Genzyme General	958,820	895,340
Additional paid-in capital -- Genzyme Tissue Repair	174,198	170,430
Additional paid-in capital -- Genzyme Molecular Oncology	63,427	34,517
Accumulated deficit	(13,779)	(76,346)
Accumulated other comprehensive income	(10,367)	(12,005)
Total stockholders' equity	1,172,547	1,012,050
Total liabilities and stockholders' equity	$ 1,690,554	$ 1,295,453

</TABLE>

The accompanying notes are an integral part of these consolidated financial statements.

GENZYME CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS)	FOR THE YEARS ENDED DECEMBER 31, 1998	1997	1996

<S>	<C>	<C>	<C>
OPERATING ACTIVITIES:			
Net income (loss)	$ 62,567	$ 13,629	$ (72,817)
Reconciliation of net income (loss) to net cash provided by operating activities:			
Depreciation and amortization	58,869	50,964	30,192
Loss on disposal of fixed assets	108	1,258	101
Non-cash compensation expense	8,740	3,160	460
Accrued interest/amortization on bonds	(6,923)	(900)	1,195
Provisions for bad debts and inventory	11,990	14,580	9,759
Accretion of debt conversion feature	3,025	2,028	--
Deferred income tax benefit	(5,669)	(5,061)	(28,558)
Equity in net loss of unconsolidated subsidiaries	29,006	12,258	4,360
Gain on affiliate sale of stock	(2,369)	--	--
Minority interest in net loss of subsidiaries	(4,285)	--	--
Gain on sale of product line	(31,202)	--	--
Gain on sale of investments	(3,391)	--	(1,711)
Charge for impaired investment	3,397	--	
Purchase of in-process research and development	--	7,000	130,639
Other	26	528	153
Increase (decrease) in cash from changes in working capital net of acquired assets:			
Accounts receivable	(46,215)	(11,076)	(18,395)
Inventories	27,907	(29,299)	(41,609)
Prepaid expenses and other current assets	(11,987)	(10,062)	(527)
Accounts payable, accrued expenses, income taxes payable and deferred revenue	17,509	(9,333)	26,775
Net cash provided by operating activities	111,103	39,674	40,017
INVESTING ACTIVITIES:			
Purchases of investments	(441,487)	(147,897)	(122,093)
Sales and maturities of investments	136,605	81,185	207,399
Proceeds from sale of equity investment	9,564	--	--
Acquisitions of property, plant and equipment	(39,467)	(29,309)	(63,802)
Sale of property, plant and equipment	1,262	852	--
Proceeds from sale of product line	24,760	--	--
Acquisitions, net of cash acquired and assumed liabilities	(9,949)	9	(299,078)
Purchase of technology rights	(15,100)	--	--
Investment in unconsolidated affiliates	(25,783)	(13,993)	(5,511)
Investment in joint ventures	(21,974)	--	--
Loans to affiliates	(1,000)	(4,601)	(1,676)
Repayment of loans by affiliates	3,019	--	--
Other	(5,592)	(1,419)	(7,470)
Net cash used by investing activities	(385,142)	(115,173)	(292,231)
FINANCING ACTIVITIES:			
Proceeds from issuance of common stock	76,860	156,036	41,556
Proceeds from issuance of debt	250,000	32,127	536,000
Payments of debt	(38,833)	(101,115)	(378,502)
Other	1,884	--	--
Net cash provided by financing activities	289,911	87,048	199,054
Effect of exchange rate changes on cash	334	(2,275)	1,920
Increase (decrease) in cash and cash equivalents	16,206	9,274	(51,240)
Cash and cash equivalents at beginning of period	102,406	93,132	144,372
Cash and cash equivalents at end of period	$ 118,612	$ 102,406	$ 93,132

</TABLE>

The accompanying notes are an integral part of these consolidated financial statements.

GENZYME CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS)	FOR THE YEARS ENDED DECEMBER 31,		
	1998	1997	1996
<S>	<C>	<C>	<C>
Supplemental disclosures of cash flows: Cash paid during the year for:			
Interest	$ 17,385	$ 9,811	$ 6,285
Income taxes	24,463	18,887	14,149

</TABLE>

Supplemental Disclosures of Non-Cash Transactions:
Other charges -- Note B
Sale of research product business assets - Note C
Acquisitions liability -- Note D
Investment in unconsolidated affiliate -- Note I
Debt conversion -- Note K
GGD Debentures -- Note K
Warrant exercise -- Note L
GTR and GMO Designated Share dividend - Note L

The accompanying notes are an integral part of these consolidated financial statements.

GENZYME CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

<TABLE>
<CAPTION>

	SHARES IN THOUSANDS			DOLLARS IN THOUSANDS		
	1998	1997	1996	1998	1997	1996
<S>	<C>	<C>	<C>	<C>	<C>	<C>
COMMON STOCKS:						
GENZYME GENERAL DIVISION COMMON STOCK:						
Balance at beginning of year	77,693	75,537	62,372	$ 777	$ 755	$ 624
Issuance of GGD Stock under stock plans	3,695	2,117	1,662	37	22	16
Exercise of warrants	7	39	6,341	--	--	63
Issuance of GGD Stock in connection with conversion of convertible notes	--	--	3,782	--	--	38
Issuance of GGD Stock in connection with acquisitions	--	--	1,380	--	--	14
Balance at end of year	81,395	77,693	75,537	$ 814	$ 777	$ 755
GENZYME TISSUE REPAIR DIVISION COMMON STOCK:						
Balance at beginning of year	19,941	13,162	12,113	$ 199	$ 132	$ 121
Issuance of GTR Stock under stock plans	756	487	449	8	4	4
Exercise of warrants	--	--	345	--	--	4
Issuance of GTR Stock in connection with declared dividend of GTR Designated Shares	--	2,292	--	--	23	--
Shares issued in public offering	--	4,000	--	--	40	--
Issuance of GTR Stock in connection with partial conversion of convertible note	224	--	255	2	--	3
Balance at end of year	20,921	19,941	13,162	$ 209	$ 199	$ 132
GENZYME MOLECULAR ONCOLOGY DIVISION COMMON STOCK:						
Balance at beginning of year	3,929	--	--	$ 39	$	
Balance at June 18, 1997	--	--	--	--	--	
Issuance of GMO Stock under stock plans	1	--	--	--	--	
Exercise of warrants	1	--	--	--	--	
Issuance of GMO Stock in connection with declared dividend of GMO Designated Shares	8,717	--	--	87	--	
Issuance of GMO Stock in connection with the acquisition of PharmaGenics	--	3,929	--	--	39	
Balance at end of year	12,648	3,929	--	$ 126	$ 39	
TREASURY COMMON STOCK (AT COST):						
GENZYME GENERAL DIVISION COMMON STOCK:						
Balance at beginning of year	(106)	(106)	(106)	$ (901)	$ (890)	$ (882)
Purchases	--	--	--	--	(11)	(8)

Balance at end of year	(106)	(106)	(106)	$ (901)	$ (901)	$ (890)

</TABLE>

The accompanying notes are an integral part of these consolidated financial statements.

GENZYME CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (CONTINUED)

<TABLE>
<CAPTION>

	DOLLARS IN THOUSANDS		
	1998	1997	1996
<S>	<C>	<C>	<C>
ADDITIONAL PAID IN CAPITAL:			
GENZYME GENERAL:			
Balance at beginning of year	$ 895,340	$ 871,020	$ 616,096
Issuance of GGD Stock under stock plans	74,323	35,888	18,565
Exercise of warrants	289	855	106,101
Allocation to Genzyme Tissue Repair for GTR Designated Shares	--	(14,892)	(11,714)
Tax benefit from disqualified dispositions	18,561	4,127	3,500
Allocation of cash to GMO for GMO Designated Shares	(5,000)	(2,886)	--
Conversion of cash of GMO Debentures to GGD Debentures for GMO Designated Shares	(19,802)	--	--
Conversion of note receivable due from GMO into GMO Designated Shares	(2,696)	--	--
Loss on purchase of facility from GTR	(711)	--	--
Payment to GTR for research program	(250)	--	--
Stock compensation expense	48	1,218	123
Purchase of Treasury Stock	--	10	10
Other	(1,282)	--	--
Issuance of GGD Stock in connection with conversion of Genzyme's 6 3/4% convertible notes	--	--	101,362
Issuance of GGD Stock in connection with acquisitions	--	--	36,508
Callable Warrants issued in connection with acquisition of Neozyme II	--	--	469
Balance at end of year	$ 958,820	$ 895,340	$ 871,020
GENZYME TISSUE REPAIR:			
Balance at beginning of year	$ 170,430	$ 122,385	$ 107,934
Issuance of GTR Stock under stock plans	2,101	2,434	2,432
Exercise of warrants	--	--	(4)
Issuance of GTR Stock in connection with declared dividend of GTR Designated Shares	--	(23)	--
Issuance of GTR Stock in public offering		28,997	--
Issuance of GTR Stock in connection with conversion of Genzyme's 6 3/4% convertible subordinated notes	--	--	(3)
Issuance of GTR Stock in connection with partial conversion of convertible notes	598		
Value of debt conversion feature	--	1,524	--
Gain on transfer of facility	711	--	--
Payment from Genzyme General for research program	250	--	--
Allocation from Genzyme General for GTR Designated Shares	--	14,892	11,714
Stock compensation expense	108	221	312
Balance at end of year	$ 174,198	$ 170,430	$ 122,385
GENZYME MOLECULAR ONCOLOGY:			
Balance at beginning of year	$ 34,517	$ --	$ --
Balance at June 18, 1997	--	--	--
Issuance of GMO Stock under stock plans	7	--	--
Issuance of GMO Stock in connection with declared dividend of GMO Designated Shares	(87)	--	--
Conversion of note payable to Genzyme General into GMO Designated Shares	2,696	--	--
Issuance of GMO Stock in connection with the requisition of PharmaGenics	--	27,330	--
Sale of warrants	--	724	--

Value of debt conversion feature	--	3,529	--
Conversion of GMO Debentures to GGD Debentures for GMO Designated Shares	19,802	--	--
Allocation from Genzyme General for GMO Designated Shares	5,000	2,886	--
Stock compensation expense (unearned compensation), net	113	(116)	--
Other	1,379	164	--
Balance at end of year	$ 63,427	$ 34,517	$ --
ACCUMULATED DEFICIT:			
Balance at beginning of year	$ (76,346)	$ (89,975)	$ (17,158)
Net income (loss)	62,567	13,629	(72,817)
Balance at end of year	$ (13,779)	$ (76,346)	$ (89,975)

The accompanying notes are an integral part of these consolidated financial statements.

GENZYME CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (CONTINUED)

	DOLLARS IN THOUSANDS		
	1998	1997	1996
Accumulated other comprehensive income:			
Balance at beginning of year	$(12,005)	$ (1,118)	$ (1,528)
Foreign currency translation adjustments	7,681	(11,704)	2,845
Unrealized gains (losses) on investments	(6,043)	817	(2,435)
Accumulated other comprehensive income	$(10,367)	$(12,005)	$(1,118)

The accompanying notes are an integral part of these consolidated financial statements.

GENZYME CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BUSINESS

Genzyme Corporation is a global diversified human healthcare business with product development, manufacturing and marketing capabilities in therapeutic products, surgical products, diagnostic products and services, tissue repair and oncology.

BASIS OF PRESENTATION

The consolidated financial statements of Genzyme include the balance sheets, results of operations and cash flows of Genzyme's therapeutics, surgical products, diagnostics, tissue repair and oncology businesses and corporate operations during the periods presented.

Genzyme currently has three series of common stock outstanding. These three series are intended to reflect the value and track the economic performance of Genzyme's three primary operating divisions (Genzyme General, GTR and GMO).

PRINCIPLES OF CONSOLIDATION

The accompanying consolidated financial statements of Genzyme reflect the consolidated accounts of all of Genzyme's businesses. Investments in companies and joint ventures in which the Company has a substantial ownership interest (20% to 50%), or in which the Company participates in policy decisions, are accounted for using the equity method. Accordingly, the Company's share of the earnings of these entities is included in consolidated net income. Investments of less than 20% are reported at fair value (see Note I., "Investments" below). All significant intercompany items and transactions have been eliminated in consolidation. Certain items in the consolidated financial statements for the years ended December 31, 1997 and 1996 have been reclassified to conform with the December 31, 1998 presentation.

FINANCIAL INFORMATION

The Company prepares separate financial statements for Genzyme General, GTR and GMO in addition to consolidated financial statements for Genzyme. Notwithstanding the allocation of assets and liabilities, including contingent liabilities, between Genzyme General, GTR and GMO for the purposes of preparing their respective financial statements, Genzyme continues to hold title to all of the assets and is responsible for all of the liabilities allocated to each of the divisions. Holders of GGD Stock, GTR Stock and GMO Stock are common stockholders of Genzyme and have no specific claim against the assets to which each series of common stock relates. Liabilities or contingencies of Genzyme General, GTR or GMO could affect the results of operations and financial condition of the other divisions.

DIVIDEND POLICY

The Company has never paid any cash dividends on shares of its capital stock. Genzyme currently intends to retain its earnings to finance future growth and therefore does not anticipate paying any cash dividends on its common stock in the foreseeable future.

NOTE A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

USE OF ESTIMATES

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make certain estimates and assumptions that effect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reported period. Actual results could differ from those estimates.

FINANCIAL INSTRUMENTS

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist principally of cash and cash equivalents, current and non-current investments and accounts receivable. The Company generally invests its cash investments in investment-grade securities to mitigate risk.

UNCERTAINTIES

The Company is subject to risks common to companies in the biotechnology industry, including (i) the Company's ability to successfully complete preclinical and clinical development and obtain timely regulatory approval and adequate patent and other proprietary rights protection of its products and services, (ii) the content and timing of decisions made by the FDA and other agencies regarding the indications for which the Company's products may be approved, (iii) the ability of the Company to manufacture adequate supplies of its products for development and commercialization activities, (iv) the accuracy of the Company's estimates of the size and characteristics of markets to be addressed by the Company's products and services, (v) market acceptance of the Company's products and services, (vi) the Company's ability to obtain reimbursement for its products from third-party payers, where appropriate, and (vii) the accuracy of the Company's information concerning the products and resources of competitors and potential competitors.

CASH AND CASH EQUIVALENTS

Cash and cash equivalents, consisting principally of money market funds and municipal notes purchased with initial maturities of three months or less, are valued at cost plus accrued interest, which approximates market.

INVESTMENTS

Short-term investments include all investments with remaining maturities of twelve months or less. Long-term investments include all investments with remaining maturities greater than twelve months. The Company classifies its

equity investments as available-for-sale and its investments in debt securities as either held-to-maturity or available-for-sale based on facts and circumstances present at the time the investments are purchased. As of December 31, 1998 and 1997, the Company classified all of its investments in debt and equity securities as available-for-sale.

Available-for-sale investments are reported at fair value as of the balance sheet date with unrealized holding gains and losses (the adjustment to fair value) included in stockholders' equity. If the adjustment to fair value reflects a decline in the value of the investment, management considers all available evidence to evaluate the extent to which the decline is "other than temporary" and marks the investment to market through a charge to the income statement.

Investments in equity securities not listed or traded are valued on a security by security basis, considering the types of securities, their marketability, subsequent purchase of the same or similar securities by third parties and the financial condition, operating results and progress of development programs of the securities.

FAIR VALUE OF FINANCIAL INSTRUMENTS
The fair value of investments is obtained from market quotations and is disclosed in Note I., "Investments" below. The fair value of foreign currency forward contracts is based on forward rates in effect at the balance sheet date and is disclosed below (see -- Foreign Currency Hedging).

INVENTORIES
Inventories are valued at the lower of cost (first-in, first-out method) or market.

NOTE A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

PROPERTY, PLANT AND EQUIPMENT Property, plant and equipment are stated at cost. On disposal, the related cost and accumulated depreciation or amortization are removed from the accounts and any resulting gain or loss is included in the results of operations. Provision for depreciation is generally computed using the straight-line method over the estimated useful lives of the assets (three to ten years for plant and equipment, five to seven years for furniture and fixtures, and 20 to 40 years for buildings). Certain specialized manufacturing equipment and facilities allocated to Genzyme General are depreciated over their remaining useful lives using the units-of-production method. The remaining life and recoverability of such equipment is evaluated periodically based on the appropriate facts and circumstances. Leasehold improvements are amortized over the lesser of the useful life or the term of the respective lease. For products expected to be commercialized, the Company capitalizes, to construction-in-progress, the costs of manufacturing process validation and optimization incurred beginning when the product is deemed to have demonstrated technological feasibility and ending when the asset is substantially complete and ready for its intended use. Qualified costs include incremental labor and direct material, and incremental fixed overhead and interest. These costs are generally depreciated using the units of production method.

INTANGIBLES
Intangible assets consist of goodwill, covenants not to compete, customer lists, patents, trademarks, trade names and technology rights and are being amortized using the straight-line method over useful lives of three to 40 years. Management's policy regarding intangible assets is to evaluate the recoverability of its intangible assets when the facts and circumstances suggest that these assets may be impaired. Evaluations consider factors including operating results, business plans, economic projections, strategic plans and market emphasis. Evaluations also compare expected cumulative, undiscounted operating incomes or cash flows with net book values of related intangible assets. Unrealizable intangible asset values are charged to operations if these evaluations indicate an impairment in value.

TRANSLATION OF FOREIGN CURRENCIES
The financial statements of the Company's foreign subsidiaries are translated from local currency into U.S. dollars using the current exchange rate at the balance sheet date for assets and liabilities and the average exchange rate prevailing during the period for revenues and expenses. The local currency for all of the Company's foreign subsidiaries is considered to be the functional currency for each entity and, accordingly, translation adjustments for these subsidiaries are included in stockholders' equity. Exchange gains and losses on intercompany balances of a long-term investment nature are also recorded as a charge or credit to stockholder's equity.

Transaction gains and losses are recorded in income and totaled net gains of $0.3 million in 1998 and net losses of $0.3 million and $0.9 million for the years ended December 31, 1997 and 1996, respectively.

FOREIGN CURRENCY HEDGING

From time to time, the Company enters into forward contracts to reduce foreign currency exchange risk. Such contracts are revalued using current exchange rates at the balance sheet date. All gains and losses on revaluation of forward contracts are included in net income. Related gains and losses were not material to the financial statements. There were no foreign currency forward contracts outstanding at December 31, 1998 and 1997.

INTEREST RATE HEDGE AGREEMENTS

Interest rate hedge agreements are used to reduce interest rate risks and costs inherent in the Company's debt portfolio. The Company enters into these agreements to change the fixed/variable interest rate mix of the portfolio to reduce the Company's aggregate risk to movements in interest rates. The Company does not hold or issue derivative financial instruments for trading purposes. The differentials to be received or paid under contracts designated as hedges are recognized in income over the life of the contracts as adjustments to interest expense. The fair values of interest rate contracts are estimated based on the estimated amount necessary to terminate the agreements.

NOTE A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

REVENUE RECOGNITION

Revenues from product sales are recognized when goods are shipped and are net of third party contractual allowances and rebates, as applicable. Revenues from service sales are recognized when the service procedures have been completed or applicable milestones have been achieved. Revenues from research and development contracts are recognized over applicable contractual periods as specified by each contract and as costs related to the contracts are incurred.

RESEARCH AND DEVELOPMENT

Research and development costs are expensed in the period incurred. Costs of purchased technology which management believes has not demonstrated technological feasibility and for which there is no alternative future use are charged to expense in the period of purchase.

ISSUANCE OF STOCK BY A SUBSIDIARY OR AN AFFILIATE

Gains on the issuance of stock by a subsidiary or an affiliate are included in net income unless the subsidiary or affiliate is a research and development, start-up or development stage company or an entity whose viability as a going concern is under consideration. In those situations the Company accounts for the change in its proportionate share of subsidiary or affiliate equity resulting from the additional equity raised by the subsidiary or affiliate as an equity transaction.

INCOME TAXES

The Company uses the asset and liability method of accounting for deferred income taxes. The provision for income taxes includes income taxes currently payable and those deferred because of temporary differences between the financial statement and tax bases of assets and liabilities. The Company has not provided for possible U.S. taxes on the undistributed earnings of foreign subsidiaries that are considered to be reinvested indefinitely. At December 31, 1998, such undistributed foreign earnings were approximately $4.5 million. Based on the Company's policy of indefinite reinvestment in non-US operations, it is not currently practicable to determine the tax liability associated with the repatriation of those earnings.

NET INCOME (LOSS) PER SHARE

Net income (loss) per share attributable to Genzyme General, GTR and GMO gives effect to the management and accounting policies adopted by the Genzyme Board and is reported in lieu of consolidated per share data. The Company computes net income (loss) per share for each division by dividing the earnings attributable to each series of stock by the weighted average number of shares of that stock outstanding during the period for basic earnings per share and by the weighted average shares of that stock plus other potentially dilutive securities outstanding during the applicable period for diluted earnings per share. Earnings (loss) attributable to GGD Stock, GTR Stock and GMO Stock equal the

respective division's net income or loss for the relevant period determined in accordance with generally accepted accounting principles in effect at such time, adjusted by the amount of tax benefits allocated to or from the division pursuant to the management and accounting policies adopted by the Genzyme Board.

GENZYME CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

NET INCOME (LOSS) PER SHARE (CONTINUED)
The following tables set forth the computation of basic and diluted earnings per share for Genzyme General, Genzyme Tissue Repair and Genzyme Molecular Oncology:

GENZYME GENERAL:

(AMOUNTS IN THOUSANDS, EXCEPT PER SHARE AMOUNTS)	DECEMBER 31, 1998	1997	1996
	<C>	<C>	<C>
Net income (loss) attributable to GGD Stock-basic and diluted	$121,053	$ 77,447	$(30,502)
Shares used in net income per common share-basic	79,063	76,531	68,289
Effect of dilutive securities:			
Employee and director stock options	2,661	2,387	--
Warrants	10	7	--
Dilutive potential common shares (1,2,3)	2,671	2,394	--
Shares used in net income per common share-diluted (1,2,3)	81,734	78,925	68,289
Net income (loss) per common share - basic	$ 1.53	$ 1.01	$ (0.45)
Net income (loss) per common share - diluted (1,2,3)	$ 1.48	$ 0.98	$ (0.45)

---

(1) Certain securities were not included in the computation of Genzyme General's diluted earnings per share for the years ended December 31, 1998, 1997 and 1996 because each such security had an exercise price greater than the average market price of GGD Stock during each respective period. Such securities include:

(Amounts in thousands)	December 31, 1998	1997	1996
	<C>	<C>	<C>
Shares of GGD Stock issuable for options(a)	2,827	5,921	3,824
Shares of GGD Stock issuable for warrants	40	40	--
Total shares with exercise prices greater than the average market price of GGD Stock during the year	2,867	5,961	3,824

(a) Options not included in diluted earnings per share had exercise price ranges of $28.67-$47.88 in 1998, $23.59-$38.00 in 1997, and $3.79-$38.00 in 1996.

(2) In computing diluted earnings per share for Genzyme General for 1998, the following securities were not included in the calculation because inclusion of such shares would have an anti-dilutive effect on Genzyme General's net income per share: (i) approximately 6,313,000 shares of GGD Stock reserved in May 1998 for issuance upon conversion of the GGD Notes and (ii) approximately 630,000 shares of GGD Stock reserved in August 1998 for issuance upon conversion of the GGD Debentures.

(3) In computing diluted earnings per share for 1996, exercise of approximately 6,506,000 options and 35,000 warrants were not included because the result would be anti-dilutive due to Genzyme General's net loss in 1996.

GENZYME TISSUE REPAIR:

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS, EXCEPT PER SHARE AMOUNTS)	DECEMBER 31, 1998	1997	1996
<S>	<C>	<C>	<C>
Net loss	$(40,386)	$(45,984)	$(42,315)
Basic and diluted weighted average shares outstanding	20,277	14,976	12,525
Net loss per common share -- basic and diluted	$(1.99)	$(3.07)	$(3.38)

</TABLE>

During the years ended December 31, 1998, 1997 and 1996, certain securities were not included in the computation of diluted earnings per share because they would have an anti-dilutive effect due to the net loss for those years. Such securities include:

NOTE A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

NET INCOME (LOSS) PER SHARE (CONTINUED)

GENZYME TISSUE REPAIR (CONTINUED):

<TABLE>
<CAPTION>

(Amounts in thousands)	December 31, 1998	1997	1996
<S>	<C>	<C>	<C>
Shares of GTR Stock issuable for options	3,398	2,777	2,574
GTR Designated Shares	716	885	1,794
Shares of GTR Stock issuable upon conversion of the GTR Note	7,810	1,772	--
Total shares excluded from the GTR diluted earnings per share calculation	11,924	5,434	4,368

</TABLE>

GENZYME MOLECULAR ONCOLOGY:

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS, EXCEPT PER SHARE AMOUNTS)	DECEMBER 31, 1998	1997	1996
<S>	<C>	<C>	<C>
Net loss for basic and diluted weighted average shares	$(19,107)	$(19,578)	$(1,003)
Basic and diluted weighted average shares outstanding	5,019		
Net loss per common share - basic and diluted	$ (3.81)		
Pro forma basic and diluted weighted average shares outstanding		3,929	3,929
Pro forma net loss per common share - basic and diluted		$(4.98)	$(0.26)

</TABLE>

During the years ended December 31, 1998 and 1997, certain securities were not included in the computation of diluted earnings per share because they would have an anti-dilutive effect due to the net loss for the years. Such securities include:

<TABLE>

<CAPTION>

(Amounts in thousands)	December 31, 1998	1997
<S>	<C>	<C>
Shares of GMO Stock issuable for options	1,158	826
Warrants to purchase GMO Stock	10	10
GMO Designated Shares	1,410	6,000
Total shares excluded from the GMO diluted earnings per share calculation	2,578	6,836

</TABLE>

During the years ended December 31, 1996, there were no securities outstanding to be considered in this calculation.

COMPREHENSIVE INCOME
Effective January 1, 1998, Genzyme adopted SFAS 130, "Reporting Comprehensive Income", which establishes standards for reporting and displaying comprehensive income and its components in a set of financial statements. Components of comprehensive income are net income and all other non-owner changes in equity such as the change in the cumulative translation adjustment. Genzyme presents such information in its statement of operations.

SEGMENT INFORMATION
In 1998, Genzyme adopted SFAS 131, "Disclosures about Segments of an Enterprise and Related Information." SFAS 131 supersedes SFAS 14, "Financial Reporting for Segments of a Business Enterprise," and replaces the "industry segment" approach with the "management" approach. The management approach designates the internal organization that is used by management for making operating decisions and assessing performance as the source of the Company's reportable segments. SFAS 131 also requires disclosures about products and services, geographic areas, and major customers. The adoption of SFAS 131 did not affect results of operations or financial position, but did affect the disclosure of segment information (see Note Q., "Segment Information" below).

ACCOUNTING FOR STOCK-BASED COMPENSATION
The Company has elected the disclosure-only alternative permitted under SFAS 123, "Accounting for Stock-Based Compensation". The Company has disclosed herein pro forma net income and pro forma earnings per share in the footnotes using the fair value based method for fiscal 1998, 1997 and 1996.

NOTE A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

NEW ACCOUNTING PRONOUNCEMENTS
In April 1998, the Accounting Standards Executive Committee of the American Institute of Certified Public Accountants issued Statement of Position 98-5, "Accounting for the Costs of Start-Up Activities". SOP 98-5 requires all costs of start-up activities (as defined by SOP 98-5) to be expensed as incurred. The adoption of SOP 98-5 did not have a material impact on Genzyme's consolidated financial statements.

In June 1998, the Financial Accounting Standards Board issued SFAS 133, "Accounting for Derivative Instruments and Hedging Activities". SFAS 133 establishes accounting and reporting standards for derivative instruments, including certain derivative instruments embedded in other contracts (collectively referred to as derivatives), and for hedging activities. SFAS 133 requires companies to recognize all derivatives as either assets or liabilities, with the instruments measured at fair value. The accounting for changes in fair value, gains or losses, depends on the intended use of the derivative and its resulting designation. The statement is effective for all fiscal quarters of fiscal years beginning after June 15, 1999. Genzyme will adopt SFAS 133 by January 1, 2000. Genzyme is evaluating SFAS 133 to determine its impact on its consolidated financial statements.

NOTE B. OTHER CHARGES
In the third quarter of 1998, Genzyme recorded $26.9 million of charges associated with its Therapeutics and Surgical Products businesses.

The conversion of patients with Gaucher disease from Ceredase(R) enzyme to Cerezyme(R) enzyme is substantially complete. Based on its successful progress in converting patients from Ceredase(R) enzyme to Cerezyme(R) enzyme, Genzyme determined that its existing supply of finished goods of Ceredase(R) enzyme was sufficient to meet patient needs. As a result, in the third quarter of 1998, Genzyme recorded a $14.8 million charge to cost of products sold for the excess inventory used to make Ceredase(R) enzyme.

During the third quarter of 1998, Genzyme reviewed its requirements to support the Sepra Products. As a result, in the third quarter of 1998, Genzyme recorded a $10.4 million charge to cost of products sold to write down Sepra Products inventory amounts to net realizable value. In addition, during the third quarter, the Company wrote-off certain costs related to equipment used to manufacture the Sepra Products totaling $1.7 million.

In the fourth quarter of 1997, Genzyme recorded $29.2 million of charges mainly associated with its Pharmaceuticals and Surgical Products businesses and the sale of GDI, which was sold in 1996. The Pharmaceuticals business unit now focuses on products that are more consistent with Genzyme's long-term business strategy of moving towards higher-value products and away from fine chemical and bulk pharmaceuticals. This change in strategy resulted in a $18.1 million charge to cost of products sold primarily related to the melatonin, bulk pharmaceuticals and fine chemical product lines that were discontinued. In addition, Genzyme recorded charges of $5.5 million to cost of products sold and $3.5 million to SG&A expense primarily related to the manufacturing and selling of Sepracoat(TM) Coating Solution, which was discontinued for the U.S. market after an advisory panel of the FDA recommended against granting marketing approval of this product in 1997. The product is sold outside of the United States. Genzyme also recorded a $2.0 million charge to other expense related to the uncertainty of collection on certain notes receivable.

NOTE C. SALE OF RESEARCH PRODUCTS BUSINESS ASSETS

On July 1, 1998, Genzyme completed the sale of the primary assets of its research products business to TECHNE. The purchase price consisted of $24.8 million in cash, approximately 987,000 shares of TECHNE common stock, and royalties on TECHNE's biotechnology group sales for the next five years. Royalty income will be recorded as earned. In the third quarter of 1998, Genzyme recorded a gain of $31.2 million related to the sale of the research products business assets.

NOTE D. ACQUISITIONS

The Company allocates all acquisitions to either Genzyme General, GTR or GMO depending on the nature of the acquired business.

ALLOCATED TO GENZYME GENERAL:

NEOZYME II CORPORATION

In the fourth quarter of 1996, Genzyme acquired Neozyme II Corporation. The aggregate purchase price of Neozyme II was $111.3 million and consisted of $108.2 million of cash, warrants valued at $0.5 million and acquisition costs of $2.6 million. The acquisition was accounted for as a purchase. The excess purchase price was allocated to Neozyme II's only remaining assets, which were technologies still in the development stage. These technologies consisted of specific programs for the treatment of cystic fibrosis and have no alternative future use. Accordingly, the statement of operations for the year ended December 31, 1996 reflects a $106.5 million charge for in-process technology and a related deferred tax benefit of $21.7 million which were recorded upon consummation of the acquisition.

DEKNATEL SNOWDEN PENCER, INC.

On July 1, 1996, Genzyme acquired DSP. The purchase price of $252.2 million consisted of cash of approximately $192.0 million, acquisition costs of approximately $4.6 million and debt obligations of DSP of approximately $55.6 million. The acquisition was accounted for as a purchase. The excess of the purchase price over the fair market value of the net assets acquired, approximately $130.8 million, was allocated to goodwill to be amortized over 40 years.

The purchase price was allocated to the assets and liabilities of DSP based on their estimated respective fair values on the date of acquisition. Completed technology that had reached technological feasibility was valued using a risk adjusted cash flow model under which

future cash flows were discounted, taking into account risks related to existing and future markets and assessments of the life expectancy of the completed technology. In-process technology that had not reached technological feasibility and that has no alternative future use was valued using the same method. Expected future cash flows associated with in-process technology were discounted considering risks and uncertainties related to viability of and to the potential changes in future target markets and to the completion of the products expected to be ultimately marketed by Genzyme. The amount allocated to in-process technology of $24.2 million was charged to operations in July 1996 upon completion of the acquisition.

GENETRIX, INC.

On May 1, 1996, the Company acquired Genetrix, Inc., a privately held genetic testing laboratory, for an aggregate purchase price of $36.5 million. Approximately $39.0 million was allocated to goodwill and is being amortized over 15 years. The Company incurred restructuring charges of $1.0 million related to closings of laboratories made redundant by the acquisition.

NOTE D. ACQUISITIONS (CONTINUED)

ALLOCATED TO GENZYME MOLECULAR ONCOLOGY:

PHARMAGENICS, INC.
Genzyme acquired PharmaGenics on June 18, 1997. The transaction was accounted for as a purchase. The aggregate purchase price of $27.5 million (net of $0.5 million, which represents fees payable by PharmaGenics in connection with the merger), plus acquisition costs of $2.5 million and assumed liabilities of $4.9 million, has been allocated to the acquired tangible and intangible assets based on their respective fair values (amounts in thousands):

<TABLE>
<CAPTION>

<S>	<C>
Equipment	$ 208
Other assets	50
Completed technology rights (to be amortized over 3 years)	20,000
Goodwill (to be amortized over 3 years)	15,193
Deferred tax liability (to be amortized over 3 years)	(7,600)
In-process technology	7,000
Total	$34,851

</TABLE>

In 1998, there were certain adjustments to the assumed liabilities totaling $0.5 million.

The $7.0 million allocated to in-process technology represents the value assigned to PharmaGenics's programs which were still in the development stage and for which there was no alternative use. The value assigned to these programs (both complete and in-process) was determined by selecting the maximum anticipated value of these programs based on comparable technologies. The amount allocated to in-process technology was charged to operations in June 1997, the period in which the merger was consummated.

The deferred tax liability of $7.6 million results from the temporary difference between the book and tax basis of the completed technology computed at a 38.0% incremental tax rate.

CONSOLIDATED UNAUDITED PRO FORMA FINANCIAL INFORMATION
The following unaudited pro forma information presents the results of operations of Genzyme for the year ended December 31, 1997 as if the acquisition of PharmaGenics had been consummated on January 1, 1997. The pro forma information does not purport to be indicative of what would have occurred had the acquisition been made on that date or of results that may

occur in the future. The pro forma financial information does not include $7.0 million in charges for in-process technology:

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS, EXCEPT PER SHARE AMOUNTS)	YEAR ENDED DECEMBER 31, 1997
<S>	<C>
Pro forma revenues	$608,916
Pro forma net income	$7,832
Pro forma net loss attributable to GMO Stock	$(25,926)
Pro forma net loss per GMO common share -basic and diluted	$(6.60)
Pro forma weighted average shares outstanding	3,929

</TABLE>

NOTE E. OFF-BALANCE-SHEET FINANCIAL INSTRUMENTS

Off-balance-sheet financial instruments create various degrees and types of risk to Genzyme, including credit, interest rate and liquidity risk.

In the normal course of business, Genzyme enters into interest rate swap contracts to hedge interest rate risk related to its variable rate notes payable. Interest rate swaps generally involve the exchange of fixed and variable interest payments between two parties based on a common notional principal amount and maturity date. The notional amount of interest rate contracts is the amount upon which interest and other payments under the contract are based. The primary risks associated with interest rate swaps are the exposure to movements in interest rates and the ability of counterparties to meet the terms of the contract.

In December 1996, Genzyme entered into a $100.0 million interest rate swap contract to effectively convert the variable interest rate on borrowings under its $225 million revolving credit facility to a fixed interest rate. Net payments made or received under the interest rate swap contract are recorded as interest expense. At December 31, 1998, the interest rate swap contract had a termination value of approximately $1.2 million with a notional value of approximately $100.0 million. The agreement matures in 1999.

NOTE F. ACCOUNTS RECEIVABLE AND INTANGIBLE ASSETS

Genzyme's trade receivables primarily represent amounts due from healthcare service providers and companies and institutions engaged in research, development or production of pharmaceutical and biopharmaceutical products. Genzyme performs ongoing credit evaluations of its customers and generally does not require collateral. Accounts receivable are stated at fair value after reflecting the allowance for doubtful accounts of $13.9 million and $12.1 million at December 31, 1998 and 1997, respectively.

Net intangible assets for Genzyme as of December 31, 1998 and 1997 includes $178.0 million and $191.7 million, respectively, of goodwill primarily due to acquisitions.

As of December 31, 1998 and 1997 accumulated amortization of intangible assets was $70.7 million and $43.3 million, respectively.

NOTE G. INVENTORIES

Inventories at December 31 consist of the following:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997
<S>	<C>	<C>
Raw materials	$ 41,328	$ 48,392
Work-in-process	27,474	31,994
Finished products	41,031	59,295

	$109,833	$139,681

</TABLE>

NOTE H. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment at December 31 include the following:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997
<S>	<C>	<C>
Plant and equipment	$ 257,706	$ 249,718
Land and buildings	156,067	141,020
Leasehold improvements	71,425	65,672
Furniture and fixtures	17,619	15,364
Construction-in-progress	30,805	24,953
	533,622	496,727
Less accumulated depreciation	(151,003)	(111,379)
Property, plant and equipment, net	$ 382,619	$ 385,348

</TABLE>

Depreciation and amortization expense was $39.2 million, $33.5 million and $23.1 million in 1998, 1997 and 1996, respectively.

The Company attributes its fixed assets to Genzyme General, GTR or GMO based on use.

The Company has capitalized approximately $34.6 million of gross process validation and optimization costs related to its manufacturing facilities. The Company capitalized approximately $0.7 million, $0.5 million and $2.2 million of interest costs in 1998, 1997 and 1996, respectively, related to facility construction.

NOTE I. INVESTMENTS

MARKETABLE SECURITIES

Consolidated investments in marketable securities at December 31 consisted of the following:

<TABLE>
<CAPTION>

	1998		1997	
(DOLLARS IN THOUSANDS)	COST	MARKET VALUE	COST	MARKET VALUE
<S>	<C>	<C>	<C>	<C>
Cash Equivalents:				
Corporate notes	$ 8,131	$ 8,129	$ 17,036	$ 17,034
Money market fund...	70,805	70,805	67,649	67,650
	$ 78,936	$ 78,934	$ 84,685	$ 84,684
Short Term:				
Corporate notes	$175,002	$175,453	$ 51,280	$ 51,259
Long Term:				
Corporate notes	$226,002	$226,259	$ 70,981	$ 70,921
Federal	33,412	33,581	--	--
U.S. Treasury notes	21,323	21,824	21,667	21,755
	$280,737	$281,664	$ 92,648	$ 92,676
Equity securities	$ 62,244	$ 51,977	$ 29,609	$ 30,047

</TABLE>

Investments in marketable securities are attributed to either Genzyme General, GTR or GMO.

REALIZED AND UNREALIZED GAINS AND LOSSES ON MARKETABLE SECURITIES AND EQUITY INVESTMENTS

In 1998, Genzyme recorded a gain of $3.4 million upon the sale of a portion of its TECHNE common stock received from the sale of Genzyme's research products assets to TECHNE. In 1998, Genzyme also recorded a charge of $3.4 million related to a write-down of a strategic equity investment whose decline in value was considered "other than temporary". Investment income for 1997 and 1996 includes gross realized losses of $2,000 and $47,000, respectively.

Gross unrealized holding losses of $12.5 million and unrealized holding gains of $3.6 million were recorded at December 31, 1998 in stockholders' equity as compared to unrealized holding losses of $3.0 million and unrealized holding gains of $3.4 million at December 31, 1997.

Information regarding the range of contractual maturities of investments in debt securities at December 31 is as follows:

<TABLE>
<CAPTION>

	1998		1997	
(DOLLARS IN THOUSANDS)	COST	MARKET VALUE	COST	MARKET VALUE
<S>	<C>	<C>	<C>	<C>
Within 1 year	$253,939	$254,387	$135,965	$135,943
After 1 year through 2 years .	259,363	259,788	63,905	63,855
After 2 years through 10 years	21,373	21,876	28,743	28,821
	$534,675	$536,051	$228,613	$228,619

</TABLE>

NOTE I. INVESTMENTS (CONTINUED)

MARKETABLE SECURITIES (CONTINUED)

The Company holds certain strategic investments in equity securities of unconsolidated entities which may be attributed to either Genzyme General, GTR or GMO.

INVESTMENTS ALLOCATED TO GENZYME GENERAL (amounts in thousands), except shares owned):

<TABLE>
<CAPTION>

Entity	Adjusted Cost	Market Value	Unrealized Gain (Loss)
<S>	<C>	<C>	<C>
ABIOMED, Inc.	$15,804	$11,323	$ (4,481)
Aronex Pharmaceuticals, Inc.	1,693	846	(847)
BioMarin Pharmaceutical, Inc.....	8,000	8,000	--
Celtrix Pharmaceuticals, Inc.(3).....	4,898	4,898	--
Dyax Corporation	3,000	3,000	--
GelTex Pharmaceuticals, Inc.	2,500	2,263	(237)
Pharming Group, N.V(1)	13,983		
Revaluation of investment in Pharming	1,122		
Adjusted investment in Pharming	15,105	8,497	(6,608)

</TABLE>

TECHNE Corporation(2)	9,126	11,196	2,070
Other	2,118	1,954	(164)
Total investment in equity securities as of December 31, 1998	$62,244	$51,977	$(10,267)

SUMMARY:

(AMOUNTS IN THOUSANDS)	DECEMBER 31, 1998	1997
Adjusted historical cost of investments in equity securities	$ 62,244	$29,609
Net unrealized gains (losses)	(10,267)	438
Investment in equity securities at market value:	$ 51,977	$30,047

(1) The investment in Pharming is denominated in guilders and the revaluation entry represents the translation of the historical guilder amount of the investment into US dollars at the December 1998 month-end rate.

(2) In December 1998, Genzyme sold a portion of TECHNE common stock for net proceeds of $9.6 million and recorded a gain of approximately $3.4 million related to the sale.

(3) In December 1998, Genzyme determined that a portion of the impairment in its investment in Celtrix was "other than temporary." Accordingly, a loss of approximately $3.4 million was charged to operations in 1998.

NOTE I. INVESTMENTS (CONTINUED)

EQUITY INVESTMENTS ALLOCATED TO GENZYME GENERAL

DYAX CORPORATION

In October 1998, Genzyme entered into a collaboration agreement with Dyax Corporation to develop and commercialize one of Dyax's proprietary compounds for the treatment of chronic inflammatory diseases. Dyax will fund the first $6.0 million in development costs, and the parties will split all subsequent development costs equally. In connection with that agreement, Genzyme made an investment of $3.0 million in the convertible preferred stock of Dyax and made a $3.0 million line of credit available to help Dyax fund its operations. As of December 31, 1998, Dyax had not borrowed any money under the line of credit. Genzyme is required to make milestone payments to Dyax upon FDA approval of products that arise out of the collaboration, and will share equally with Dyax all profits from the sale of these products. Genzyme's Chairman and Chief Executive Officer is a director of Dyax and Dyax's Chief Executive Officer is a director of Genzyme.

GENZYME TRANSGENICS CORPORATION

Genzyme currently holds approximately 40.4% of the outstanding common stock of GTC, and accounts for its investment in GTC under the equity method. Genzyme and GTC are parties to a services agreement (which is currently under renegotiation) under which GTC pays Genzyme for certain basic services provided by Genzyme, such as treasury, data processing and laboratory support services, a sublease agreement pursuant to which Genzyme subleases a portion of one of its facilities in Framingham, Massachusetts to GTC and a research and development agreement pursuant to which Genzyme and GTC each perform certain research services for each other. During 1998, Genzyme received approximately $4.8 million from GTC pursuant to the three agreements between the companies and GTC received approximately $3.6 million from Genzyme pursuant to the research and development agreement. At December 31, 1998, Genzyme had a receivable of $1.5 million from GTC.

The fair market value of the GTC shares owned by Genzyme, based on quoted market prices, was $41.8 million and $71.5 million at December 31, 1998 and 1997, respectively. The Company reported equity in GTC's net losses of $7.4 million, $2.9 million and $3.4 million for the years ended December

31, 1998, 1997 and 1996, respectively.

Following are condensed statements of operations and balance sheet data of GTC:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	YEAR ENDED DECEMBER 31, 1998	1997	1996
<S>	<C>	<C>	<C>
Revenues	$ 62,412	$62,938	$46,834
Operating loss	(19,365)	(8,352)	(7,253)
Net loss	(19,950)	(9,343)	(7,746)

</TABLE>

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	DECEMBER 31, 1998	1997
<S>	<C>	<C>
Current assets	$32,417	$24,400
Noncurrent assets	50,920	46,580
Current liabilities	37,297	32,823
Noncurrent liabilities	9,836	10,779

</TABLE>

GTC CREDIT FACILITIES

Genzyme has guaranteed GTC's obligations under a $17.5 million credit facility and a $7.1 million term loan with a commercial bank. In exchange for this guarantee, GTC issued Genzyme a warrant to purchase up to 288,000 shares of GTC common stock at an exercise price of $4.875 per share. Of these shares, 96,000 are currently exercisable. GTC also issued Genzyme a warrant to purchase 145,000 shares of GTC common stock at an exercise price of $2.84375 per share in connection with the guarantee by Genzyme of GTC's obligations under a prior credit facility. All of the shares subject to this warrant are exercisable.

CONVERTIBLE DEBT AGREEMENT

In December 1998, Genzyme and GTC further amended and restated their Convertible Debt Agreement (the "Convertible Debt Agreement"). Under the Convertible Debt Agreement, the available line of credit from Genzyme to GTC is $8,327,000 and the expiration date is March 31, 2000. GTC has an option to convert any outstanding balance to a three year term loan. The interest rate of the Convertible Debt Agreement was 7% through April 1, 1998 increasing annually through the end of the Convertible Debt Agreement; starting at the lower of 8% or prime in the first year increasing to the lower of 10% or prime lending rate plus 2% in the first year of the Convertible Debt Agreement. As a result of GTC's preferred stock offering in March 1998 the Convertible Debt Agreement was reduced to approximately $6.3 million. There are certain financial covenants under the Convertible Debt Agreement. Any amounts outstanding under the Convertible Debt Agreement may be converted into shares of GTC common stock at Genzyme's option at any time or at GTC's option on a quarterly basis. All such conversions are to be based on the average closing stock price over 20 trading days ending two trading days prior to the date of conversion. The largest amount outstanding under this line of credit during the fiscal year ended December 31, 1998 was $3.0 million. As of December 31, 1998, no balances remained outstanding under this credit line.

NOTE I. INVESTMENTS (CONTINUED)

ATIII LLC

Effective January 1998, Genzyme and GTC established ATIII LLC, a joint venture for the development and commercialization of ATIII. Genzyme and GTC will provide 70% and 30%, respectively, of the first $33.0 million in development costs under the program. Development costs in excess of $33.0 million will be shared equally by the partners and all profits from the sale of ATIII will be split equally. To the extent that either party fails to fund its share of costs and expenses, the profit sharing interests and the future funding obligations of the parties may be proportionately adjusted. The joint venture has the right to

commercialize ATIII worldwide, excluding Asia. GTC contributed ATIII and certain of the product's underlying patents and technology to the joint venture. Genzyme also contributed patents and technology underlying the product to the joint venture. Pursuant to the terms of the joint venture agreements, Genzyme will pay GTC certain amounts upon the achievement of certain milestones. GTC will manufacture ATIII in bulk form and Genzyme will perform the finished processing work. Genzyme, as the exclusive distributor for ATIII LLC, will market and sell products for the joint venture in the territory. The joint venture agreements supersede and replace the provisions of an earlier agreement between the parties pursuant to which Genzyme had funded the ATIII program.

The minority interest of $4.3 million for the year ended December 31, 1998 relates to the portion of the results of operations of ATIII LLC that is allocable to GTC. There were no corresponding amounts for the years ended December 31, 1997 or 1996. Genzyme's Chairman and Chief Executive Officer is a director of GTC.

INVESTMENTS IN JOINT VENTURES ALLOCATED TO GENZYME GENERAL:

RENAGEL LLC

In June 1997, Genzyme and GelTex established RenaGel LLC, a joint venture for the final development and commercialization of Renagel(R) Capsules. The joint venture has rights to commercialize Renagel(R) Capsules worldwide, except in Japan and Pacific Rim countries. Genzyme will market and sell products for the joint venture in the territory. Each of Genzyme and GelTex currently hold a 50% ownership interest in RenaGel LLC. Genzyme and GelTex are each required to fund 50% of the joint venture's costs and expenses, and will share equally in the profits. To the extent that either party fails to fund its share of costs and expenses, the profit sharing interests and the future funding obligations of the parties may be proportionately adjusted. GelTex contributed Renagel(R) Capsules and the product's underlying patents and technologies to the joint venture.

Pursuant to the terms of the agreement, Genzyme committed to pay GelTex a total of $27.5 million. When the joint venture agreements were signed, Genzyme made a $2.5 million equity investment of GelTex common stock at $25.00 per share, which represents less than 1% ownership in GelTex. Genzyme also paid GelTex $15.0 million in November 1998 when Renagel(R) Capsules received FDA marketing approval. Genzyme will make an additional $10.0 million milestone payment in October 1999. The $25.0 million in milestone payments has been capitalized.

As of December 31, 1998, Genzyme General has provided a total of $14.4 million of funding to the joint venture and realized net losses from the joint venture of $7.5 million in 1998 and $2.3 million in 1997. Summary financial information is not presented as the impact of RenaGel LLC's activities on the Company's statement of operations for the years ended December 31, 1998 and 1997 is not considered to be material. At December 31, 1998, Genzyme had a receivable from RenaGel LLC of $1.1 million. The Company's Chairman and Chief Executive Officer is a director of GelTex and another director of the Company is Chairman of GelTex.

NOTE I. INVESTMENTS (CONTINUED)

INVESTMENTS IN JOINT VENTURES ALLOCATED TO GENZYME GENERAL (CONTINUED):

BIOMARIN/GENZYME LLC

In September 1998, Genzyme formed BioMarin/Genzyme LLC, a joint venture with BioMarin for the development and commercialization of alpha-L-iduronidase, a recombinant enzyme to treat MPS I. Funding for and profits of the joint venture will be shared equally by Genzyme and BioMarin. Pursuant to the terms of joint venture agreement, Genzyme will pay BioMarin a $12.1 million milestone payment upon receipt of FDA approval of a Biologics License Application for alpha-L-iduronidase to treat MPS I. As of December 31, 1998, Genzyme General has provided a total of $1.4 million of funding to the joint venture and realized net losses from the joint venture of $0.9 million in 1998. Summary financial information is not presented as the impact of BioMarin/Genzyme LLC's activities on the Company's statement of operations for the year ended December 31, 1998 is not considered to be material.

PHARMING/GENZYME LLC

On October 14, 1998 Genzyme General and Pharming formed Pharming/Genzyme LLC, joint venture to develop and commercialize worldwide the human enzyme

alpha-glucosidase as a treatment for Pompe disease. Under the terms of the agreement, Genzyme General will fund the first $14.0 million of development costs. Thereafter, funding for and profits of the joint venture will be shared equally by Genzyme and Pharming. As of December 31, 1998, Genzyme General has provided a total of $3.2 million of funding to the joint venture and realized net losses from the joint venture of $4.0 million in 1998. Summary financial information is not presented as the impact of Pharming/Genzyme LLC's activities on the Company's statement of operations for the year ended December 31, 1998 is not considered to be material.

INVESTMENT IN JOINT VENTURE ALLOCATED TO GENZYME TISSUE REPAIR:

DIACRIN/GENZYME LLC

On October 1, 1996, Diacrin/Genzyme LLC was established as a joint venture between GTR and Diacrin to develop and commercialize products and processes using porcine fetal cells for the treatment of Parkinson's and Huntington's disease in humans. Under the terms of the joint venture agreement, GTR provided 100% of the initial $10.0 million of the funding requirements and will provide 75% of the next $40.0 million of funding requirements for products to be developed by the joint venture. Thereafter, all costs will be shared equally by the two parties. As of December 31, 1998, GTR has provided a total of $15.7 million of funding to the joint venture, $5.1 million of which was provided by Genzyme General in exchange for 489,810 GTR Designated Shares. GTR realized net losses from the joint venture of $7.7 million in 1998, $6.7 million in 1997 and $1.7 million in 1996. During February 1998, GTR's funding obligation of the expenses incurred by Diacrin/Genzyme LLC decreased from 100% to 75%, because the initial $10.0 million of the funding requirements had been provided by that date. Summary financial information is not presented as the impact of the joint venture's activities on the Company's statement of operations for the years ended December 31, 1998, 1997 and 1996 is not considered to be material. The Company's Chairman and Chief Executive Officer is a director of Diacrin.

Genzyme has announced its intent to reallocate this joint venture from GTR to Genzyme General. See Note S., "Subsequent Events," below.

In 1996, Genzyme agreed to make available an unsecured, subordinated line of credit of up to $10.0 million to Diacrin that may be used by Diacrin under certain circumstances only to fund capital contributions to Diacrin/Genzyme LLC. There have been no draws on the line of credit to date.

INVESTMENT IN JOINT VENTURE ALLOCATED TO GENZYME MOLECULAR ONCOLOGY:
STRESSGEN/GENZYME LLC

In July 1997, StressGen/Genzyme LLC was established as a joint venture among Genzyme, StressGen Biotechnologies Corporation ("StressGen") and the Canadian Medical Discoveries Fund ("CMDF") to develop stress gene therapies for the treatment of cancer. CMDF provided $10.0 million (Canadian) in funding in connection with the joint venture. Each of Genzyme and StressGen (through a U.S. subsidiary) also made a capital contribution to StressGen/Genzyme LLC in the amount of $1.0 million (Canadian) and a limited recourse loan was made by a U.S. subsidiary of StressGen to StressGen/Genzyme LLC in the amount of $7.0 million (Canadian). In addition, Genzyme and StressGen have agreed to provide in equal shares any additional capital required by the joint venture in excess of the initial $10.0 million (Canadian) in funding.

NOTE I. INVESTMENTS (CONTINUED)

Genzyme and StressGen have an option, payable in equal shares, to purchase CMDF's membership interest in StressGen/Genzyme LLC at any time during the three-year period beginning July 31, 1999 and ending July 31, 2002. In addition, at any time during the 30-day period commencing on the date when not less than 75% of the initial funding provided by CMDF has been spent by the joint venture, but in no event later than July 31, 1999, CMDF shall have the right to require Genzyme and StressGen to purchase its membership interest at an aggregate purchase price of $10.0 million (Canadian) plus interest thereon at a rate per annum equal to the Canadian prime rate plus 1%. This purchase right will terminate if not exercised by CMDF during such 30-day period.

Prior to any repurchase of CMDF's membership interest in StressGen/Genzyme LLC, profits from the joint venture will be shared in proportion to the capital contributions of the three parties. Following any repurchase of CMDF's membership interest, profits will be shared equally by StressGen and Genzyme. However, GMO currently records 50% of the net operating losses of the joint venture due to the existence of CMDF's put right. Accordingly, for the years ended December 31, 1998 and 1997, GMO recorded $1.6 million and $0.3 million, respectively, of equity in loss of joint venture.

For the years ended December 31, 1998 and 1997, GMO recorded $2.2 million and $0.3 million, respectively, of research and development revenue and $2.0 million and $0.3 million, respectively, for cost of research and development revenue related to services billed to StressGen/Genzyme LLC. GMO had a receivable of $0.1 million due from StressGen/Genzyme LLC at December 31, 1998, which is included in other current assets.

As of December 31, 1998, GMO's portion of the cumulative losses of StressGen/Genzyme LLC exceeded its initial capital contribution of $0.7 million and GMO has recorded $1.2 million of a noncurrent liability due to the existence of CMDF's put right.

Summary financial information for StressGen/Genzyme LLC is not presented as the impact of StressGen/Genzyme LLC activities on Genzyme's statement of operations for the years ended December 31, 1998 and 1997 is not considered to be material.

NOTE J. ACCRUED EXPENSES

Accrued expenses at December 31 include the following:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997
<S>	<C>	<C>
Compensation	$23,310	$21,917
Technology access fee	10,000	--
Professional fees	6,146	7,949
Royalties	6,895	8,421
Rebates	5,663	4,575
Other	22,063	29,241
	$74,077	$72,103

</TABLE>

NOTE K. LONG-TERM DEBT AND LEASES

LONG-TERM DEBT

Although the Company retains responsibility for the repayment of all long-term debt obligations, such debt and leases are allocated to Genzyme General, GTR or GMO for reporting purposes based on the intended use of the funds borrowed under each instrument or facility or equipment leased.

Long-term debt at December 31 is comprised of the following:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997
<S>	<C>	<C>
5.25% convertible subordinated notes due June 2005	$ 250,000	$ --
Revolving credit facility due November 1999	100,000	118,000
5% GGD Notes due August 2003	21,559	--
6% convertible subordinated debentures	--	16,617
5% convertible subordinated note due February 2000	12,579	12,681
Mortgage note payable, matures June 1999	--	19,833
Other mortgage notes payable	3,167	3,856
	387,305	170,987
Less current portion	(100,080)	(711)
	$ 287,225	$ 170,276

</TABLE>

In February 1998, Genzyme repaid the remaining $0.7 million principal balance due on a mortgage note due January 2008.

In November 1998, Genzyme repaid the remaining $19.4 million principal balance due on a mortgage note due June 1999, plus accrued interest of $0.2 million.

The minimum annual principal repayment of obligations for long-term debt, excluding capital leases, in each of the next five years are as follows: 1999 -

$100,080,000, 2000 - $12,668,000, 2001 - $98,000, 2002 - $109,000, 2003 - $21,680,000 and thereafter $252,670,000.

REVOLVING CREDIT FACILITY

Genzyme has a $225 million revolving credit facility with a syndicate of commercial banks. Amounts drawn under this facility may be allocated to Genzyme General, GTR or GMO. As of December 31, 1998, Genzyme had $100.0 million of debt outstanding under the revolving credit facility, $82.0 million of which was allocated to Genzyme General and $18.0 million of which was allocated to GTR.

Loans bear interest at LIBOR plus an applicable margin pursuant to the terms and conditions defined in the credit agreement. The notes have certain covenants which require Genzyme to, among other things, maintain certain levels of earnings and liquidity ratios. If Genzyme defaults on the covenants the revolving credit facility is payable on demand. The stock of Genzyme Securities Corporation, a Massachusetts securities corporation, is pledged as collateral for this facility. As of December 31, 1998, the interest rate on amounts outstanding under the revolving credit facility was approximately 5.75%. Genzyme pays a commitment fee ranging from .15% to .375% on the unused portion of the revolving credit facility.

NOTE K. LONG-TERM DEBT AND LEASES (CONTINUED)

5.25% CONVERTIBLE SUBORDINATED NOTES

In May 1998, Genzyme raised approximately $243.0 million, net of the initial purchasers' discount and offering costs, from the issuance of the GGD Notes. The GGD Notes bear interest at 5.25% per annum and interest is payable semi-annually on June 1 and December 1 of each year, commencing on December 1, 1998. The GGD Notes are convertible, at any time at or before maturity (unless previously redeemed), into shares of GGD Stock at a conversion price of $39.60 per share, subject to adjustment for certain events. As a result of the GMO Dividend, holders of the GGD Notes will also be entitled to receive 0.10805 share of GMO Stock for each share of GGD Stock issued upon conversion. The GGD Notes may not be redeemed prior to June 10, 2001 and are redeemable, subject to certain subordination provisions, on such date and thereafter at the option of Genzyme, as a whole or from time to time in part, at the following prices (expressed as percentages of the principal amount) plus accrued interest to, but not including, the redemption date: 102.63% if redeemed on or before May 31, 2002, 101.75% if redeemed between June 1, 2002 and May 31, 2003; 100.88% if redeemed between June 1, 2003 and May 31, 2004; and 100% if redeemed on or after June 1, 2004. The fair value of the GGD Notes at December 31, 1998, based upon quoted market prices, totaled $322.0 million.

GTR'S 5% CONVERTIBLE NOTE

On February 28, 1997, GTR raised $13.0 million through the private placement of the GTR Note. The GTR Note became convertible beginning May 29, 1997 into shares of GTR Stock and, beginning August 1997, at a discount to the average of the closing bid prices of the GTR Stock on the Nasdaq National Market for the 25 trading days (the "Average GTR Stock Price") immediately preceding the conversion date. The discount started at 2% beginning in August 1997 and increased to 11% in November 1998. Thereafter, the conversion price is the lesser of 89% of the Average GTR Stock Price preceding the conversion date or May 28, 1998, 15 months after the date of issue. In the first quarter of 1997, GTR recorded $11.5 million of proceeds attributed to the value of the debt and $1.5 million attributed to the value of the conversion feature (recorded as an increase to division equity). The debt has been accreted to its face value by a charge to interest expense of $1.6 million over the term of the initial 15 month conversion period. GTR recorded interest expense related to the accretion of this debt of $0.5 million and $1.1 million in the years ended December 31, 1998 and 1997, respectively.

In November 1998, the holder of the GTR Note converted $600,000 of the principal amount of the GTR Note in exchange for 223,405 shares of GTR Stock. Due to the conversion, GTR paid $1.1 million of accrued interest in cash to the holder of the GTR Note, which represented all of the accrued interest on the GTR Note.

GGD DEBENTURES

In August 1997, GMO raised $20.0 million through the private placement of the GMO Debentures. In the third quarter of 1997, GMO recorded $16.5 million of proceeds attributable to the value of the debt and $3.5 million attributed to the value of the conversion feature (recorded as an increase to stockholders' equity). The debt was accreted to its $20.0 million face value by a charge to interest expense of $3.5 million over the term of the initial 15 month conversion period. The GMO Debentures provided that if the effective date of the initial public offering of GMO Stock did not occur before August 29, 1998, at the holder's option, the GMO Debentures could be exchanged for the GGD Debentures. Effective August 1998, all of the holders of the GMO Debentures exercised their option to exchange their GMO Debentures, plus accrued interest of $1.2 million, for the GGD Debentures. Approximately 3,029,000 GMO Designated Shares were reserved in connection with this exchange, subject to adjustment based on the fair market value of GMO Stock on October 16, 1999. GMO recorded $1.9 million and $1.0 million of interest expense related to the accretion of this debt in 1998 and 1997, respectively. Genzyme General recorded $0.7 million of interest expense related to the accretion of this debt in 1998.

MORTGAGE NOTES

The Company's remaining mortgage note matures December 2003 and is collateralized by land and buildings with a net book value of $3.5 million at December 31, 1998. This mortgage, which bears interest at 10.5%, is attributed to Genzyme General

NOTE K. LONG-TERM DEBT AND LEASES (CONTINUED)

OPERATING LEASES

Total rent expense under operating leases was $18.4 million, $16.3 million and $12.8 million in 1998, 1997 and 1996, respectively. The Company leases facilities and personal property under certain operating leases in excess of one year.

FUTURE MINIMUM PAYMENTS DUE UNDER OPERATING LEASES:

Future minimum payments due under the Company's operating leases are as follows:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	OPERATING LEASES
<S>	<C>
1999	$ 21,535
2000	20,443
2001	17,309
2002	13,867
2003	13,163
Thereafter	129,191
Total minimum payments	$215,508

</TABLE>

A sixty-five year lease commenced on June 1, 1992 between a wholly owned subsidiary of Genzyme and a third party lessor. Genzyme recorded total rent expense under this lease of $1,517,000, $1,290,000 and $886,000 in 1998, 1997 and 1996, respectively. The lease provides for escalations every five years based on the Consumer Price Index Escalation with a minimum escalation of 3% per year. Therefore, rent expense on a straight-lined basis is $1,517,000 per year.

GTR leases from Genzyme General a portion of a research and development facility. GTR is obligated to pay Genzyme General $0.6 million per year for 3 years commencing on July 1, 1998. Total rent expense for 1998 was $0.3 million. Diacrin/Genzyme LLC has subleased a portion of this facility and is obligated to pay GTR rent of $0.4 million per year pursuant to the terms of the sublease agreement. Total rent expense under the sublease for 1998 was $0.2 million.

NOTE L. STOCKHOLDERS' EQUITY

PREFERRED STOCK

Shares of preferred stock may be issued from time to time in one or more series. The Genzyme Board may determine, in whole or in part, the preferences, voting powers, qualifications, and special or relative rights or privileges of any such series before the issuance of any such shares of that series. The Genzyme Board shall determine the number of shares constituting each series of preferred stock and each series shall have a distinguishing designation.

STOCK OFFERINGS

In 1997, Genzyme sold 4,000,000 shares of GTR Stock for net proceeds of $29.0 million.

STOCK SPLIT

All share and per share amounts herein have been restated to reflect the 2-for-1 split of shares of GGD Stock on July 25, 1996.

DIRECTORS' DEFERRED COMPENSATION PLAN

Genzyme's Directors' Deferred Compensation Plan allows each member of the Genzyme Board who is not also an officer, employee or consultant of Genzyme to defer receipt of all or a portion of the cash compensation payable to him or her as a director of Genzyme and receive either cash or stock in the future. Compensation may be deferred until the termination of services as a director or, subject to certain restrictions, such other date as may be specified by the director. All of the current directors of Genzyme, other than those directors who are also officers, employees or consultants of Genzyme, are eligible to participate in the plan and as of December 31, 1998, one of the directors has elected to participate in the plan. Genzyme has reserved 50,000 shares of GGD Stock, 100,000 shares of GTR Stock and 50,000 shares of GMO Stock to cover distributions of shares credited to stock accounts under the Directors' Deferred Compensation Plan (subject in each case to adjustments for stock splits, stock dividends, and certain transactions affecting Genzyme's capital stock). As of December 31, 1998, no shares of GGD Stock, GTR Stock, or GMO Stock credited to stock accounts under the Directors' Deferred Compensation Plan have been distributed to participants.

NOTE L. STOCKHOLDERS' EQUITY (CONTINUED)

SHARES RESERVED FOR ISSUANCE UNDER THE EQUITY PLANS, DIRECTORS' STOCK OPTION PLAN AND EMPLOYEE STOCK PURCHASE PLAN

At December 31, 1998, approximately 14,888,000 shares of GGD Stock, 5,253,000 shares of GTR Stock and 4,139,000 shares of GMO Stock were reserved for issuance under the Company's 1990 Equity Incentive Plan, as amended, 1997 Equity Plan, 1998 Director Stock Option Plan, 1990 Employee Stock Purchase Plan, as amended, and upon the exercise of outstanding warrants.

STOCK OPTIONS

Pursuant to the 1990 Equity Incentive Plan, as amended, and the 1997 Equity Plan, options may be granted to purchase an aggregate of 23,800,000 shares of GGD Stock, 5,300,000 shares of GTR Stock and 3,500,000 shares of GMO Stock. The plans allow the granting of stock options at not less than fair market value at date of grant, and stock appreciation rights, performance shares, restricted stock and stock units to employees and consultants of the Company, each with a maximum term of ten years. In addition, Genzyme has a 1998 Director Stock Option Plan pursuant to which nonstatutory stock options up to a maximum of 354,000 shares of GGD Stock, 200,000 shares of GTR Stock and 140,000 shares of GMO Stock are automatically granted at fair market value to members of the Genzyme Board upon their election or reelection as directors. For each year of a director's term of office, he or she receives an option to purchase 4,000 shares of GGD Stock and a number of GTR Stock and GMO Stock options with a market value equal to one-quarter of the market value of the stock subject to GGD Stock options. All options expire ten years after the initial grant date and generally vest over four years.

Stock option activity is summarized below:

	SHARES UNDER OPTION	WEIGHTED AVERAGE EXERCISE PRICE	EXERCISABLE
GGD STOCK:			
Outstanding at December 31, 1995	12,172,666	17.79	5,138,502
Granted	3,442,484	29.16	
Exercised	(906,041)	15.70	
Forfeited and cancelled	(643,626)	22.81	
Outstanding at December 31, 1996	14,065,483	20.48	6,505,835
Granted	2,083,936	29.86	
Exercised	(1,760,934)	16.25	
Forfeited and cancelled	(1,041,218)	23.77	
Outstanding at December 31, 1997	13,347,267	22.22	6,982,224
Granted	2,482,222	29.61	
Exercised	(3,319,203)	20.11	
Forfeited and cancelled	(917,556)	27.21	
Outstanding at December 31, 1998	11,592,730	24.00	5,579,267

NOTE L. STOCKHOLDERS' EQUITY (CONTINUED)

STOCK OPTIONS (CONTINUED)

GTR STOCK:			
Outstanding at December 31, 1995	1,985,237	8.66	449,257
Granted	819,142	12.88	
Exercised	(81,117)	5.23	
Forfeited and cancelled	(149,043)	9.50	
Outstanding at December 31, 1996	2,574,219	10.73	739,421
Granted	636,605	9.84	
Exercised	(100,407)	5.21	
Forfeited and cancelled	(333,655)	12.75	
Outstanding at December 31, 1997	2,776,762	10.50	1,084,532
Granted	996,019	5.44	
Exercised	(71,491)	4.83	
Forfeited and cancelled	(303,344)	10.47	
Outstanding at December 31, 1998	3,397,946	9.13	1,464,732

	SHARES UNDER OPTION	WEIGHTED AVERAGE EXERCISE PRICE	EXERCISABLE
GMO STOCK:			
Outstanding June 18, 1997	--		
Granted	826,334	7.00	
Outstanding at December 31, 1997	826,334	7.00	180,063
Granted	386,867	6.83	
Exercised	(886)	7.00	
Forfeited and cancelled	(54,530)	7.00	

Outstanding at December 31, 1998	1,157,785	6.96	391,044		

</TABLE>

The total exercise proceeds for all options outstanding at December 31, 1998 is approximately $278,271,000, $31,065,000 and $8,061,000 for GGD Stock, GTR Stock and GMO Stock, respectively. Information regarding the range of option prices as of December 31, 1998 is as follows:

GGD STOCK:

<TABLE>
<CAPTION>

RANGE OF EXERCISE PRICES	NUMBER OUTSTANDING AS OF 12/31/98	WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE	WEIGHTED AVERAGE EXERCISE PRICE	EXERCISABLE NUMBER AS OF 12/31/98	EXERCISABLE WEIGHTED AVERAGE EXERCISE PRICE
<S>	<C>	<C>	<C>	<C>	<C>
$ 4.82 - $15.14	2,526,171	4.10	$12.79	1,630,092	$11.72
15.19 - 24.88	2,452,083	5.12	20.48	1,978,770	20.24
25.00 - 28.00	3,146,767	8.27	27.44	590,030	26.76
28.06 - 30.63	2,875,941	8.04	30.37	1,300,498	30.35
30.65 - 47.88	591,768	9.15	37.19	79,877	33.81
$ 4.82 - $47.88	11,592,730	6.68	$24.00	5,579,267	$20.99

</TABLE>

NOTE L. STOCKHOLDERS' EQUITY (CONTINUED)

STOCK OPTIONS (CONTINUED)

GTR STOCK:

<TABLE>
<CAPTION>

RANGE OF EXERCISE PRICES	NUMBER OUTSTANDING AS OF 12/31/98	WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE	WEIGHTED AVERAGE EXERCISE PRICE	EXERCISABLE NUMBER AS OF 12/31/98	EXERCISABLE WEIGHTED AVERAGE EXERCISE PRICE
<S>	<C>	<C>	<C>	<C>	<C>
$ 2.31 - $ 4.75	868,267	7.42	$4.05	525,446	$4.73
4.81 - 6.50	722,966	8.29	6.31	283,109	6.13
6.63 - 10.75	710,681	8.74	9.27	235,408	9.67
10.88 - 17.50	1,042,951	7.14	14.62	391,748	13.28
17.63 - 25.75	53,081	7.09	21.75	29,021	21.41
$ 2.31 - $25.75	3,397,946	7.79	$9.13	1,464,732	$8.41

</TABLE>

GMO STOCK:

<TABLE>
<CAPTION>

RANGE OF EXERCISE PRICES	NUMBER OUTSTANDING AS OF 12/31/98	WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE	WEIGHTED AVERAGE EXERCISE PRICE	EXERCISABLE NUMBER AS OF 12/31/98	EXERCISABLE WEIGHTED AVERAGE EXERCISE PRICE
<S>	<C>	<C>	<C>	<C>	<C>
$2.31 - $3.75	11,467	9.94	$3.22	67	$3.75
7.00 - 7.00	1,146,318	8.98	7.00	390,977	7.00
$2.31 - $7.00	1,157,785	8.99	$6.96	391,044	$7.00

</TABLE>

EMPLOYEE STOCK PURCHASE PLAN

Genzyme's 1990 Employee Stock Purchase Plan, as amended, allows full-time employees, as defined in the plan, to purchase the Company's stock at 85% of fair market value. Under this plan, (i) 2,250,000 shares of GGD Stock are authorized for issuance, of which 388,048, 366,922 and 291,053 shares were issued in 1998, 1997 and 1996, respectively, (ii) 1,450,000 shares of GTR Stock are authorized for issuance, of which 515,936, 280,819 and 325,300 shares were issued in 1998, 1997 and 1996, respectively, and (iii) 500,000 shares of GMO Stock are authorized for issuance, none of which have been issued.

STOCK COMPENSATION PLANS

The Company applies APB Opinion 25 and related interpretations in accounting for its four stock-based compensation plans, the 1990 Equity Incentive Plan and the 1997 Equity Incentive Plan (both of which are stock option plans), the 1990 Employee Stock Purchase Plan, as amended, (a stock purchase plan), and the 1998 Director Stock Option Plan, and accordingly, no compensation expense has been recognized for options granted and shares purchased under the provisions of these plans for options granted to employees with an exercise price equal to fair market value. Had compensation expense for the stock-based compensation plans been determined based on the fair value at the grant dates for options granted and shares purchased under the plans consistent with the method of SFAS 123, net income (loss) and income (loss) per share would have been as follows (in the case of GMO, disclosure is presented for the years ended December 31, 1998 and 1997, as there were no stock options issued under the above mentioned plans prior to 1997):

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS, EXCEPT PER SHARE DATA)	DECEMBER 31, 1998	1997	1996
<S>	<C>	<C>	<C>
CONSOLIDATED:			
Net income (loss):			
As reported	$ 62,567	$ 13,629	$(72,817)
Pro forma	$ 43,986	$ (2,150)	$(86,293)

</TABLE>

NOTE L. STOCKHOLDERS' EQUITY (CONTINUED)

STOCK COMPENSATION PLANS (CONTINUED)

<TABLE>

<S>	<C>	<C>	<C>
GENZYME GENERAL:			
Net income (loss):			
As reported	$ 121,053	$ 77,447	$ (30,502)
Pro forma	$ 107,478	$ 65,440	$ (40,558)
Basic income (loss) per share:			
As reported	$ 1.53	$ 1.01	$ (0.45)
Pro forma	$ 1.36	$ 0.86	$ (0.59)
Diluted income (loss) per share:			
As reported	$ 1.48	$ 0.98	$ (0.45)
Pro forma	$ 1.31	$ 0.83	$ (0.59)
GENZYME TISSUE REPAIR:			
Net loss:			
As reported	$ (40,386)	$ (45,984)	$ (42,315)
Pro forma	$ (44,481)	$ (49,547)	$ (45,735)
Basic and diluted loss per share:			
As reported	$ (1.99)	$ (3.07)	$ (3.38)
Pro forma	$ (2.19)	$ (3.31)	$ (3.65)
GENZYME MOLECULAR ONCOLOGY:			
Net loss:			
As reported	$ (19,107)	$ (19,578)	--
Pro forma	$ (20,018)	$ (19,787)	--
Basic and diluted loss per share:			
As reported	$ (3.81)	$ (4.98)	--
Pro forma	$ (3.99)	$ (5.04)	--

</TABLE>

The effects of applying SFAS 123 in this pro forma disclosure are not likely to

be representative of the effects on reported net income for future years. SFAS 123 does not apply to awards granted prior to 1995, and additional awards are anticipated in future years.

The fair value of each option grant is estimated on the date of the grant using the Black-Scholes option-pricing model. In computing these pro forma amounts, Genzyme General has assumed a risk-free interest rate equal to approximately 5.59%, 5.96% and 6.37%, expected volatility of 44%, 42% and 45%, zero dividend yields and expected lives of four years for 1998, 1997 and 1996, respectively. The average fair value of the Genzyme General options granted during 1998, 1997 and 1996 is estimated as $12.87, $12.21 and $11.98, respectively, on the date of grant. In computing these pro forma amounts, GTR has assumed a risk-free interest rate equal to approximately 5.59%, 5.96% and 6.37%, expected volatility of 73%, 70% and 80% in 1996, zero dividend yields and expected lives of four years for 1998, 1997, and 1996, respectively. The average fair value of GTR stock options granted during 1998, 1997 and 1996 is estimated as $3.27, $5.66 and $9.23, respectively, on the date of grant. In computing these pro forma amounts, GMO has assumed a risk-free interest rate equal to approximately 5.59% and 5.96%, expected volatility of 70% and 45%, zero dividend yields and expected lives of four years for 1998 and 1997, respectively. The average fair value of the options exercisable for shares of GMO Stock granted during 1998 and 1997 is estimated as $3.92 and $2.97 on the date of grant.

NOTE L. STOCKHOLDERS' EQUITY (CONTINUED)

STOCK RIGHTS

Pursuant to the Company's shareholder rights plan, each outstanding share of GGD Stock, GTR Stock and GMO Stock also represents one preferred stock purchase right (a "GGD Stock Right", a "GTR Stock Right" and a "GMO Stock Right", respectively). Each GGD Stock Right, GTR Stock Right and GMO Stock Right, when it becomes exercisable, will entitle the registered holder to purchase from Genzyme (i) in the case of a GGD Stock Right, one one-hundredth of a share of Series A Junior Participating Preferred Stock at a purchase price of $26.00, subject to adjustment, (ii) in the case of a GTR Stock Right, one one-hundredth of a share of Series B Junior Participating Preferred Stock at a purchase price of $25.00, subject to adjustment, and (iii) in the case of a GMO Stock Right, one one-hundredth of a share of Series C Junior Participating Preferred Stock at a purchase price of $21.00, subject to adjustment. The shareholder rights plan was renewed by the Genzyme Board in March 1999. See Note S., "Subsequent Events," below.

WARRANTS

Genzyme sold three warrants (the "Front-End Warrant", the "NDA Warrant", and the "Callable Warrant"), to purchase Genzyme common stock to CMDF for an aggregate purchase price of $1.0 million (Canadian). Each warrant is initially exercisable for up to 40,000 shares of GGD Stock and will be converted automatically upon the closing date of the first underwritten public offering of GMO Stock (the "Qualified Public Offering") into warrants to purchase shares of GMO Stock as follows:

The Front-End Warrant is exercisable immediately and will terminate upon the earlier of the exercise of the Mandatory Purchase Right by CMDF or July 31, 2002. The exercise price of the Front-End Warrant is $30.18 per share of GGD Stock (120% of $25.15) and, upon conversion following the Qualified Public Offering, will be equal to 120% of a defined conversion price per share of GMO Stock.

The NDA Warrant will be exercisable during the one-year period following the filing of the first new drug application with the FDA for a product developed through the collaboration and will terminate upon the earliest of the exercise of the Mandatory Purchase Right by CMDF, the expiration of the Purchase Option or July 31, 2007. The exercise price of the NDA Warrants is $30.18 per share of GGD Stock and, upon conversion following the Qualified Public Offering, will be equal to 120% of a defined conversion price per share of GMO Stock.

The Callable Warrant will terminate upon the earliest of the exercise of the Mandatory Purchase Right by CMDF, the exercise of the Purchase Option or July 31, 2005 and will be exercisable during the three-year period following the expiration of the Purchase Option. The exercise price of the Callable Warrant per share of GGD Stock will be equal to the average of the closing sale prices of GGD Stock on the Nasdaq National Market for the 20 trading days ending on the expiration date of the Purchase Option and, upon conversion following the Qualified Public Offering, will be equal to the average of closing sale prices

of GMO Stock on the Nasdaq National Market for the 20 trading days ending on the expiration date of the Purchase Option.

In 1992 and 1995, Genzyme issued certain warrants which, when exercised between December 16, 1994 and July 10, 1997, grant the holders two shares of GGD Stock and .0675 share of GTR Stock (after giving effect to the 2-for-1 split of shares of GGD Stock in July 1996) for each warrant exercised. When exercised after July 10, 1997, holders received two shares of GGD Stock and .0975 shares of GTR Stock. These warrants were granted in exchange for the receipt of options to purchase the callable common stock of Neozyme II and in connection with Genzyme's purchase of the publicly-held shares of IG in exchange for IG warrants.

NOTE L. STOCKHOLDERS' EQUITY (CONTINUED)

WARRANTS (CONTINUED)

Warrant activity related to GGD Stock is summarized below:

<TABLE>
<CAPTION>

	WARRANTS	WARRANT PRICE
<S>	<C>	<C>
Outstanding at December 31, 1995	5,597,241	16.01 -- 42.67
Exercised	(3,170,551)	16.01 -- 38.25
Tendered	(2,385,686)	
Expired	(5,685)	16.01 -- 38.25
Outstanding at December 31, 1996	35,319	16.01 -- 44.20
Granted	120,000	30.18
Exercised	(19,340)	44.20
Outstanding at December 31, 1997	135,979	16.01 -- 44.20
Exercised	(13,019)	42.67 -- 44.20
Expired	(2,960)	44.20
Outstanding at December 31, 1998	120,000	30.18

</TABLE>

GTR DESIGNATED SHARES

Pursuant to the Charter, GTR Designated Shares are authorized shares of GTR Stock which are not issued and outstanding, but which the Genzyme Board may from time to time issue, sell or otherwise distribute without allocating the proceeds or other benefits of such issuance, sale or distribution to GTR. GTR Designated Shares are not eligible to receive dividends and cannot be voted by Genzyme. GTR Designated Shares are created in certain circumstances when cash or other assets are transferred from Genzyme General to GTR. The number of GTR Designated Shares will be decreased by: the number of shares of GTR Stock issued by Genzyme, the proceeds of which are allocated to Genzyme General; the number of shares of GTR Stock issued as a dividend to holders of GGD Stock; and the number of shares of GTR Stock issued upon the conversion of convertible securities, the proceeds of which are attributed to Genzyme General. In addition, the number of GTR Designated Shares can be increased as a result of certain interdivision transactions.

Genzyme had the option to allocate to GTR, at $10.00 per GTR Designated Share, up to $30.0 million from Genzyme General (the "GTR Purchase Option") in exchange for a maximum of 3,000,000 GTR Designated Shares to be issued in connection with the exercise of the GTR Purchase Option. In each of June 1996 and 1997, pursuant to the terms of the GTR Purchase Option, the Genzyme Board elected to allocate $10.0 million in cash from Genzyme General to GTR in exchange for 1,000,000 GTR Designated Shares, which were reserved for issuance at the sole discretion of the Genzyme Board for the benefit of the Genzyme General stockholders. There was no such allocation in 1998. The GTR Purchase Option has expired.

GTR EQUITY LINE

In October 1996, the Genzyme Board approved the GTR Equity Line with an initial allocation of up to $20.0 million in cash from Genzyme General to GTR to provide initial funding for GTR's joint venture with Diacrin, of which $7.0 million of cash was allocated to GTR in 1997 in exchange for 721,455 GTR Designated Shares.

In May 1998, the Genzyme Board increased the amount available under the GTR Equity Line from $13.0 million to $50.0 million. Under the GTR Equity Line, Genzyme Tissue Repair may draw down funds as needed each fiscal quarter in exchange for GTR Designated Shares. The rate of exchange will be determined by dividing the amount drawn under the line of credit by the average market value of one share of GTR Stock during the 20 trading days prior to the date the amount is drawn under the line of credit. As of December 31, 1998, GTR had not yet drawn any funds from the GTR Equity Line.

NOTE L. STOCKHOLDERS' EQUITY (CONTINUED)

GTR DESIGNATED SHARES (CONTINUED)

DISTRIBUTION OF GTR DESIGNATED SHARES

If, as of May 31 of each year starting May 31, 1997, the number of GTR Designated Shares on such date (not including those reserved for issuance with respect to Genzyme General convertible securities as a result of anti-dilution adjustments required by the terms of such instruments by the Genzyme Board) exceeds 10% of the number of shares of GTR Stock then issued and outstanding, then substantially all GTR Designated Shares will be distributed to holders of record of GGD Stock, subject to reservation of a number of such shares equal to the sum of (a) the number of GTR Designated Shares reserved for issuance upon the exercise or conversion of Genzyme General convertible securities and (b) the number of GTR Designated Shares reserved by the Genzyme Board as of such date for sale not later than six months after such date, the proceeds of which sale will be allocated to Genzyme General.

On June 30, 1997, the Genzyme Board declared a dividend of approximately 2,686,000 GTR Designated Shares. Of these shares, 2,292,000 shares of GTR Stock, with a fair market value of $22.9 million, were issued to holders of GGD Stock and 394,000 shares of GTR Stock were reserved for issuance upon the exercise of GGD Stock options and warrants outstanding on June 11, 1997.

There was no distribution of GTR Designated Shares in 1998.

GTR Designated Share activity is summarized below:

<TABLE>
<CAPTION>

	GTR DESIGNATED SHARES
<S>	<C>
Balance at December 31, 1995	1,286,908
Stock options exercised	(42,728)
Stock warrants exercised	(426,984)
Convertible notes conversion	(255,249)
Exercise of GTR Purchase Option	1,000,000
Increase from equity line	231,645
Balance at December 31, 1996	1,793,592
Stock options exercised	(103,729)
Stock warrants exercised	(2,617)
Exercise of GTR Purchase Option	1,000,000
Increase from equity line	489,810
Dividend distribution	(2,292,003)
Balance at December 31, 1997	885,053
Stock options exercised	(167,064)
Stock warrants exercised	(1,721)
Balance at December 31, 1998	716,268

</TABLE>

GENZYME CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE L. STOCKHOLDERS' EQUITY (CONTINUED)

GMO DESIGNATED SHARES

Pursuant to the Charter, GMO Designated Shares are authorized shares of GMO Stock which are not issued and outstanding, but which the Genzyme Board may from time to time issue, sell or otherwise distribute without allocating the proceeds or other benefits of such issuance, sale or distribution to GMO. GMO Designated Shares are not eligible to receive dividends and cannot be voted by Genzyme. GMO Designated Shares are created in certain circumstances when cash or other assets are transferred from Genzyme General to GMO. The Genzyme Board may issue the GMO Designated Shares as a stock dividend to the holders of GGD Stock or it may sell such shares in a public or private sale and allocate all of the proceeds to Genzyme General. The number of GMO Designated Shares will be decreased by: the number of shares of GMO Stock issued by Genzyme, the proceeds of which are allocated to Genzyme General; the number of shares of GMO Stock issued as a dividend to holders of GGD Stock; and the number of shares of GMO Stock issued upon the conversion of convertible securities, the proceeds of which are attributed to Genzyme General. In addition, the number of GMO Designated Shares can be increased as a result of certain interdivision transactions.

When Genzyme acquired PharmaGenics, the $2.5 million of debt outstanding under a credit facility which Genzyme had made available to PharmaGenics to fund PharmaGenics's documented operating costs became a liability allocated to GMO (the "PGI Credit Facility"). In September 1998, the Genzyme Board approved the exchange of the PGI Credit Facility to Genzyme General in the principal amount of $2,450,000, plus accrued interest of $246,080, for approximately 386,000 GMO Designated Shares. The number of GMO Designated Shares created as a result of the exchange was based on the fair value of the GMO Stock ($7.00) as determined by the Genzyme Board. The amount of the note and the accrued interest was reclassified to division equity upon the exchange.

GMO EQUITY LINE OF CREDIT

In 1997, the Genzyme Board approved the allocation of up to $25.0 million in cash from Genzyme General to GMO (the "GMO Equity Line"), subject to a dollar-for-dollar reduction by the proceeds of outside financing received by GMO. As a result of the issuance of the GMO Debentures in August 1997, the amount available under the GMO Equity Line was reduced to $5.0 million. In September 1998, GMO made a draw of the remaining $5.0 million available under the GMO Equity Line, thus reducing the amount available under the GMO Equity Line to zero. Approximately 714,000 GMO Designated Shares were reserved for issuance in connection with this draw.

In August 1998, the Genzyme Board approved the allocation of up to an additional $30.0 million in cash to GMO in exchange for an increase in the number of GMO Designated Shares. As of December 31, 1998, GMO had not yet drawn any funds under this arrangement.

If, as of November 30, of each year starting November 30, 1999 the number of GMO Designated Shares on such date (not including those reserved for issuance with respect to Genzyme General convertible securities as a result of anti-dilution adjustments required by the terms of such instruments by the Genzyme Board) exceeds 10% of the number of shares of GMO Stock then issued and outstanding, then substantially all GMO Designated Shares will be distributed to holders of record of GGD Stock, subject to reservation of a number of such shares equal to the sum of (a) the number of GMO Designated Shares reserved for issuance upon the exercise or conversion of Genzyme General convertible securities and (b) the number of GMO Designated Shares reserved by the Genzyme Board as of such date for sale not later than six months after such date, the proceeds of which sale will be allocated to Genzyme General.

In November 1998, Genzyme distributed approximately 8,717,000 shares of GMO Stock to holders of GGD Stock and released from escrow approximately 3,929,000 shares of GMO Stock held by the former PharmaGenics shareholders.

GENZYME CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE L. STOCKHOLDERS' EQUITY (CONTINUED)

GMO DESIGNATED SHARES (CONTINUED)

GMO Designated Shares activity is summarized below:

<TABLE>
<CAPTION>

	GMO DESIGNATED SHARES
<S>	<C>
Established at merger with PharmaGenics	6,000,000
Balance at December 31, 1997	6,000,000
GMO Debenture exchange	3,028,571
PharmaGenics credit facility exchange	385,972
Increase from equity line	714,286
Dividend distribution	(8,717,485)
Warrants exercised	(1,352)
Outstanding at December 31, 1998	1,409,992

</TABLE>

NOTE M. RESEARCH AND DEVELOPMENT AGREEMENTS

Revenues from research and development agreements with related parties include the following:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997	1996
<S>	<C>	<C>	<C>
Fees for research and development activities:			
GTC	$3,568	$8,041	$ 3,212
StressGen/Genzyme LLC	2,177	315	--
Neozyme II	--	--	19,799
	$5,745	$8,356	$23,011

</TABLE>

The Company allocates all research and development agreements with unconsolidated affiliates to Genzyme General, GTR or GMO based on the business to which the research relates.

GENZYME GENERAL:

GENZYME DEVELOPMENT PARTNERS, L.P.

Genzyme Development Corporation II, a wholly-owned subsidiary of Genzyme, is the General Partner of GDP, a Delaware limited partnership which was formed in September 1989 to develop, produce and derive income from the sale of the Sepra Products.

The Company has an option (the "GDP Purchase Option") to purchase all of the outstanding partnership interests in GDP for a payment of approximately $26.0 million in cash, Genzyme common stock or a combination thereof determined at Genzyme's sole discretion, plus future royalty payments. The GDP Purchase Option is exercisable during the 90-day period commencing on August 31, 2000, but such commencement date will be accelerated to the last day of the first month in which GDP has received distributions from GVII (described below) in an aggregate amount of at least $5.5 million. Genzyme elected without obligation to fund the research and development activities of GDP using Genzyme General cash and spent approximately $6.7 million, $7.3 million and $6.0 million on GDP's programs in 1998, 1997 and 1996, respectively. The Company has agreed to fund GDP's research and development programs and general and administrative expenses through 1999 but, as general partner, believes that additional funds will be required to complete the development, clinical testing and commercialization of GDP's products.

NOTE M. RESEARCH AND DEVELOPMENT AGREEMENTS (CONTINUED)

GENZYME GENERAL (CONTINUED):

GDP (CONTINUED)

The Company and GDP formed GVII, in September 1989 for the purpose of manufacturing and marketing the Sepra Products in the United States and Canada for use in human clinical trials or human surgical procedures. In December 1994, the Company allocated its interests in GVII to Genzyme General. GDP has contributed its technology and $1.7 million to GVII and Genzyme General has contributed its agreement to manufacture and market the Sepra Products, to make non-interest bearing loans to the Joint Venture in the amount of any working capital deficiency, and to make capital contributions to the extent deemed necessary by the two venturers in connection with the business of GVII. GVII began to engage in active business after receipt of FDA marketing approval for Seprafilm(R) in August 1996. For the years ended December 31, 1998, 1997 and 1996, GVII incurred net losses of $4.8 million, $2.3 million and $2.5 million, respectively, primarily attributable to costs associated with the introduction of the Sepra Products to the healthcare marketplace. The results of operations and financial position of GVII are consolidated into Genzyme's financial statements.

GTC

The disclosures related to the research and development agreement between Genzyme and GTC are included in Note I., "Investments" above.

RENAGEL LLC, BIOMARIN/GENZYME LLC, PHARMING/GENZYME LLC AND ATIII LLC:

The disclosures related to Genzyme General's participation in RenaGel LLC, BioMarin/Genzyme LLC, Pharming/Genzyme LLC and ATIII LLC, joint ventures with GelTex, BioMarin, Pharming and GTC, respectively, are included in Note I., "Investments" above.

GENZYME TISSUE REPAIR:

The disclosures related to GTR's participation in Diacrin/Genzyme LLC, a joint venture, are included in Note I., "Investments" above.

GENZYME MOLECULAR ONCOLOGY:

The disclosures related to GMO's participation in StressGen/Genzyme LLC, a joint venture, are included in Note I., "Investments" above.

NOTE N. COMMITMENTS AND CONTINGENCIES

From time to time the Company has been subject to legal proceedings and claims arising in connection with its business. At December 31, 1998, there were no asserted claims against the Company which, in the opinion of management, if adversely decided would have a material adverse effect on the Company's financial position and results of operations.

NOTE O. INCOME TAXES

Income (loss) before income taxes and the related income tax expense (benefit) are as follows for the year ended December 31:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997	1996
<S>	<C>	<C>	<C>
Domestic (1)	$ 92,923	$ 16,907	$(79,930)
Foreign	9,514	8,822	10,308
Total	$102,437	$ 25,729	$(69,622)

</TABLE>

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997	1996
<S>	<C>	<C>	<C>
Currently payable:			

Federal	$ 32,501	$ 11,344	$ 23,174
State	6,375	1,754	4,689
Foreign	4,016	2,971	3,616
Total current	42,892	16,069	31,479
Deferred:			
Federal	(2,180)	(3,723)	(28,448)
State	(842)	(246)	164
Total deferred ...	(3,022)	(3,969)	(28,284)
Provision for income taxes .	$ 39,870	$ 12,100	$ 3,195

</TABLE>

---

(1) Includes $7.0 million in charges for purchased research and development and acquisition expenses in 1997, and $130.6 million in charges for purchased research and development in 1996.

Provisions for income taxes were at rates other than the U.S. Federal statutory tax rate for the following reasons:

<TABLE>
<CAPTION>

	1998	1997	1996
<S>	<C>	<C>	<C>
Tax at U.S. statutory rate	35.0 %	35.0%	35.0%
Losses in less than 80%-owned subsidiaries with no current tax benefit	1.7	3.1	1.4
State taxes, net	3.5	3.0	5.2
Foreign sales corporation	(3.2)	(6.7)	(3.6)
Nondeductible amortization	4.2	10.6	3.6
Benefit of tax credits	(3.9)	(7.7)	--
Other, net	0.5	(2.6)	3.7
Nondeductible interest	1.1	2.2	--
Utilization of operating loss carryforwards	--	--	(4.5)
Effective tax rate before certain charges - expense	38.9	36.9	40.8
Gross charge for purchased research and development net of related tax benefits	0.0	10.1	(36.3)
Effective tax rate -- expense	38.9%	47.0%	4.5%

</TABLE>

GENZYME CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE O. INCOME TAXES

At December 31 the components of net deferred tax assets were as follows:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997
<S>	<C>	<C>
Deferred tax assets:		
Net operating loss carryforwards	$ 6,853	$ 7,702
Tax credits	3,714	6,514
Deferred gain	2,002	2,237
Intangible amortization	42,717	46,391
Investments in unconsolidated subsidiary	3,108	1,323
Realized and unrealized capital losses	10,139	10,182
Reserves,accruals and other	44,509	27,328
Gross deferred tax asset	113,042	101,677
Valuation allowance	(16,700)	(14,914)
Net deferred tax asset	96,342	86,763
Deferred tax liabilities:		
Depreciable assets	(28,479)	(23,174)
Intangible amortization	(3,861)	(6,509)

Net deferred tax asset	$ 64,002	$ 57,080

</TABLE>

Due to uncertainty surrounding the realization of certain favorable tax attributes primarily relating to capital losses related to the purchase of in-process research and development, the Company placed a valuation allowance of $16.7 million and $14.9 million for December 31, 1998 and 1997, respectively, against otherwise recognizable deferred tax assets.

Realization of the net deferred tax assets is dependent on generating sufficient taxable income prior to the expiration of loss carryforwards. Although realization is not assured, management believes that it is more likely than not that all of the net deferred tax assets will be realized. The amount of the deferred tax asset considered realizable, however, could be reduced in the near term if estimates of future taxable income during the carryforward period are reduced.

At December 31, 1998 the Company had U.S. net operating loss and tax credit carryforwards of $19.6 million and $3.7 million, respectively, for income tax purposes. These loss carryforwards expire from 2003 to 2011. Utilization of net operating loss carryforwards may be limited under Section 382 of the Internal Revenue Code of 1986, as amended (the "Code"). Tax credits of $3.7 million carryforward indefinitely.

NOTE P. BENEFIT PLANS

Genzyme has a domestic employee savings plan under Section 401(k) of the Code covering substantially all employees of the Company with the exception of employees of DSP who have a separate retirement savings plan. The plan allows employees to make contributions up to a specified percentage of their compensation, a portion of which are matched by the Company. The Company contributed $3.8 million, $2.3 million and $1.1 million to the 401(k) Plan in 1998, 1997 and 1996, respectively.

The Company has defined-benefit pension plans covering substantially all the employees of DSP and certain of Genzyme's foreign subsidiaries. Pension expense for 1998, 1997 and 1996 was approximately $1.1 million, $1.1 million and $0.6 million, respectively. Pension costs are funded as accrued. Actuarial and other disclosures regarding the plans are not presented because they are not material.

NOTE Q. SEGMENT INFORMATION

Genzyme reportable segments are strategic business units or divisions that offer different products and services. Genzyme has five reportable segments:

- The Therapeutics business unit, which develops, manufactures and distributes human therapeutic products for significant unmet medical needs. The business derives substantially all of its revenue from Cerezyme(R) enzyme and Ceredase(R) enzyme sales.

- The Surgical Products business unit, which commenced operations in July 1996 upon the acquisition of DSP, develops, manufactures and markets surgical products for three principal business lines: (i) cardiovascular surgery; (ii) general surgery; and (iii) plastic surgery.

- The Diagnostic Products business unit, which provides diagnostic products to niche markets focusing on in vitro diagnostics.

- GTR develops and markets biological products for orthopedic injuries, such as cartilege repair, and severe burns.

- GMO is developing cancer products, with a focus on therapeutic vaccines and angiogenesis inhibitors.

Information concerning the operations in these reportable segments is as follows (dollars in thousands):

<TABLE>
<CAPTION>

	1998	1997	1996
<S>	<C>	<C>	<C>
REVENUES:			
Therapeutics	$ 413,645	$ 332,712	$ 264,588

Surgical Products	103,958	100,835	50,715
Diagnostic Products	65,683	66,288	65,789
GTR	17,117	10,856	7,312
GMO	19,407	782	--
Other	85,846	86,927	107,162
Eliminations/Adjustments	3,679	10,441	23,188
Total	$ 709,335	$ 608,841	$ 518,754
DEPRECIATION AND AMORTIZATION EXPENSE:			
Therapeutics	$ 10,862	$ 10,054	$ 1,700
Surgical Products	8,449	8,220	4,520
Diagnostic Products	4,715	4,540	7,487
GTR	1,757	2,482	935
GMO	12,354	5,245	--
Other	11,470	7,410	7,161
Eliminations/Adjustments	9,262	13,013	8,389
Total	$ 58,869	$ 50,964	$ 30,192
EQUITY IN NET LOSS OF UNCONSOLIDATED AFFILIATES:			
Therapeutics	$ (12,480)	$ (2,310)	$ --
Surgical Products	--	--	--
Diagnostic Products	--	--	--
GTR	(7,674)	(6,719)	(1,727)
GMO	(1,647)	(258)	--
Other	(107)	(71)	(174)
Eliminations/Adjustments	(7,098)	(2,900)	(3,472)
Total	$ (29,006)	$ (12,258)	$ (5,373)

</TABLE>

<TABLE>
<CAPTION>

	1998	1997	1996
<S>	<C>	<C>	<C>
INCOME TAX (EXPENSE) BENEFIT:			
Therapeutics	$ (76,606)	$ (61,389)	$ (57,145)
Surgical Products	19,653	10,210	18,514
Diagnostic Products	(13,755)	(1,409)	(2,430)
GTR	--	--	--
GMO	2,647	1,092	--
Other	2,134	8,658	621
Eliminations/Adjustments	26,057	30,738	37,245
Total	$ (39,870)	$ (12,100)	$ (3,195)
NET INCOME:			
Therapeutics	$ 120,832	$ 104,527	$ 82,232
Surgical Products	(31,000)	(17,384)	(26,642)
Diagnostic Products(1)	21,694	2,400	3,499
GTR	(40,386)	(45,984)	(42,315)
GMO	(19,107)	(19,578)	--
Other	(3,367)	(14,741)	(895)
Eliminations/Adjustments	13,901	4,389	(88,696)
Total	$ 62,567	$ 13,629	$ (72,817)
SEGMENT ASSETS:			
Therapeutics	$ 326,305	$ 315,775	
Surgical Products	277,578	282,379	
Diagnostic Products	49,430	54,132	
GTR	18,954	57,226	
GMO	35,952	53,801	
Other	94,930	92,605	
Eliminations/Adjustments	887,405	439,535	
Total	$1,690,554	$1,295,453	

</TABLE>

(1) Includes a gain on sale of product line in 1998 totaling $31.2 million.

The amounts in the category Other consist of amounts derived from Genzyme's genetic testing and Pharmaceuticals business units. The difference between the reportable segment's Net Income and Segment Assets and the Consolidated Net

Income and the Consolidated Total Assets for Genzyme is included in Eliminations/Adjustments. The amounts in Eliminations/Adjustments for the category Net Income primarily consists of interest income and interest expense and certain other income and expense amounts not allocated to the segments. Eliminations/Adjustments in the category Net Income for 1996 included a 106.5 million charge for in-process technology.

Segment assets for reportable segments includes the following: Accounts Receivable, Inventory, certain Fixed Assets and certain Intangible Assets. Therefore, the amounts in Eliminations/Adjustments for Segment Assets consist of the following:

	1998	1997
Cash, cash equivalents, short and long term investments	$575,729	$246,341
Intangibles, net	40,079	15,973
Property, plant and equipment, net	133,995	96,650
Investment in equity securities	51,977	30,047
Other	85,625	50,524
Total Eliminations/Adjustments	$887,405	$439,535

Genzyme operates in the healthcare industry and primarily manufactures and markets its products in two major geographic areas - the United States and Europe. Genzyme's principal manufacturing facilities are located in the United States, United Kingdom, Switzerland and Germany. Genzyme purchases products from its British and Swiss subsidiaries for sale to customers in the United States. Transfer prices from the foreign subsidiaries are intended to allow Genzyme to produce profit margins commensurate with its sales and marketing effort. Genzyme's Netherlands subsidiary is the primary European distributor of Genzyme's therapeutic products.

Certain information by geographic area follows (dollars in thousands):

<TABLE>
<CAPTION>

	Revenues	Long-Lived Assets
<S>	<C>	<C>
1998		
United States	$485,864	$ 970,898
Other	223,471	57,247
Total	$709,335	$1,028,145
1997		
United States	$446,991	$ 755,040
Other	161,850	54,349
Total	$608,841	$ 809,389
1996		
United States	$386,956	
Other	131,798	
Total	$518,754	

</TABLE>

Genzyme's results of operations are highly dependent upon the sales of Cerezyme(R) enzyme and Ceredase(R) enzyme. For the years ended December 31, 1998, 1997 and 1996, sales of Cerezyme(R) enzyme and Ceredase(R) enzyme represented 67%, 63% and 62% of total product sales. In 1998, 1997 and 1996, Genzyme marketed Cerezyme(R) enzyme and Ceredase(R) enzyme directly to physicians, hospitals and treatment centers, and sold products representing approximately 12%, 18% and 12%, respectively, of net revenue to an unaffiliated distributor. The credit risk associated with trade receivables is mitigated due to the large number of customers and their broad dispersion over different industries and geographic areas.

NOTE R. QUARTERLY RESULTS (UNAUDITED)

Summarized quarterly financial data (in thousands of dollars except per share amounts) for the years ended December 31, 1998 and 1997 are displayed in the following table.

<TABLE>
<CAPTION>

	1ST QUARTER	2ND QUARTER	3RD QUARTER	4TH QUARTER
<S>	<C>	<C>	<C>	<C>
1998				
Net revenue	$ 160,551	$ 174,874	$ 173,394	$ 200,516
Gross profit	99,434	111,436	87,142	130,802
Net income (loss) (1)	7,784	13,096	14,967	26,720
Income (loss) per share:				
Attributable to GGD Stock:				
Basic	0.32	0.40	0.41	0.40
Diluted	0.31	0.39	0.40	0.39
Attributable to GTR Stock:				
Basic and diluted	(0.57)	(0.52)	(0.47)	(0.44)
Attributable to GMO Stock:				
Basic	(1.66)	(1.90)	(2.06)	0.36
Diluted	(1.66)	(1.90)	(2.06)	0.22
1997				
Net revenue	$ 146,593	$ 150,268	$ 152,094	$ 159,886
Gross profit	86,215	90,973	94,466	72,114
Net income (loss) (2)	9,367	4,269	9,557	(9,564)
Income (loss) per share:				
Attributable to GGD Stock:				
Basic	0.28	0.31	0.32	0.11
Diluted	0.27	0.30	0.31	0.11
Attributable to GTR Stock:				
Basic and diluted	(0.90)	(0.86)	(0.72)	(0.64)
Attributable to GMO Stock:				
Basic and diluted			(1.00)	(1.69)
Pro forma attributable to GMO Stock (3):				
Basic and diluted	(0.16)	(2.14)		

</TABLE>

---

(1) Includes pre-tax charges in the third quarter of 1998 of $26.9 million resulting from certain other charges (see Note B., "Other Charges" above) and a pre-tax gain on the sale of the research products business assets of $31.2 million, also recorded in the third quarter of 1998 (see Note C., "Sale of Research Products Business Assets" above).

(2) Includes pre-tax charges in the second quarter of 1997 of $7.0 million respectively for acquired incomplete technology (see Note D., "Acquisitions" above). Also includes pre-tax charges in the fourth quarter of 1997 of $29.2 million related to certain other charges recorded in December 1997 (see Note B., "Other Charges" above).

(3) Pro forma net loss per share data is presented for GMO Stock for the first and second quarters of 1997 as there were no shares of GMO Stock outstanding prior to June 18, 1997. In each such quarter, approximately 3,929,000 shares of GMO Stock, which represents the shares of GMO Stock issued to effect the merger with PharmaGenics, were used for the pro forma loss per share calculation.

NOTE S. SUBSEQUENT EVENTS

In March 1999, Genzyme announced that it intends to create a separate division, with its own series of common stock, for the existing surgical products business that is currently part of Genzyme General, subject to approval of the Genzyme Board.

In March 1999, Genzyme announced it plans to reallocate Genzyme's interest in Diacrin/Genzyme LLC from GTR to Genzyme General. The transfer of the interest in Diacrin/Genzyme LLC is subject to the approval of GTR's shareholders.

In March 1999, the Genzyme Board renewed Genzyme's shareholder rights plan, which expired on March 28, 1999. Under the renewed plan, the exercise prices for the GGD Stock Rights, GTR Stock Rights and GMO Stock Rights are $300.00, $26.00 and $26.00, respectively.

REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and Stockholders of Genzyme Corporation:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, of stockholders' equity and of cash flows present fairly, in all material respects, the financial position of Genzyme Corporation and its subsidiaries 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. In addition, in our opinion, the financial statement schedule presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. These financial statements and financial statement schedule are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements and financial statement schedule based on our audits. We conducted our audits of these statements in accordance with generally accepted auditing standards which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and 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.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

Boston, Massachusetts
February 23, 1999

GENZYME CORPORATION AND SUBSIDIARIES
SCHEDULE II -- VALUATION AND QUALIFYING ACCOUNTS
FOR THE YEARS ENDED DECEMBER 31, 1998, 1997 AND 1996

<TABLE>
<CAPTION>

COLUMN A	COLUMN B	COLUMN C		COLUMN D	COLUMN E
		ADDITIONS			
DESCRIPTION	BALANCE AT BEGINNING OF PERIOD	CHARGED TO COSTS AND EXPENSES	CHARGED TO OTHER ACCOUNTS	DEDUCTIONS	BALANCE AT END OF PERIOD
<S>	<C>	<C>	<C>	<C>	<C>
Year ended December 31, 1998:					
Allowance for doubtful accounts	$12,138,000	$ 5,482,000	$ --	$ 3,740,000	$13,880,000
Inventory Reserve	$23,339,200	$ 6,508,000	$ --	$17,816,000	$12,031,200
Year ended December 31, 1997:					
Allowance for doubtful accounts	$16,508,400	$ 2,835,000	$ --	$ 7,205,400	$12,138,000
Inventory Reserve	$ 7,674,200	$19,505,000(1)	--	$ 3,840,000	$23,339,200
Year ended December 31, 1996					
Allowance for doubtful accounts	$ 8,158,800	$ 8,331,600	$ 2,534,000(2)	$ 2,516,000(3)	$16,508,400
Inventory Reserve	$ 3,082,200	$ 5,853,600	$ --	$ 1,261,600	$ 7,674,200

</TABLE>

---

(1) Includes $13.4 million of strategic financial provisions (See Note B., "Other Charges" to the Consolidated Financial Statements).

(2) Reserve acquired in acquisition.

(3) Uncollectable accounts written off, net of recoveries.

EXHIBIT 13.2

FINANCIAL STATEMENTS

<TABLE>
<CAPTION>

</TABLE>

GENZYME TISSUE REPAIR
COMBINED SELECTED FINANCIAL DATA

The following Selected Financial Data reflects the results of operations and financial position of Genzyme Tissue Repair Division ("Genzyme Tissue Repair" or "GTR") and should be read in conjunction with the financial statements of GTR and accompanying footnotes.

<TABLE>
<CAPTION>
COMBINED STATEMENTS OF OPERATIONS DATA

(AMOUNTS IN THOUSANDS, EXCEPT PER SHARE AMOUNTS)	FOR THE YEARS ENDED DECEMBER 31,				
	1998	1997	1996	1995	1994
<S>	<C>	<C>	<C>	<C>	<C>
Revenues:					
Net service sales	$ 17,117	$ 10,856	$ 7,312	$ 5,220	$ 324
Operating costs and expenses:					
Cost of services sold	13,438	11,788	11,193	4,731	287
Selling, general and administrative	24,579	25,571	27,111	12,927	964
Research and development	10,432	10,845	10,880	10,938	3,638
Purchase of in-process research and development	-	-	-	-	11,215
Total operating costs and expenses	48,449	48,204	49,184	28,596	16,104
Operating loss	(31,332)	(37,348)	(41,872)	(23,376)	(15,780)
Other income (expenses):					
Equity in net loss of joint venture	(7,674)	(6,719)	(1,727)	-	-
Interest income	1,176	979	1,432	1,386	29
Interest expense	(2,556)	(2,896)	(148)	(40)	-
Total other income (expenses)	(9,054)	(8,636)	(443)	1,346	29
Net loss attributable to Genzyme Tissue Repair Stock	$(40,386)	$(45,984)	$(42,315)	$(22,030)	$(15,751)
Net loss per Genzyme Tissue Repair basic and diluted common share:					
Net loss	$(1.99)	$(3.07)	$(3.38)	$(2.28)	$(4.40)
Weighted average shares outstanding	20,277	14,976	12,525	9,659	3,578

</TABLE>

<TABLE>
<CAPTION>
COMBINED BALANCE SHEET DATA:

	DECEMBER 31,				
	1998	1997	1996	1995	1994
<S>	<C>	<C>	<C>	<C>	<C>
Cash and investments	$ 7,732	$31,915	$16,230	$47,573	$24,808
Working capital (deficit)	(6,461)	31,623	14,232	44,374	20,557
Total assets	18,954	57,226	42,593	52,649	28,435
Long-term debt	12,579	31,089	18,000	-	174
Division equity (deficit)	(16,396)	20,203	18,084	45,926	23,313

</TABLE>

There were no cash dividends paid.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF GENZYME TISSUE REPAIR'S FINANCIAL CONDITION AND RESULTS OF OPERATIONS

INTRODUCTION

This discussion contains forward-looking statements. These forward-looking statements represent the expectations of the management of Genzyme Tissue Repair and Genzyme Corporation ("Genzyme" of the "Company") as of the filing date of this Annual Report. The actual results for both GTR and Genzyme could differ materially from those anticipated by the forward-looking statements due to the risks and uncertainties described under the caption "Factors Affecting Future Operating Results" for GTR and Genzyme included elsewhere in this Annual Report. Stockholders and potential investors should consider carefully each of these risks and uncertainties in evaluating the financial condition and results of operations of GTR and Genzyme.

Genzyme provides separate financial statements for the Company and its subsidiaries on a consolidated basis and for each of Genzyme General Division ("Genzyme General"), GTR and Genzyme Molecular Oncology Division ("Genzyme Molecular Oncology" or "GMO"). The financial statements of each division include the financial position, results of operations and cash flows of programs and products allocated to the division under the Company's Restated Articles of Organization, as amended (the "Charter"), and the management and accounting policies adopted by Genzyme's Board of Directors (the "Genzyme Board") to govern the relationship of the divisions. The financial information of Genzyme General, GTR and GMO, taken together, include all accounts which comprise the consolidated financial information presented for Genzyme and its subsidiaries.

For purposes of financial statement presentation, all of the Company's programs and products are allocated to either Genzyme General, GTR or GMO. Notwithstanding this allocation, Genzyme continues to hold title to all of the assets and is responsible for all of the liabilities allocated to each of the divisions. Holders of Genzyme General Division Common Stock ("GGD Stock"), Genzyme Tissue Repair Division Common Stock ("GTR Stock") and Genzyme Molecular Oncology Division Common Stock ("GMO Stock") have no specific claim against the assets attributed to the division whose performance is associated with the series of stock they hold. Liabilities or contingencies of one division that affect Genzyme's resources or financial condition could affect the financial condition or results of operations of the other divisions.

Stockholders and potential investors should, therefore, read this discussion and analysis of GTR's financial position and results of operations in conjunction with the financial statements and related notes of GTR, the discussion and analysis of Genzyme's financial position and results of operations, and the consolidated financial statements and related notes of Genzyme, all of which are included with this Annual Report.

RESULTS OF OPERATIONS

The following discussion summarizes the key factors management considers necessary in reviewing GTR's combined results of operations. Detailed discussion and analysis of the consolidated results of operations of Genzyme and its subsidiaries, which include the combined results of Genzyme General, Genzyme Tissue Repair and Genzyme Molecular Oncology, are provided separately in this Annual Report under "Management's Discussion and Analysis of Genzyme Corporation and Subsidiaries' Financial Condition and Results of Operations".

1998 COMPARED TO 1997

REVENUES

Revenues in 1998 increased 58% to $17.1 million from $10.9 million in 1997. Sales of Carticel(R) autologous cultured chondrocytes ("Carticel(R) AuCC") were $11.0 million, compared to $6.6 million in 1997, an increase of 66%. The growth in sales of Carticel(R) AuCC is primarily attributable to increased acceptance by orthopedic surgeons and insurance companies, most notably following issuance by the U.S. Food and Drug Administration ("FDA") of a biologics license to GTR in August 1997 for Carticel(R) AuCC, and a continued increase in the number of orthopedic surgeons trained in the implantation procedure. Sales of Epicel(TM) skin grafts were $6.0 million in 1998, compared to $4.3 million in 1997, an increase of 42%. The increase was due to increased penetration of Epicel(TM) skin grafts into the catastrophic burn market. This increased market share resulted from increased surgeon awareness and from product improvements designed to ease the surgical procedure.

MARGINS AND OPERATING EXPENSES

GTR's costs of services sold were $13.4 million in 1998 as compared to $11.8 million in 1997. Revenues exceeded costs of services sold by 21% in 1998 and costs of services sold exceeded revenues by 9% in 1997. The improvement in service margins is primarily attributable to the higher sales volume and efficiencies gained in the manufacturing process.

Selling, general and administrative ("SG&A") expenses in 1998 were $24.6 million, a decrease of 4% from SG&A expenses of $25.6 million in 1997. The decrease is due primarily to a decrease in general and administrative expenses resulting from GTR's ongoing efforts to streamline operations. GTR incurs direct SG&A expenses as well as a SG&A charge, based on actual amounts incurred, from Genzyme General for SG&A work performed by Genzyme General on behalf of GTR. In 1998, $6.5 million of SG&A services were provided by Genzyme General, compared to $7.7 million in 1997, due to the decrease in corporate, legal, reimbursement and other organizational support required following FDA approval of Carticel(R) AuCC.

Research and development expenses were $10.4 million in 1998 compared to $10.8 million in 1997, a decrease of 4%. In 1998 and 1997, $7.7 million of the total research and development expenses incurred by GTR resulted from charges for research and development services provided by Genzyme General to GTR.

OTHER INCOME AND EXPENSES

Interest income was $1.2 million in 1998 as compared to $1.0 million in 1997, due primarily to higher average cash balances during the year.

Interest expense in 1998 was $2.6 million as compared to $2.9 million in 1997. Interest expense includes interest related to the addition of $11.4 million of debt from the issuance of $13 million in principal under a 5% note convertible into shares of GTR Stock (the "GTR Note") in February 1997 (see "Liquidity and Capital Resources" below), interest charges to complete the accretion of this debt to its face value and interest from borrowing under Genzyme's $225 million revolving credit facility with a syndicate of commercial banks.

On October 1, 1996, Diacrin/Genzyme LLC was established as a joint venture between GTR and Diacrin, Inc. to develop and commercialize products and processes using porcine fetal cells for the treatment of Parkinson's disease and Huntington's disease in humans. Under the terms of the joint venture agreement, GTR provided 100% of the initial $10.0 million of the funding requirements and will provide 75% of the next $40.0 million of funding requirements for products to be developed by the joint venture. Thereafter, all costs will be shared equally by the two parties. Profits from the joint venture will be shared equally by the two parties. For the year ended December 31, 1998, GTR had provided a total of $7.2 million of funding to the joint venture, and GTR realized net losses from the joint venture of $7.7 million in 1998 compared to $6.8 million in funding and net losses of $6.7 million from the joint venture in 1997. The Company's Chairman and Chief Executive Officer is a director of Diacrin.

1997 COMPARED TO 1996

REVENUES

Revenues in 1997 increased 49% to $10.9 million from $7.3 million in 1996. Sales of Carticel(R) AuCC were $6.6 million, compared to $3.1 million in 1996. The growth in sales of Carticel(R) AuCC is primarily attributable to increased acceptance by orthopedic surgeons and insurance companies, most notably following issuance by the FDA of a biologics license to GTR in August 1997 for Carticel(R) AuCC, and a continued increase in the number of orthopedic surgeons trained in the procedure utilizing the service. Sales of Epicel(TM) skin grafts were $4.3 million in 1997, compared to $4.2 million in 1996, due to a slight increase in the number of burn incidents requiring the treatment.

MARGINS AND OPERATING EXPENSES

GTR's costs of services sold were $11.8 million in 1997 as compared to

$11.2 million in 1996. Costs of services sold exceeded revenues by 9% in 1997 and 53% in 1996. The improvement in service margins is primarily attributable to the higher sales volume and efficiencies gained in the manufacturing process.

SG&A expenses in 1997 were $25.6 million, a decrease of 6% from SG&A expenses of $27.1 million in 1996. The decrease is due primarily to a decrease in expenses incurred in connection with the marketing of Carticel(R) AuCC in 1996. In 1997, $7.7 million of SG&A services were provided by Genzyme General, compared to $9.1 million in 1996 due to a decrease in expenses incurred in connection with the marketing of Carticel(R) AuCC in 1997.

Research and development expenses were $10.8 million in 1997 and $10.9 million in 1996. In 1997, $7.7 million of the total research and development expenses incurred by GTR resulted from charges for research and development services provided by Genzyme General to GTR, compared to $6.9 million in 1996.

OTHER INCOME AND EXPENSES

Interest income was $1.0 million in 1997 as compared to $1.4 million in 1996, due primarily to lower average cash balances during the year.

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Interest expense in 1997 was $2.9 million as compared to $0.1 million in 1996. Interest expense increased in 1997 as a result of $0.5 million of interest related to the addition of $11.4 million of debt from the GTR Note in February 1997, $1.1 million of interest charges to accrete this debt to its face value and additional interest from increases in borrowing under Genzyme's revolving credit facility in June 1996 and December 1996 of $8.0 million and $3.0 million, respectively (see "Liquidity and Capital Resources" below).

GTR realized net losses from Diacrin/Genzyme LLC of $6.7 million in 1997, and $1.7 million in 1996. For the year ended December 31, 1997, GTR provided $6.8 million of funding to the joint venture, compared to $1.9 million in funding to the joint venture in 1996.

LIQUIDITY AND CAPITAL RESOURCES

As of December 31, 1998, GTR had cash, cash equivalents and short-term investments of $7.7 million, a decrease of $24.2 million from December 31, 1997. In 1998, GTR used $34.4 million of cash for operations. Investing activities provided $19.3 million of cash which consisted of $16.5 million from the transfer of property to Genzyme General and $10.6 million from the sale and maturity of investments, offset by $7.2 million used to fund GTR's investment in Diacrin/Genzyme LLC. Financing activities provided $1.8 million of cash, of which $2.2 million consisted of proceeds from the exercise of stock options and stock issued under the employee stock purchase plan.

As of December 31, 1998, $18.0 million of funds allocated to GTR in December 1996 under Genzyme's revolving credit facility remained outstanding.

In 1996, Genzyme agreed to make available an unsecured, subordinated line of credit of up to $10.0 million to Diacrin that may be used by Diacrin under certain circumstances to fund capital contributions to Diacrin/Genzyme LLC. There have been no draws on this line of credit to date.

In 1996, the Genzyme Board approved the allocation of $20.0 million in cash from Genzyme General to GTR to provide initial funding for Diacrin/Genzyme LLC, of which $7.0 million had been allocated to GTR in exchange for 721,455 GTR Designated Shares as of December 31, 1997. GTR Designated Shares are shares of GTR Stock that are not issued and outstanding, but which the Genzyme Board may from time to time issue, sell or otherwise distribute without allocating the proceeds to GTR. During 1998, the Genzyme Board increased the amount available under the GTR Equity Line from $13.0 million to $50.0 million. Under the GTR Equity Line, GTR may draw down funds as needed each fiscal quarter in exchange for GTR Designated Shares. There were no amounts outstanding under the GTR Equity Line at December 31, 1998.

In February 1997, GTR raised $13.0 million through the private placement of the GTR Note. In November 1998, the holder of the GTR Note converted $600,000 in principal amount in exchange for 233,405 shares of GTR Stock. GTR paid $1.1 million of accrued interest in cash in connection with this conversion.

GTR believes its available cash and investments, and amounts available under the GTR Equity Line will be sufficient to finance planned operations and capital requirements through the end of 1999. GTR must raise significant additional capital in order to continue operations at current levels beyond 1999. GTR's plans to raise additional capital include the consideration of the sale of additional equity securities, strategic alliances with third parties to fund further developments and marketing of Carticel(R) AuCC and other business transactions that would generate capital resources to assure continuation of GTR's operations and research programs. If these initiatives are not successful, GTR may be required to delay, scale back or eliminate certain of its programs, or to license third parties to commercialize technologies or products that GTR

would otherwise undertake itself.

For a discussion of the demands, commitments and events that may affect the liquidity and capital resources of Genzyme Corporation including GTR, see also "Management's Discussion and Analysis of Genzyme Corporation and Subsidiaries' Financial Condition and Results of Operations -- Liquidity and Capital Resources" included in this Annual Report.

NEW ACCOUNTING PRONOUNCEMENTS, EURO, YEAR 2000 AND MARKET RISK

See "Management's Discussion and Analysis of Genzyme Corporation and Subsidiaries' Financial Condition and Results of Operations -- Liquidity and Capital Resources" included in this Annual Report.

FACTORS AFFECTING FUTURE OPERATING RESULTS

The future operating results of Genzyme Tissue Repair could differ materially from the results described above due to the risks and uncertainties described below and under the heading "Management's Discussion and Analysis of Genzyme Corporation and Subsidiaries' Financial Condition and Results of Operations -- Factors Affecting Future Operating Results" included in this Annual Report.

UNCERTAINTY OF COMMERCIAL SUCCESS OF CARTICEL(R) AUCC

Carticel(R) AuCC is used to treat knee cartilage damage. Carticel(R) AuCC involves a proprietary process for growing autologous (a patient's own) cartilage cells to replace those that are damaged or lost. Revenue from this service accounted for approximately 64% of Genzyme Tissue Repair's revenue during 1998 and 61% of its revenue during 1997. The commercial success of Carticel(R) AuCC will depend on many factors including:

POSITIVE RESULTS FROM POST-MARKETING STUDIES

As a condition to the FDA's approval of Carticel(R) AuCC, Genzyme Tissue Repair agreed to conduct two post-marketing studies to confirm its effectiveness. The first study will compare the long-term clinical effects of treatment with Carticel(R) AuCC to certain other available treatments. The second study will compare treatment with Carticel(R) AuCC against a placebo implant. If these studies demonstrate that treatment with Carticel(R) AuCC is not superior to the alternatives studied, the FDA may suspend or withdraw its approval of Carticel(R) AuCC. If Genzyme Tissue Repair cannot market Carticel(R) AuCC in the U.S., its results of operations will be adversely affected.

FDA APPROVAL OF SURGICAL INSTRUMENTATION

Genzyme Tissue Repair has developed surgical instruments to improve the Carticel(R) AuCC treatment procedure and plans to file for marketing approval with the FDA. It is anticipated that Genzyme Tissue Repair will begin marketing the instruments in early 2000. There can be no assurance, however, that the FDA will approve these instruments or that the instruments will improve the Carticel(R) AuCC treatment procedure or gain commercial acceptance.

AVAILABILITY OF THIRD PARTY REIMBURSEMENT

Since the FDA approved Carticel(R) AuCC, there has been a substantial increase in the number of third party payers who cover the treatment. A large number of third party payers, however, do not cover it. There can be no assurance that any third party payers will continue to cover Carticel(R) AuCC or that additional third party payers will begin to provide reimbursement.

Although FDA approval is a crucial factor in insurance plans deciding to cover new treatments, a number of major insurance plans also base such decisions on their own or third party evaluations of such treatments. One independent association that conducts such evaluations is the Blue Cross Blue Shield Association. The Blue Cross Blue Shield Association has determined that its Technology Assessment Committee does not believe that Carticel(R) AuCC meets all of its published criteria for new treatments. Genzyme Tissue Repair believes that Carticel(R) AuCC does in fact meet all of such criteria and is discussing the evaluation with the Blue Cross Blue Shield Association. While individual Blue Cross Blue Shield plans representing more than 50% of Blue Cross Blue Shield policyholders have provided policy coverage for Carticel(R) AuCC without a favorable evaluation by the Blue Cross Blue Shield Association, many Blue Cross Blue Shield plans have delayed approving Carticel(R) AuCC for coverage under their policies as a direct result of this unfavorable ruling. Since these remaining plans represent a significant percentage of insured lives in the United States, this ruling has delayed Genzyme Tissue Repair's access to a substantial portion of the market for Carticel(R) AuCC.

SUCCESS OF COMPETITIVE PRODUCTS

The process Genzyme Tissue Repair uses to grow a patient's cartilage cells is not patentable, and Genzyme does not yet have significant patent protection covering the other processes used in providing Carticel(R) AuCC. Genzyme Tissue Repair consequently cannot prevent a competitor from developing the ability to grow cartilage cells and from offering a product or service that is similar or superior to Carticel(R) AuCC. If a competitor were to develop such ability and obtain FDA approval for a competitive product or service, Genzyme Tissue Repair's results of operations could be adversely affected. Genzyme Tissue Repair is aware of at least two other companies that are growing autologous cartilage cells for cartilage repair in the European market. Additionally, several pharmaceutical and biotechnology companies are

developing alternative treatments for knee cartilage damage. One or more of these companies may develop products or services superior to Carticel(R) AuCC.

MARKET ACCEPTANCE BY ORTHOPEDIC SURGEONS

Genzyme Tissue Repair is marketing Carticel(R) AuCC to orthopedic surgeons. There can be no assurance that enough trained surgeons will incorporate Carticel(R) AuCC into their practice to make it commercially successful.

SIGNIFICANT TISSUE REPAIR DIVISION OPERATING LOSSES AND CASH REQUIREMENTS MAY REDUCE FLEXIBILITY IN OPERATIONS

Genzyme Tissue Repair is expected to have significant operating losses at least through early 2001 as it continues to introduce Carticel(R) AuCC and conduct research and development and clinical programs. There can be no assurance that Genzyme Tissue Repair's operations will ever be profitable. It is anticipated that Genzyme Tissue Repair's current cash resources, together with amounts available under the GTR Equity Line and cash generated from sales of Carticel(R) AuCC and Epicel(TM) skin grafts, a skin replacement product for patients with severe burns, will be sufficient to fund its operations until the end of 1999. However, Genzyme Tissue Repair may need more cash than currently planned because of numerous factors, including: (i) fluctuations in its revenues; (ii) the availability of third party reimbursement; (iii) the results of research and development and clinical testing; (iv) the development of competitive products and services; (v) effectiveness of cost-containment measures; (vi) regulation by the FDA and other government authorities; (vii) commitments to fund joint ventures or strategic collaborations; and (viii) acquisition activity.

Genzyme Tissue Repair may also require significant additional financing to continue operations at anticipated levels. There can be no assurance that Genzyme Tissue Repair will be able to obtain any additional financing or find it on favorable terms. If Genzyme Tissue Repair has insufficient funds or is unable to raise additional funds, it may have to delay, reduce or eliminate certain of its programs. Genzyme Tissue Repair also may have to give rights to third parties to commercialize technologies or products that it would otherwise commercialize itself.

FLUCTUATION IN QUARTERLY RESULTS MAY AFFECT OPERATIONS

It is expected that revenue from the sale of Carticel(R) AuCC will fluctuate based on Genzyme Tissue Repair's success penetrating the market, the availability of competitive procedures and the availability of third party reimbursement. The timing or magnitude of such fluctuations cannot be predicted. Furthermore, it is expected that revenue from Carticel(R) AuCC will be lower in the summer months because fewer operations are typically performed during those months. It is also expected that revenues from the sale of Epicel(TM) skin grafts will continue to fluctuate from quarter to quarter. This fluctuation is a result of several unpredictable factors, including the number and survival rate of burn patients who are treated with the Epicel(TM) skin grafts. Since Genzyme Tissue Repair must maintain extensive tissue culture facilities and a trained staff for both Carticel(R) AuCC and Epicel(TM) skin grafts, a significant portion of its costs are fixed and, therefore, fluctuations in demand can have an adverse effect on its results of operations.

UNCERTAINTY REGARDING SUCCESS OF THE NEUROCELL(TM) PRODUCTS

Genzyme has a joint venture with Diacrin, Inc. to develop and commercialize NeuroCell(TM)-PD for Parkinson's disease and NeuroCell(TM)-HD for Huntington's disease and have allocated these programs to Genzyme Tissue Repair. Genzyme intends, however, to reallocate this program to Genzyme General if the holders of GTR Stock approve. Both Parkinson's disease and Huntington's disease result from damage to brain cells. NeuroCell(TM)-PD and NeuroCell(TM)-HD rely upon transplantation of cells from fetal pig brains to regenerate damaged brain tissue. The ultimate success of the NeuroCell(TM) products is subject to several risks, including:

RISKS RELATED TO DISEASE TRANSMISSION

Human therapeutic products based on the transplantation of cells obtained from animals -- "xenotransplantation" -- represent a novel therapeutic approach. There have not been extensive clinical tests of products based on xenotransplantation, and there is a risk that viruses or other animal pathogens will be unintentionally transmitted to human patients who are treated with these products. The FDA has issued draft regulatory guidelines to reduce the risk that infectious agents will contaminate xenotransplanted products. Although Genzyme Tissue Repair believes that the processes the joint venture uses to produce the NeuroCell(TM) products would comply with the guidelines as presently drafted, the FDA may substantially revise these guidelines before issuing them in final form. There can be no assurance that the FDA will in fact issue final guidelines or that the processes the joint venture uses to produce the NeuroCell(TM) products will comply with any guidelines that the FDA does issue.

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No therapeutic product based on xenotransplantation has been approved for marketing by the FDA, and there can be no assurance that the FDA or regulatory authorities in other countries will approve any products developed by the joint venture. The current regulatory scheme in Europe does not allow products based on porcine cells to be marketed in Europe. There can also be no assurance that the medical community or third party payers will accept products based on xenotransplantation, including those developed by the joint venture.

SAFETY AND EFFECTIVENESS NOT YET ESTABLISHED

Based on the early results of the Phase I clinical trial for NeuroCell(TM)-PD, the companies initiated two Phase II clinical trials of NeuroCell(TM)-PD. These two trials are designed to show safety and efficacy of NeuroCell (TM)-PD using two forms of immunosuppression. Upon successful completion of these trials, GTR plans to initiate pivotal trials of NeuroCell(TM)-PD. There can be no assurance that these trials will produce positive results. Negative results from any of these clinical trials may jeopardize the joint venture's ability to get FDA approval for NeuroCell(TM)-PD. If the joint venture cannot market NeuroCell(TM)-PD in the U.S., the value of Genzyme Tissue Repair's interest in the joint venture will be significantly reduced.

In Phase I clinical trials involving NeuroCell(TM)-HD, patients did not show statistically significant clinical improvement 12 months following surgery. There can be no assurance that future clinical trials will demonstrate that NeuroCell(TM)-HD is effective in treating Huntington's disease.

The joint venture's success also depends upon the successful development of xenotransplantation technology. This technology currently has limited clinical applications and there can be no assurance that it will result in the development of any therapeutic products. If the xenotransplantation technology does not result in the development of therapeutic products, the joint venture may have to dramatically change the scope and direction of its product development activities.

RELIANCE ON AGREEMENTS WITH KEY COLLABORATORS

Carticel(R) AuCC was developed based on the work of a group of Swedish physicians. Genzyme Tissue Repair had consulting agreements with the two leaders of that group. These agreements expired at the end of 1998 and Genzyme Tissue Repair is currently negotiating renewals of these agreements. Pending these negotiations, these physicians are continuing to advise Genzyme Tissue Repair on the commercialization and further development of Carticel(R) AuCC. There can be no assurance, however, that renewals of these agreements will be signed.

Under the terms of these consulting agreements, each physician: (i) cannot conduct any business activity that is competitive with products or services of Genzyme Tissue Repair through 1999; and (ii) cannot disclose proprietary and confidential information of Genzyme Tissue Repair. There can be no assurance that the two physicians will honor their obligations under the consulting agreements or that the agreements will be renewed. In addition, individuals who are familiar with the know-how underlying Carticel(R) AuCC through their association with these physicians may disclose such information to our competitors. Either event could have an adverse effect on Genzyme Tissue Repair's results of operations.

Genzyme has entered into a sponsored research agreement with the University of Gothenburg in Sweden and certain physicians, including the two physicians discussed above. The purpose of the agreement is to conduct additional research on Carticel(R) AuCC. The agreement prohibits each member of the research team from disclosing any information relating to Genzyme Tissue Repair or its business that they acquire in connection with their work under the agreement. The agreement also states that all inventions that the members conceive or reduce to practice during the course of the research program will be the

property of Genzyme Tissue Repair, with royalties payable to the inventing member. There can be no assurance that these members will honor their obligations under the sponsored research agreement.

POTENTIAL DILUTION OF GTR STOCKHOLDERS

The issuance or distribution of additional shares of GTR Stock could adversely affect the market price of such stock and/or result in substantial dilution to holders of such stock. The Genzyme Board has reserved 8,033,707 shares of GTR Stock for issuance upon conversion of amounts payable under the GTR Note. On March 15, 1999, $9.4 million of principal on this note was outstanding. The actual number of shares of GTR Stock issued upon conversion of this note will depend on the market price prior to conversion.

In addition, in May 1998, the Genzyme Board established a long-term financing plan for the continuing development of the product portfolio and research and development programs of Genzyme Tissue Repair. As part of this plan, the Genzyme Board increased the amount available under the GTR Equity Line from $13 million to $50 million. Under the terms of the GTR Equity Line, Genzyme Tissue Repair may draw down funds as needed each fiscal quarter in exchange for designated shares of GTR Stock. The rate of exchange will be determined by dividing the amount drawn under the line of credit by the average market value of one share of GTR Stock during the 20 trading days prior to the date the amount is drawn under the line of credit.

Designated shares represent authorized shares that are not issued or outstanding but that the Genzyme Board can sell for the sole benefit of Genzyme General or distribute as a stock dividend to the holders of GGD Stock. Under the terms of Genzyme's management and accounting policies, substantially all of the designated shares of GTR Stock will be distributed or sold if, as of May 31 of each year, the number of such designated shares is greater than 10% of the number of outstanding shares of GTR Stock. The effect that these sales or distributions may have on the market price of GTR Stock cannot be predicted.

SUBSEQUENT EVENTS

In January 1999, the holder of the GTR Note converted $3,000,000 in principal amount of the GTR Note in exchange for 1,352,290 shares of GTR Stock. GTR paid $133,000 of accrued interest to the holder in connection with this conversion.

In February 1999, GTR made a $5.0 million draw under the GTR Equity Line in exchange for 1,633,399 GTR Designated Shares.

In March 1999, Genzyme announced that it plans to reallocate Genzyme's interest in Diacrin/Genzyme LLC from GTR to Genzyme General. The transfer of the interest in Diacrin/Genzyme LLC is subject to the approval of GTR's shareholders.

GENZYME TISSUE REPAIR
COMBINED STATEMENTS OF OPERATIONS

<TABLE>
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(IN THOUSANDS, EXCEPT PER SHARE AMOUNTS)	FOR THE YEARS ENDED DECEMBER 31, 1998	1997	1996
<S>	<C>	<C>	<C>
Revenues:			
Net service sales	$ 17,117	$ 10,856	$ 7,312
Operating costs and expenses:			
Cost of services sold	13,438	11,788	11,193
Selling, general and administrative	24,579	25,571	27,111
Research and development	10,432	10,845	10,880
Total operating costs and expenses	48,449	48,204	49,184
Operating loss	(31,332)	(37,348)	(41,872)
Other income (expenses):			

Equity in net loss of joint venture	(7,674)	(6,719)	(1,727)
Interest income	1,176	979	1,432
Interest expense	(2,556)	(2,896)	(148)
Total other income (expenses)	(9,054)	(8,636)	(443)
Net loss attributable to Genzyme Tissue Repair Stock	$(40,386)	$ (45,984)	$(42,315)
Per Genzyme Tissue Repair basic and diluted common share:			
Net loss	$(1.99)	$(3.07)	$(3.38)
Weighted average shares outstanding	20,277	14,976	12,525
Net loss attributable to Genzyme Tissue Repair Stock	$(40,386)	$(45,984)	$(42,315)
Other comprehensive loss			
Unrealized gains (losses) on securities arising during the period	9	(9)	11
Other comprehensive income	9	(9)	11
Comprehensive loss	$(40,377)	$(45,993)	$(42,304)

</TABLE>

The accompanying notes are an integral part of these combined financial statements.

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GENZYME TISSUE REPAIR
COMBINED BALANCE SHEETS
<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS)	DECEMBER 31, 1998	1997
ASSETS		
<S>	<C>	<C>
Current assets:		
Cash and cash equivalents	$ 7,732	$21,120
Short-term investments	-	10,795
Accounts receivable, net	3,833	2,221
Inventories	2,645	1,973
Other current assets	1,723	921
Total current assets	15,933	37,030
Property, plant and equipment, net	2,836	19,524
Other noncurrent assets	185	672
Total assets	$ 18,954	$57,226
LIABILITIES AND DIVISION EQUITY		
Current liabilities:		
Accounts payable	$ 1,355	$ 1,378

Accrued expenses	2,491	2,816
Due to Genzyme General	548	1,213
Current portion of long-term debt	18,000	-
Total current liabilities	22,394	5,407
Long-term debt	-	18,000
Convertible debenture, net	12,579	13,089
Other noncurrent liabilities	377	527
Total liabilities	35,350	37,023
Commitments and contingencies (See Notes)		
Division equity (Note J)	(16,396)	20,203
Total liabilities and division equity	$ 18,954	$57,226

</TABLE>

The accompanying notes are an integral part of these combined financial statements.

GENZYME TISSUE REPAIR
COMBINED STATEMENTS OF CASH FLOWS
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(IN THOUSANDS)	FOR THE YEARS ENDED DECEMBER 31, 1998	1997	1996
<S>	<C>	<C>	<C>
OPERATING ACTIVITIES:			
Net loss	$(40,386)	$(45,984)	$(42,315)
Reconciliation of net loss to net cash used by operating activities:			
Depreciation and amortization	1,757	2,482	935
Loss on disposal of property, plant and equipment	-	24	59
Non-cash compensation expense	108	221	312
Accrued interest/amortization on bonds	188	(188)	85
Provision for bad debts and inventory	2,985	4,400	4,665
Accretion of debt discount	453	1,071	-
Equity in net loss of joint venture	7,674	6,719	1,727
Increase (decrease) in cash from working capital:			
Accounts receivable	(1,869)	(1,024)	(77)
Inventories	(3,400)	(4,070)	(5,489)
Other current assets	(719)	(587)	(148)
Accounts payable, accrued expenses and deferred revenue	(574)	(39)	444
Due to Genzyme General	(665)	(391)	(430)
Net cash used by operating activities	(34,448)	(37,366)	(40,232)
INVESTING ACTIVITIES:			
Purchases of investments	-	(10,614)	(5,004)
Sales and maturities of investments	10,614	318	11,447
Investment in joint venture	(7,163)	(6,820)	(1,911)
Purchases of property, plant and equipment	(670)	(496)	(26,573)
Sale of property, plant and equipment	16,500	852	5,311
Other	15	(428)	151
Net cash (used) provided by investing activities	19,296	(17,188)	(16,579)
FINANCING ACTIVITIES:			
Proceeds from issuance of common stock, net	2,204	31,475	2,437
Proceeds from issuance of debt, net	-	13,542	56,000
Payments of debt and capital lease obligations	(445)	3	(38,169)

Cash allocated from Genzyme General	155	14,892	11,714
Other	(150)	(150)	-
Net cash provided by financing activities	1,764	59,762	31,982
Increase (decrease) in cash and cash equivalents	(13,388)	5,208	(24,829)
Cash and cash equivalents at beginning of period	21,120	15,912	40,741
Cash and cash equivalents at end of period	$ 7,732	$ 21,120	$ 15,912
Supplemental cash flow information:			
Cash paid during the year for:			
Interest	$ 2,265	$ 1,127	$ 334

</TABLE>

Supplemental Disclosures of Non-Cash Transactions:
GTR Designated Shares -- Note J
Transfer of Property, Plant and Equipment -- Note E
Conversion of GTR Note--Note H

The accompanying notes are an integral part of these combined financial statements.

GENZYME TISSUE REPAIR
NOTES TO COMBINED FINANCIAL STATEMENTS

NOTE A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BUSINESS
Genzyme Tissue Repair develops and sells biological products primarily for the treatment of orthopedic injuries, such as cartilage damage, and severe burns. It is a division of Genzyme Corporation and has a separate series of common stock intended to reflect its value and track its economic performance.

BASIS OF PRESENTATION
The combined financial statements of GTR include the balance sheets, results of operations and cash flows during the periods presented. GTR's financial statements are prepared using the amounts included in the consolidated financial statements of Genzyme and its subsidiaries ("Genzyme's Consolidated Financial Statements") included in this Annual Report. Corporate allocations reflected in these financial statements are determined based upon methods which management believes to be reasonable.

PRINCIPLES OF COMBINATION
The accompanying combined financial statements of GTR reflect the combined accounts of all of GTR's businesses. The equity method is used to account for investments in companies and joint ventures in which GTR has a substantial ownership interest (20% to 50%), or in which GTR participates in policy decisions. Accordingly, GTR's share of the earnings or losses of such entities is included in computation of GTR's net loss. (See Note I., "Investments" to Genzyme's Consolidated Financial Statements which is incorporated herein by reference). All significant intradivisional items and transactions have been eliminated in combination. Certain items in GTR's combined financial statements for the years ended December 31, 1997 and 1996 have been reclassified to conform with the December 31, 1998 presentation.

FINANCIAL INFORMATION

Genzyme provides to holders of GTR Stock separate financial statements, management's discussion and analysis, descriptions of business and other relevant information for GTR. Notwithstanding the allocation of assets and liabilities, including contingent liabilities, between Genzyme General, GTR and GMO for the purposes of preparing their respective financial statements, Genzyme Corporation continues to hold title to all of the assets and is responsible for all of the liabilities allocated to each of the divisions. Holders of GTR Stock are common stockholders of Genzyme and have no specific claim against the assets attributed to GTR. Liabilities or contingencies of Genzyme General, GTR or GMO could affect the financial condition or results of operations of the other divisions. Accordingly, the GTR combined financial statements should be read in connection with Genzyme's Consolidated Financial Statements.

Accounting policies and financial information specific to GTR are presented in these GTR combined financial statements. Accounting policies and financial information relevant to Genzyme, Genzyme General, GTR and GMO, collectively, are presented in Genzyme's Consolidated Financial Statements. The Company prepares the financial statements of GTR in accordance with generally accepted accounting

principles, the management and accounting policies of Genzyme and the divisional accounting policies approved by the Genzyme Board (See Note A., "Summary of Significant Accounting Policies", to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference). Except as otherwise provided in such policies, the management and accounting policies applicable to the presentation of the financial statements of GTR may be modified or rescinded at the sole discretion of the Genzyme Board without approval of the stockholders, subject only to the Genzyme Board's fiduciary duty to Genzyme's stockholders.

DIVIDEND POLICY

Under the terms of the Charter, dividends that may be paid to the holders of GTR Stock will be limited to the lesser of funds of Genzyme legally available for the payment of dividends and the Available GTR Dividend Amount, as defined in the Charter. Although there is no requirement to do so, the Genzyme Board would declare and pay cash dividends on

GTR Stock, if any, based primarily on earnings, financial condition, cash flow and business requirements of Genzyme. Genzyme has never paid any cash dividends on shares of its capital stock. Genzyme currently intends to retain its earnings to finance future growth and therefore does not anticipate paying any cash dividends on GTR stock in the foreseeable future.

REVENUE RECOGNITION

GTR recognizes service revenue at the time skin grafts or cartilage cells are shipped. Cancellation charges may be assessed upon the cancellation of an Epicel(TM) order. These charges are dependent upon order size and stage of skin graft growth and are recognized upon order cancellation and when collection is determined to be probable.

NET INCOME (LOSS) PER SHARE

Net income (loss) per share attributable to Genzyme General, GTR and GMO gives effect to the management and accounting policies adopted by the Genzyme Board and is reported in lieu of consolidated per share data. Genzyme computes net income (loss) per share for each division by dividing the earnings attributable to each series of stock by the weighted average number of shares of that stock outstanding during the period, for basic earnings per share, and by the weighted average shares of that stock, plus other potentially dilutive securities outstanding during the applicable period for diluted earnings per share. Earnings (loss) attributable to GTR Stock equals GTR's net income or loss for the relevant period determined in accordance with generally accepted accounting principles in effect at such time, adjusted by the amount of tax benefits allocated to or from the other divisions pursuant to the management and accounting policies adopted by the Genzyme Board.

The following table sets forth the computation of basic and diluted earnings per share:

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS, EXCEPT PER SHARE AMOUNTS)	DECEMBER 31, 1998	1997	1996
<S>	<C>	<C>	<C>
Net loss	$(40,386)	$(45,984)	$(42,315)
Basic and diluted weighted average shares outstanding	20,277	14,976	12,525
Net loss per common share-- basic and diluted	$(1.99)	$(3.07)	$(3.38)

</TABLE>

During the years ended December 31, 1998, 1997 and 1996, certain securities were not included in the computation of diluted earnings per share because they would have an anti-dilutive effect due to the net loss for those years. Such securities include:

<TABLE>
<CAPTION>

Amounts in thousands	December 31, 1998	1997	1996
<S>	<C>	<C>	<C>
Shares of GTR Stock issuable for options	3,398	2,777	2,574
GTR Designated Shares	716	885	1,794
Shares of GTR Stock issuable upon conversion of the GTR Note	7,810	1,772	--
Total shares excluded from the GTR diluted earnings per share calculation	11,924	5,434	4,368

</TABLE>

</TABLE>

ACCOUNTING FOR STOCK-BASED COMPENSATION
GTR has elected the disclosure-only alternative permitted under Statement of Financial Accounting Standards ("SFAS") No. 123, "Accounting for Stock-Based Compensation". GTR has disclosed pro forma net income (loss) and pro forma earnings per share information in Note J. below, using the fair value based method for 1998, 1997 and 1996.

NOTE B. POLICIES GOVERNING THE RELATIONSHIP OF GENZYME'S DIVISIONS

Genzyme allocates certain corporate costs for general and administrative, research and development, and cash management services to the divisions. Genzyme files a consolidated tax return and allocates income taxes to the divisions in accordance with the policies described below. With the exception of the policy regarding Interdivision Asset Transfers, policies may be modified or rescinded by action of the Genzyme Board, or the Genzyme Board may adopt additional policies, without approval of the stockholders of Genzyme, subject only to the Genzyme Board's fiduciary duty to the Genzyme stockholders. In addition, generally accepted accounting principles require that any change in policy be preferable (in accordance with such principles) to the previous policy.

FINANCIAL MATTERS
The Company manages the financial activities of Genzyme General, GTR and GMO. These financial activities include: the investment of surplus cash; the issuance, repayment and repurchase of short-term and long-term debt; and the issuance and repurchase of equity instruments.

Loans may be made from time to time between divisions. Any such loan of $1.0 million or less will mature within 18 months and interest will accrue at the lowest borrowing rate available to Genzyme for a loan with similar terms and duration. Amounts borrowed in excess of $1.0 million will require approval of the Genzyme Board, which approval shall include a determination by the Genzyme Board that the material terms of such loan, including the interest rate and maturity date, are fair and reasonable to each participating division and to holders of the common stock representing such division.

SHARED SERVICES
GTR operates as a division of Genzyme with its own personnel and financial resources, but GTR has access to Genzyme's extensive research and development capabilities, manufacturing facilities, worldwide clinical development and regulatory affairs staffs, marketing, infrastructure, and experience in raising capital. Genzyme's corporate general and administrative functions, selling and marketing, and research and development expenses have been allocated to GTR in a reasonable and consistent manner based on utilization by the division of the services to which such costs relate. Genzyme's corporate general and administrative and research and development functions are performed primarily by Genzyme General. Management believes that such allocation is a reasonable estimate of such expenses. Genzyme General's allocation to GTR for research and development was $7.7 million in both 1998 and 1997 and $6.9 million in 1996. The charges for SG&A services were $6.5 million, $7.7 million and $9.1 million in 1998, 1997 and 1996, respectively. As of December 31, 1998 and 1997, GTR owed Genzyme General $0.5 million and $1.2 million, respectively, in connection with the above services.

INTERDIVISION INCOME TAX ALLOCATIONS
GTR is included in the consolidated U.S. federal income tax return filed by Genzyme. Genzyme allocates current and deferred taxes to the divisions using the asset and liability method of accounting for income taxes as if the divisions were separate taxpayers. Accordingly, the realizability of deferred tax assets is assessed at the division level. The sum of the amounts calculated for individual divisions of Genzyme may not equal the consolidated amount under this approach.

Income taxes are allocated to each division based upon the financial statement income, taxable income, credits and other amounts properly allocable to such division under generally accepted accounting principles as if each division were a separate taxpayer; provided, however, that as of the end of any fiscal quarter of Genzyme, any projected annual tax benefit attributable to any division that cannot be utilized by such division to offset or reduce its current or deferred income tax expense may be allocated to the other divisions in proportion to their taxable income without any compensating payment or allocation. The treatment of such allocation for purposes of earnings per share computation is discussed in Note A., "Summary of Significant Accounting Policies -- Net Income (Loss) Per Share", in Genzyme's Consolidated Financial Statements, which is incorporated herein by reference.

ACCESS TO TECHNOLOGY AND KNOW-HOW
GTR has free access to all technology and know-how of Genzyme that may prove useful in GTR's business, subject to any obligations or limitations applicable to Genzyme.

INTERDIVISION ASSET TRANSFERS
The following policy regarding the transfer of assets between divisions may not be changed by the Genzyme Board without the approval of the holders of GTR Stock and GMO Stock, each voting as a separate class; provided, however, that if a policy change affects GTR or GMO alone, only holders of shares representing the affected division will be entitled to a class vote on such matter.

The Genzyme Board may at any time and from time to time reallocate any program, product or other asset from one division to any other division. All such reallocations will be done at fair market value, determined by the Genzyme Board, taking into account, in the case of a program under development, the commercial potential of the program, the phase of clinical development of the program, the expenses associated with realizing any income from the program, the likelihood and timing of any such realization and other matters that the Genzyme Board and its financial advisors, if any, deem relevant. The consideration for such reallocation may be paid by one division to another in cash or other consideration, with a value equal to the fair market value of the assets being reallocated or, in the case of a reallocation of assets from Genzyme General to GTR or GMO, the Genzyme Board may elect to account for such reallocation of assets as an increase in Designated Shares representing the division to which such assets are reallocated. Notwithstanding the foregoing, no Key GTR Program, as defined in the management and accounting policies, may be transferred out of GTR without a class vote of the holders of GTR Stock.

OTHER INTERDIVISION TRANSACTIONS
From time to time, a division may engage in transactions with one or more other divisions or jointly with one or more other divisions and one or more third parties. Such transactions may include agreements by one division to provide products and services for use by another division and joint ventures or other collaborative arrangements involving more than one division to develop new products and services jointly and with third parties. SG&A or research and development performed by one division for the benefit of another division will be charged to the division for which work is performed on a cost basis. The division performing the research will not recognize revenue as a result of performing such research. Other interdivisional transactions shall be on terms and conditions that would be obtainable in transactions negotiated with unaffiliated third parties. Any interdivisional transaction to be performed on terms and conditions other than those previously set forth and that is material to one or more of the participating divisions will require the approval of the Genzyme Board, which approval shall include a determination by the Genzyme Board that the transaction is fair and reasonable to each participating division and to holders of the common stock representing each such division.

If a division (the "purchasing division") requires any product or service from which another division (the "selling division") derives revenue from sales to third parties (a "commercial product or service"), the purchasing division may solicit from the selling division a bid to provide such commercial product or service in addition to any bids solicited by the purchasing division from third parties. Subject to determination by the Genzyme Board that the bid of the selling division is fair and reasonable to each division and to their respective stockholders and that the purchasing division is willing to accept the selling division's bid, the purchasing division may accept any bid deemed to offer the most favorable terms and conditions for providing the commercial product or service sought by the purchasing division.

NOTE C. ACCOUNTS RECEIVABLE

GTR performs ongoing credit evaluations of its customers and generally does not require collateral. Accounts receivable are stated at fair value after reflecting the allowance for doubtful accounts of $1.0 million and $840,000 at December 31, 1998 and 1997, respectively.

NOTE D. INVENTORIES

Inventories at December 31 consist of the following:
<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997

Raw materials	$ 264	$ 243
Work--in-process	2,381	1,730
	$2,645	$1,973

NOTE E. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment at December 31 includes the following:

(DOLLARS IN THOUSANDS)	1998	1997
Plant and equipment	$ 3,845	$18,562
Land and buildings	-	2,324
Leasehold improvements	2,577	2,428
Furniture and fixtures	146	127
	6,568	23,441
Less accumulated depreciation	(3,732)	(3,917)
Property, plant and equipment, net	$ 2,836	$19,524

Depreciation expense was $1.6 million, $2.3 million and $0.9 million in 1998, 1997 and 1996, respectively.

In June 1998, the Genzyme Board approved the transfer of one of GTR's manufacturing facilities at fair market value, including land, building and equipment, to Genzyme General in exchange for approximately $16.5 million in cash. GTR recognized a gain of approximately $0.7 million from this transfer, which was recorded in division equity in June 1998.

NOTE F. INVESTMENTS

Investments in cash equivalents and marketable securities at December 31, 1998 consist primarily of money market funds. At December 31, 1997, cash equivalents and marketable securities consisted primarily of money market funds and short-and long-term corporate notes.

Gross unrealized holding losses of $9,000 were recorded at December 31, 1997 in division equity.

All of the cash equivalents and marketable securities held by GTR as of December 31, 1997 matured in 1998.

DIACRIN/GENZYME LLC

In October 1996, Diacrin/Genzyme LLC was established as a joint venture between GTR and Diacrin to develop and commercialize products and processes using porcine fetal cells for the treatment of Parkinson's disease and Huntington's disease in humans. Under the terms of the joint venture agreement, GTR provided 100% of the initial $10.0 million of the funding requirements and will provide 75% of the next $40.0 million of funding requirements for products to be developed by the joint venture. Thereafter, all costs will be shared equally by the two parties. Profits from the joint venture will be shared equally by the two parties. As of December 31, 1998 GTR has provided a total of $15.7 million of funding to the joint venture, $5.1 million of which was provided by Genzyme General in exchange for 489,810 GTR Designated Shares. GTR realized net losses from the joint venture of $7.7 million in 1998, $6.7 million in 1997 and $1.7 million in 1996. Summary financial information is not presented as the impact of the joint ventures activities on GTR's statement of operations for the years ended December 31, 1998, 1997 and 1996 is not material. GTR performs research and development services on behalf of Diacrin/Genzyme LLC. In connection with these services, GTR received payments of $5.0 million, $2.3 million and $0.2 million in 1998, 1997 and 1996, respectively. As of December 31, 1998 GTR had a payable of $0.2 million to Diacrin/Genzyme LLC. The Company's Chairman and Chief Executive Officer is a Director of Diacrin.

In 1996 Genzyme agreed to make available an unsecured, subordinated line of credit of up to $10.0 million to Diacrin that may be used by Diacrin to fund capital contributions to Diacrin/Genzyme LLC. There have been no draws on this line of credit to date.

NOTE G. ACCRUED EXPENSES

Accrued expenses at December 31 include the following:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997
<S>	<C>	<C>
Compensation	$1,271	$1,837
Professional fees	505	797
Royalties	88	58
Other	627	124
	$2,491	$2,816

</TABLE>

NOTE H. LONG-TERM OBLIGATIONS AND LEASES

Long-term obligations at December 31 is comprised of the following:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997
<S>	<C>	<C>
Revolving credit facility	$ 18,000	$18,000
Convertible Debenture	12,579	13,089
	30,579	31,089
Less current portion	(18,000)	--
	$ 12,579	$31,089

</TABLE>

The $18.0 million allocated to GTR under Genzyme's revolving credit facility at December 31, 1997 is due to be repaid in 1999 and is no longer considered a long-term debt obligation.

During 1998, the Genzyme Board increased the amount available under the GTR Equity Line from $13.0 million to $50.0 million (the "GTR Equity Line"). There were no amounts outstanding under the GTR Equity Line at December 31, 1998.

Although the Company retains responsibility for the repayment of all long-term debt obligations (See Note K., "Long-term Debt and Leases" to the Consolidated Financial Statements, which is incorporated herein by reference), such debt is allocated

to either Genzyme General, GTR or GMO for reporting purposes based on the intended use of the funds borrowed under each instrument.

GTR PRIVATE PLACEMENT

In February 1997, GTR raised $13.0 million through the private placement of the GTR Note. The GTR Note is convertible, at a discount to the average of the closing bid prices of the GTR Stock on the Nasdaq National Market for the 25 trading days immediately preceding the conversion date (the "Average GTR Stock Price"). The discount started at 2% beginning in August 1997 and increased to 11% in November 1998. The conversion price is currently the lesser of 89% of the Average GTR Stock Price preceding the conversion date or May 28, 1998, 15 months after the date of issue. In the first quarter of 1997, GTR recorded $11.5 million of proceeds attributed to the value of the debt and $1.5 million attributed to the value of the conversion feature (recorded as an increase to division equity). The debt has been accreted to its $13.0 million face value by a charge to interest expense of $1.6 million over the term of the initial 15 month conversion period. GTR recorded interest expense related to the accretion of this debt of $0.5 million and $1.1 million in the years ended December 31, 1998 and 1997, respectively.

In November 1998, the holder of the GTR Note converted $600,000 of the principal amount of the GTR Note in exchange for 223,405 shares of GTR stock. Due to the conversion, GTR paid $1.1 million of accrued interest to the holder of the GTR Note in cash, which represented total accrued interest on the GTR Note to date.

Future minimum payments due under GTR's long-term obligations are as follows:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	LONG-TERM DEBT
<S>	<C>
1999.....	$ 18,000
2000.....	12,579
Total minimum payments.....	30,579
Less current portion.....	(18,000)
Total.....	$ 12,579

</TABLE>

OPERATING LEASES
GTR rents facilities and equipment under noncancellable operating leases expiring through 2001. For one of GTR's facilities there is an option to renew the lease expiring in 2001 for an additional five years. Rent expense under all operating leases was $2.2 million in 1998, $1.8 million in 1997 and $2.1 million in 1996.

Future minimum payments due under Genzyme Tissue Repair's non-cancellable operating leases are as follows:
<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	OPERATING LEASES
<S>	<C>
1999.....	$2,238
2000.....	2,236
2001.....	1,773
Total minimum payments.....	$6,247

</TABLE>

GTR leases from Genzyme General a portion of a research and development facility. GTR is obligated to pay Genzyme General $0.6 million per year for three years commencing on July 1, 1998. Total rent expense for this facility for 1998 was $0.3 million. Diacrin/Genzyme LLC has subleased a portion of this facility from GTR for the term of the lease and is obligated to pay GTR rent of $0.4 million per year pursuant to the terms of the sublease agreement. Total rent due to GTR under the sublease for 1998 was $0.2 million.

NOTE I. COMMITMENTS AND CONTINGENCIES

From time to time Genzyme has been subject to legal proceedings and claims arising in connection with its business. At December 31, 1998, there were no asserted claims against Genzyme which, in the opinion of management, if adversely decided, would have a material adverse effect on GTR's financial position and results of operations.

NOTE J. DIVISION EQUITY

The following presents the equity of GTR for the periods presented:

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS)	DECEMBER 31, 1998	1997	1996
<S>	<C>	<C>	<C>
Balance at beginning of period.....	$ 20,203	$ 18,084	$ 45,926
Net loss.....	(40,386)	(45,984)	(42,315)
Issuance of common stock under stock plans.....	2,109	2,438	2,436
Shares issued in public offering.....	-	29,037	-
Allocation from Genzyme General for designated shares.....	-	14,892	11,714
Payment from Genzyme General for research program.....	250	-	-
Stock compensation expense.....	108	221	312
Value of debt conversion feature.....	-	1,524	-

Shares issued upon partial conversion of convertible debt..	600	-	-
Gain on transfer of facility.....	711	-	-
Equity adjustments.....	9	(9)	11
Balance at end of period.....	$(16,396)	$ 20,203	$18,084

</TABLE>

At December 31, 1998 and 1997, 40,000,000 shares of GTR Stock were authorized for issuance and approximately 20,921,000 and 19,941,000 shares, respectively, were issued and outstanding.

In October 1996, the Genzyme Board approved the GTR Equity Line with an initial allocation of up to $20.0 million in cash to GTR from Genzyme General to provide initial funding for GTR's joint venture with Diacrin, of which $7.0 million had been allocated to GTR in exchange for 721,455 GTR Designated Shares as of December 31, 1997.

In May 1998, the Genzyme Board increased the amount available under GTR Equity Line from $13 million to $50 million. Under the GTR Equity Line, GTR may draw down funds as needed each fiscal quarter in exchange for GTR Designated Shares. The rate of exchange will be determined by dividing the amount drawn under the line of credit by the average market value of one share of GTR Stock during the 20 trading days prior to the date the amount is drawn under the line of credit. As of December 31, 1998, GTR had not yet drawn any funds from the GTR Equity Line.

As of December 31, 1998, there were approximately 716,000 GTR Designated Shares reserved for issuance.

PREFERRED STOCK, DIRECTORS' DEFERRED COMPENSATION PLANS, STOCK RIGHTS, STOCK OPTIONS, EMPLOYEE STOCK PURCHASE PLAN, STOCK COMPENSATION PLANS AND GTR DESIGNATED SHARES.

The disclosures relating to Genzyme's preferred stock, Directors' Deferred Compensation Plan, stock rights, stock options, Employee Stock Purchase Plan, Stock Compensation Plans and GTR Designated Shares are included in Note L., "Stockholders' Equity" to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference.

At December 31, 1998, approximately 5,253,000 shares of GTR Stock were reserved for issuance under the Company's 1990 Equity Incentive Plan, as amended, 1997 Equity Incentive Plan, 1998 Director Stock Option Plan, and 1990 Employee Stock Purchase Plan, as amended. At December 31, 1998, approximately 3,398,000 options to purchase shares of GTR Stock were outstanding.

STOCK OFFERING

In 1997, Genzyme sold 4,000,000 shares of GTR Stock for net proceeds of $29.0 million.

STOCK COMPENSATION PLANS

The Company applies Accounting Principles Board Opinion 25 and related Interpretations in accounting for its four stock-based compensation plans, the 1997 Equity Incentive Plan and the 1990 Equity Incentive Plan (both of which are stock option plans), the 1990 Employee Stock Purchase Plan (a stock purchase plan) and the 1998 Director Stock Option Plan (a stock option plan) and, accordingly, no compensation expense has been recognized for shares purchased or for options granted to employees with an exercise price equal to fair market value.

Had compensation expense for the stock-based compensation plans been determined based on the fair value at the grant dates for options granted and shares purchased under the plans consistent with the method of SFAS 123, GTR's net loss and loss per share would have been as follows:

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS, EXCEPT PER SHARE DATA)	DECEMBER 31,		
	1998	1997	1996
Net income (loss):			
<S>	<C>	<C>	<C>
As reported.....	$(40,386)	$(45,984)	$(42,315)
Pro forma.....	$(44,481)	$(49,547)	$(45,735)

Basic and diluted loss per share:			
As reported	$(1.99)	$(3.07)	$(3.38)
Pro forma	$(2.19)	$(3.31)	$(3.65)

For assumptions used in the SFAS 123 calculations for GTR for the three years ended December 31, 1998, 1997 and 1996 - see Note L., "Stockholders Equity", to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference.

The effects of applying SFAS 123 in this pro forma disclosure are not likely to be representative of the effects on reported net income for future years. SFAS 123 does not apply to awards granted prior to 1995 and additional awards are anticipated in future years.

NOTE K. INCOME TAXES

The differences between the effective tax rates and the U.S. Federal statutory tax rates were as follows:

	YEAR ENDED DECEMBER 31,		
	1998	1997	1996
U.S. Federal income tax statutory rate	(35.0)%	(35.0)%	(35.0)%
State taxes, net	(2.8)	(3.0)	(5.2)
Tax credits	(3.4)	(1.4)	--
Other	0.6	1.0	--
Deductions subject to deferred tax valuation allowance	40.6	38.4	40.2
Effective tax rate	--%	--%	--%

At December 31, 1998 and 1997, the components of deferred tax assets were as follows (in thousands):

	1998	1997
Deferred tax assets:		
Net operating loss carryforwards	$ 55,582	$ 40,554
Tax credits	2,331	964
Intangible amortization	10,586	10,856
Reserves and other	5,035	3,695
Gross deferred tax assets	73,534	56,069
Valuation allowance	(73,534)	(56,069)
Net deferred tax assets	--	--

Due to uncertainty surrounding the realization of certain favorable tax attributes, GTR placed a valuation allowance of $73.5 million and $56.1 million for December 31, 1998 and 1997, respectively, against otherwise recognizable deferred tax assets. At the time GTR recognizes these tax assets in accordance with generally accepted accounting principles, the resulting deferred tax benefits will be reflected in the tax provision for GTR. However, the benefit of these deferred tax

assets has been previously allocated to Genzyme General in accordance with the management and accounting policies, and will be reflected as a reduction of GTR net income to determine net income attributable to GTR Stock.

NOTE L. BENEFIT PLANS

The disclosures relating to Genzyme's domestic employee savings plan under Section 401(k) of the Internal Revenue Code of 1986, as amended (the "401(k) Plan") are included in Note P., "Benefit Plans" to Genzyme's Consolidated

Financial Statements, which is incorporated herein by reference. Substantially all employees of GTR are covered under the 401(k) Plan.

The 401(k) plan allows employees to make contributions up to a specified percentage of their compensation, a portion of which are matched by GTR. GTR made $135,000, $183,000, and $165,000 in contributions to the plan in 1998, 1997 and 1996, respectively.

NOTE M. SUBSEQUENT EVENTS

In January 1999, the holder of the GTR Note converted $3,000,000 principal amount of the GTR Note in exchange for 1,352,290 shares of GTR Stock. GTR paid $133,000 of accrued interest to the holder in connection with this conversion.

In February 1999, GTR made a $5.0 million draw under the GTR Equity Line in exchange for 1,633,399 GTR Designated Shares.

In March 1999, Genzyme announced that it plans to reallocate Genzyme's interest in Diacrin/Genzyme LLC from GTR to Genzyme General. The transfer of the interest in Diacrin/Genzyme LLC is subject to the approval of GTR's shareholders.

GENZYME TISSUE REPAIR

REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and Stockholders of Genzyme Corporation:

In our opinion, the accompanying combined balance sheets and the related combined statements of operations and of cash flows present fairly, in all material respects, the financial position of Genzyme Tissue Repair (as described in Note A) at December 31, 1998 and 1997, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 1998, in conformity with generally accepted accounting principles. In addition, in our opinion, the financial statement schedule presents fairly, in all material respects, the information set forth therein when read in conjunction with the related combined financial statements. These financial statements and financial statement schedule are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements and financial statement schedule based on our audits. We conducted our audits of these statements in accordance with generally accepted auditing standards which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and 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.

As more fully described in Note A to these financial statements, Genzyme Tissue Repair is a division of Genzyme Corporation; accordingly, the combined financial statements of Genzyme Tissue Repair should be read in conjunction with the audited consolidated financial statements of Genzyme Corporation and Subsidiaries.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

Boston, Massachusetts
February 23, 1999

GENZYME TISSUE REPAIR DIVISION

SCHEDULE II -- VALUATION AND QUALIFYING ACCOUNTS

FOR THE YEARS ENDED DECEMBER 31, 1998, 1997 AND 1996

<TABLE>
<CAPTION>

COLUMN A	COLUMN B	COLUMN C		COLUMN D	COLUMN E
		ADDITIONS			
DESCRIPTION	BALANCE AT BEGINNING OF PERIOD	CHARGED TO COSTS AND EXPENSES	CHARGED TO OTHER ACCOUNTS	DEDUCTIONS	BALANCE AT END OF PERIOD
<S>	<C>	<C>	<C>	<C>	<C>
Year ended December 31, 1998:					
Allowance for doubtful accounts	$ 839,000	$ 257,000	-	$ 75,000(1)	$ 1,021,000
Inventory Reserve	$8,347,000	$2,728,000	-	$423,000	$10,652,000
Year ended December 31, 1997:					
Allowance for doubtful accounts	$ 408,000	$ 480,000	-	$ 49,000(1)	$ 839,000
Inventory Reserve	$4,427,000	$3,920,000	-	-	$ 8,347,000
Year ended December 31, 1996:					
Allowance for doubtful accounts	$ 325,000	$ 238,000	-	$155,000(1)	$ 408,000
Inventory Reserve	-	$4,427,000	-	-	$ 4,427,000

</TABLE>

(1) Uncollectible accounts written off, net of recoveries.

EXHIBIT 13.3

FINANCIAL STATEMENTS

GENZYME MOLECULAR ONCOLOGY
COMBINED SELECTED FINANCIAL DATA

The following Selected Financial Data reflects the results of operations and financial position of Genzyme Molecular Oncology Division ("Genzyme Molecular Oncology" or "GMO") and should be read in conjunction with the financial statements of GMO and accompanying footnotes.

<TABLE>
<CAPTION>

COMBINED STATEMENTS OF OPERATIONS DATA (AMOUNTS IN THOUSANDS, EXCEPT PER SHARE AMOUNTS)	FOR THE YEARS ENDED DECEMBER 31,				FOR THE PERIOD FROM DECEMBER 1, 1994 (DATE OF INCEPTION) TO DECEMBER 31, 1994
	1998	1997	1996	1995	
<S>	<C>	<C>	<C>	<C>	<C>
Revenues:					
Service revenue	2,229	467	-	-	-
Service revenue - related party	466	-	-	-	-
Research and development revenue - related party	2,177	315	-	-	-
Research and development revenue	14,535	-	-	-	-
Total revenue	19,407	782	-	-	-
Operating costs and expenses:					
Cost of service revenue	1,374	50	-	-	-
Cost of research and development revenue	4,073	287	-	-	-
Selling, general and administrative	7,155	2,118	185	87	8
Research and development	12,743	5,341	818	377	29
Amortization of intangibles	11,983	5,127	-	-	-
Charge for in-process technology	-	7,000	-	-	-
Total operating costs and expenses	37,328	19,923	1,003	464	37
Operating loss	(17,921)	(19,141)	(1,003)	(464)	(37)
Other income (expenses):					
Equity in net loss of joint venture	(1,647)	(258)	-	-	-
Interest income	782	392	-	-	-
Interest expense	(2,968)	(1,663)	-	-	-
Total other income (expenses)	(3,833)	(1,529)	-	-	-
Loss before income taxes	$(21,754)	$(20,670)	$(1,003)	$ (464)	$ (37)

Tax benefit	2,647	1,092	-	-	-
Net loss attributable to GMO Stock	$(19,107)	$(19,578)	$(1,003)	$ (464)	$ (37)
Per Genzyme Molecular Oncology basic and diluted common share:					
Net loss	$ (3.81)				
Weighted average shares outstanding	5,019				
Pro forma per Genzyme Molecular Oncology basic and diluted common share:					
Pro forma net loss		$(4.98)	$(0.26)	$(0.12)	$(0.01)
Pro forma weighted average shares outstanding		3,929	3,929	3,929	3,929

</TABLE>

GENZYME MOLECULAR ONCOLOGY
COMBINED SELECTED FINANCIAL DATA (CONTINUED)

COMBINED BALANCE SHEET DATA

<TABLE>
<CAPTION>

	DECEMBER 31,				
	1998	1997	1996	1995	1994
<S>	<C>	<C>	<C>	<C>	<C>
Cash and investments	$11,900	$21,229	$ --	$--	$--
Working capital	9,189	11,953	--	--	--
Total assets	35,952	53,801	--	--	--
Long-term debt, convertible debenture and note payable	--	24,606	--	--	--
Parent company investment	--	--	1,504	501	37
Division equity	23,364	13,466	--	--	--

</TABLE>

There were no cash dividends paid.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF GENZYME MOLECULAR ONCOLOGY'S FINANCIAL CONDITION AND RESULTS OF OPERATIONS

INTRODUCTION

This discussion contains forward-looking statements. These forward-looking statements represent the expectations of the management of Genzyme Molecular Oncology and Genzyme Corporation ("Genzyme" or the "Company") as of the filing date of this Annual Report. The actual results for both GMO and Genzyme could differ materially from those anticipated by the forward-looking statements due to the risks and uncertainties described under the caption "Factors Affecting Future Operating Results" for GMO and Genzyme included in this Annual Report. Stockholders and potential investors should consider carefully each of these risks and uncertainties in evaluating the financial condition and results of operations of GMO and Genzyme.

Genzyme provides separate financial statements for the Company and its subsidiaries on a consolidated basis and for each of Genzyme General Division ("Genzyme General"), Genzyme Tissue Repair Division ("Genzyme Tissue Repair" or "GTR") and GMO. The financial statements of each division include the financial

position, results of operations and cash flows of programs and products allocated to the division under the Company's Restated Articles of Organization, as amended (the "Charter"), and the management and accounting policies adopted by Genzyme's Board of Directors (the "Genzyme Board") to govern the relationship of the divisions. The financial information of Genzyme General, GTR and GMO, taken together, include all accounts which comprise the consolidated financial information presented for Genzyme and its subsidiaries.

For purposes of financial statement presentation, all of the Company's programs and products are allocated to either Genzyme General, GTR or GMO. Notwithstanding this allocation, Genzyme continues to hold title to all of the assets and is responsible for all of the liabilities allocated to each of the divisions. Holders of Genzyme General Division Common Stock ("GGD Stock"), Genzyme Tissue Repair Division Common Stock ("GTR Stock") and Genzyme Molecular Oncology Division Common Stock ("GMO Stock") have no specific claim against the assets attributed to the division whose performance is associated with the series of stock they hold. Liabilities or contingencies of one division that affect Genzyme's resources or financial condition could affect the financial condition or results of operations of the other divisions.

Stockholders and potential investors should, therefore, read this discussion and analysis of GMO's financial position and results of operations in conjunction with the financial statements and related notes of GMO, and the discussion and analysis of Genzyme's financial position and results of operations, and the consolidated financial statements and related notes of Genzyme, all of which are included with this Annual Report.

GMO was part of Genzyme General from December 1, 1994 (Date of Inception) to June 18, 1997. Genzyme acquired PharmaGenics, Inc. on June 18, 1997 and the combined financial statements of GMO beginning June 18, 1997 include the results of PharmaGenics.

RESULTS OF OPERATIONS

The following discussion summarizes the key factors management considers necessary in reviewing GMO'S combined results of operations. Detailed discussion and analysis of the consolidated results of operations of Genzyme and its subsidiaries, which include the combined results of Genzyme General, Genzyme Tissue Repair and Genzyme Molecular Oncology, are provided separately in this Annual Report under "Management's Discussion and Analysis of Genzyme Corporation and Subsidiaries' Financial Condition and Results of Operations".

From the Date of Inception, research and development functions with respect to development programs which have been attributed to GMO have been provided solely by Genzyme General. In accordance with Genzyme's management and accounting policies, expenses for research and development performed by Genzyme General for GMO are charged to GMO on a cost basis. Genzyme's corporate and general and administrative expenses or other indirect costs are allocated to GMO in a reasonable and consistent manner based on utilization by GMO of the services to which such costs relate. Management believes that such allocation is a reasonable estimate of such expenses.

1998 COMPARED TO 1997

REVENUES

GMO recorded $19.4 million of total revenue in 1998 as compared to $0.8 million of total revenue in 1997. The increase in GMO's revenue in 1998 is primarily attributable to an increase of $16.4 million in research and development revenue. The increase in research and development revenue is primarily due to $13.0 million in revenue recorded in connection with a research and license agreement with a large pharmaceutical company. GMO's revenue includes work performed for the joint venture with StressGen Biotechnologies Corporation ("StressGen/Genzyme LLC").

MARGINS AND OPERATING EXPENSES

GMO's cost of revenues in 1998 was $5.4 million as compared to $0.3 million in 1997. The increase is primarily attributable to costs related to the delivery of services using GMO's SAGE(TM) differential gene expression technology, royalties and costs incurred in connection with research and development performed on behalf of StressGen/Genzyme LLC and the large pharmaceutical company.

In 1998, GMO incurred $7.2 million of selling, general and administrative ("SG&A") expenses, compared to $2.1 million in 1997. The increase is due to increased administrative support corresponding to the growth of GMO's business, as well as amounts written off in connection with the withdrawal of Genzyme's registration statement on Form S-3 that it had filed with the Securities and Exchange Commission covering the initial public offering of GMO Stock.

Research and development costs in 1998 increased to $12.7 million from $5.3 million in 1997. The increase in research and development costs relate to increases in research personnel and related expenses pertaining to GMO's SAGE, gene therapy and small molecule programs.

Amortization expenses in 1998 and 1997 were $12.0 million and $5.1 million, respectively, and were attributable to the PharmaGenics acquisition, which was completed on June 18, 1997.

GMO recorded a $7.0 million charge in 1997 as part of the acquisition of PharmaGenics for the purchase of in-process technology that has no alternative future use. There were no similar amounts in 1998.

OTHER INCOME AND EXPENSES

Interest income increased in 1998 to $0.8 million from $0.4 million in 1997, mainly as the result of higher average cash balances during 1998. Interest expense increased to $3.0 million in 1998 compared to $1.7 million in 1997. The increase in interest expense is the result of interest and related amortization of the discount on the 6% convertible debentures issued in August 1997 (the "GMO Debentures") that were exchanged in August 1998 for 5% convertible debentures convertible into shares of GGD Stock (the "GGD Debentures").

On July 31, 1997, StressGen/Genzyme LLC was established as a joint venture among Genzyme, StressGen Biotechnologies Corporation and the Canadian Medical Discoveries Fund to develop stress gene therapies for the treatment of cancer. GMO recorded an equity in net loss of the joint venture of $1.6 million and $0.3 million in 1998 and 1997, respectively.

GMO recorded a tax benefit of $2.6 million in 1998 as compared to $1.1 million during 1997. The tax benefit results from the amortization of the deferred tax liability established upon the acquisition of PharmaGenics.

1997 COMPARED TO 1996

REVENUES

GMO recorded $0.8 million total revenue in 1997 as compared to no revenue in 1996. GMO recorded revenue of $0.5 million which consists of the sale of services using GMO's SAGE(TM) differential gene expression technology. GMO also recorded research and development revenue of $0.3 million, which consists of work performed for StressGen/Genzyme LLC.

MARGINS AND OPERATING EXPENSES

GMO's cost of revenues in 1997 was $0.3 million, and consisted of work performed on behalf of StressGen/Genzyme LLC.

In 1997, GMO incurred $2.1 million of SG&A expenses, compared to $0.2 million in 1996. The increase is due to increased administrative support corresponding to the growth of GMO's business following the acquisition of PharmaGenics.

Research and development costs in 1997 increased to $5.3 million from $0.8 million in 1996. The increase in research and development costs relate to increases in research personnel and related expenses pertaining to GMO's SAGE(TM) and gene therapy programs.

Amortization expenses of $5.1 million in 1997 were attributable to the PharmaGenics acquisition which was effective on June 18, 1997. There were no similar amounts in 1996.

In 1997, GMO recorded a $7.0 million charge as part of the acquisition of PharmaGenics for the purchase of in-process technology which represents the value assigned to PharmaGenics' programs which were still in the development stage for which there was no alternative future use.

OTHER INCOME AND EXPENSES

Interest income and interest expense were $0.4 million and $1.7 million, respectively in 1997. There were no similar amounts in 1996. The interest income results from higher average cash balances due to the issuance of the GMO Debentures. The interest expense is interest and related amortization of the discount on the GMO Debentures.

GMO recorded an equity in net loss of StressGen/Genzyme LLC of $0.3 million in 1997. Because StressGen/Genzyme LLC was formed in July 1997, there were no comparable amounts in 1996.

GMO recorded a tax benefit of $1.1 million during 1997. There was no similar amount in 1996. The tax benefit results from amortization of the deferred tax liability established upon the acquisition of PharmaGenics.

LIQUIDITY AND CAPITAL RESOURCES

As of December 31, 1998, GMO had cash, cash equivalents and short- and long-term investments of $11.9 million, a decrease of $9.3 million from December 31, 1997. In 1998, GMO used $8.1 million of cash for operations. Investing activities provided $4.0 million of cash which consisted of $7.1 million in proceeds from the maturities of investments, offset by $2.1 million used to purchase investments and $0.6 million used to acquire equipment.

In 1997, the Genzyme Board approved the allocation of up to $25.0 million in cash to GMO from Genzyme General (the "GMO Equity Line"). The amount available was reduced to $5.0 million as a result of the issuance of the GMO Debentures in 1997.

In August 1998, the holders of the GMO Debentures exercised their option to exchange the GMO Debentures, plus accrued interest of $1.2 million, for the GGD Debentures.

In September 1998, Genzyme withdrew its registration statement on Form S-3 that it had filed with the Securities and Exchange Commission in April 1998, covering the initial public offering of 3,450,000 shares (including 450,000 shares issuable upon exercise of the underwriter's over-allotment option) of GMO Stock. In 1998, GMO recorded a $0.6 million charge for previously capitalized costs in connection with this offering.

In September 1998, the Genzyme Board approved the exchange of a subordinated convertible promissory note due from GMO to Genzyme General in the amount of $2,450,000, plus accrued interest of $246,080, for approximately 386,000 GMO Designated Shares. GMO Designated Shares are shares of GMO Stock that are not issued and outstanding, but which the Genzyme Board may from time to time issue, sell or otherwise distribute without allocating the proceeds to GMO.

In September 1998, GMO made a draw of the remaining $5.0 million available under the GMO Equity Line. Approximately 714,000 GMO Designated Shares were reserved for issuance in connection with this draw. In August 1998, the Genzyme Board approved the allocation by Genzyme General of up to $30.0 million in cash to GMO in exchange for an increase in the number of GMO Designated Shares (the "New Equity Line"). This is in addition to the GMO Equity Line. GMO has not yet drawn any funds under this arrangement.

In October 1998, GMO licensed its p53 gene therapy patent rights to Schering-Plough Corporation. Under terms of the licensing agreement, GMO received a $5.0 million up-front payment. There could be additional patent, product development and sales milestone fees, in addition to royalties on product sales, associated with Schering-Plough's development and commercialization of p53 gene therapy product.

On November 16, 1998 Genzyme distributed 8,717,000 shares of GMO Stock to holders of GGD Stock (the "GMO Dividend") and released from escrow 3,929,000 shares of GMO Stock held by former PharmaGenics shareholders.

Management of GMO currently believes that the existing cash balances, revenues generated from SAGE agreements, committed research funding from collaborators and cash available under the New Equity Line will enable GMO to maintain its current and planned operations through 2000. Substantial additional funds will be required to complete development and commercialization of GMO's

products and services (other than SAGE services). In addition, GMO's cash requirements may vary materially from those now planned as a result of numerous factors, including progress of GMO's research and development programs, achievement of milestones under strategic alliance arrangements, the ability of GMO to establish and maintain additional strategic alliances and licensing arrangements, the progress of development efforts of GMO's strategic partners, competing technological and market developments, the costs involved in enforcing patent claims and other intellectual property rights, the development of competitor products and services and the cost and timing of regulatory approvals. Insufficient funds may require GMO to delay, scale back or eliminate certain of its programs or to license third parties to commercialize technologies or products that GMO would otherwise undertake itself.

GMO is expected to experience significant operating losses at least through fiscal year 2002 as its research and development and clinical trial programs expand. There can be no assurance that GMO will ever achieve a profitable level of operations or that profitability, if achieved, can be sustained on an ongoing basis. In addition, Genzyme's management and accounting policies provide that to the extent GMO is unable to utilize its operating losses or other projected tax benefits to reduce its current or deferred income tax expense, such losses or benefits may be reallocated to another division on a quarterly basis.

Accordingly, although the actual payment of taxes is a corporate liability of Genzyme as a whole, separate financial statements will be prepared for each division and any losses that cannot be utilized by GMO will not be carried forward to reduce the taxes allocable to GMO's earnings in the future. This could result in GMO being charged a greater portion of the total corporate tax liability and reporting lower earnings available to GMO stockholders in the future than would have been the case if GMO had retained its losses or other benefits in the form of a net operating loss carryforward.

For a discussion of the demands, commitments and events that may affect the liquidity and capital resources of Genzyme Corporation, including GMO, see Management's Discussion and Analysis of Genzyme Corporation and Subsidiaries' Financial Condition and Results of Operations -- Liquidity and Capital Resources, included in this Annual Report.

NEW ACCOUNTING PRONOUNCEMENTS, EURO, YEAR 2000 AND MARKET RISK

See "Management's Discussion and Analysis of Genzyme Corporation and Subsidiaries' Financial Condition and Results of Operations -- Liquidity and Capital Resources" included in this Annual Report.

FACTORS AFFECTING FUTURE OPERATING RESULTS

The future operating results of Genzyme Molecular Oncology could differ materially from the results described above due to the risks and uncertainties described below and under the heading "Management's Discussion and Analysis of Genzyme Corporation and Subsidiaries' Financial Condition and Results of Operations -- Factors Affecting Future Operating Results" included in this Annual Report.

LACK OF SIGNIFICANT REVENUES; EARLY STAGE OF PRODUCT DEVELOPMENT

Genzyme Molecular Oncology's products and services will not generate significant revenue for several years. Genzyme Molecular Oncology's service business around its SAGE(TM) differential gene expression technology is its only program that is not at an early stage of development. To date, these services have generated only modest revenue, and there are several other companies that provide genomics services that compete with SAGE(TM). Prior to commercializing any other products and services, Genzyme Molecular Oncology will have to conduct substantial research and development, undertake preclinical and clinical testing and pursue regulatory approvals. There can be no assurance that these efforts will be successful. Clinical trials, for example, may not support the safety or effectiveness of a particular product or service. Currently, Genzyme Molecular Oncology's gene therapy products for melanoma are its only therapeutic products in clinical development. There can be no assurance that Genzyme Molecular Oncology will not encounter problems in clinical trials that will cause it to delay or suspend the trials. In addition, gene therapy is a theoretically promising therapeutic approach that has many technical obstacles to be overcome. No gene therapy products have been approved to date for sale in the U.S. or internationally.

SIGNIFICANT OPERATING LOSSES

It is expected that Genzyme Molecular Oncology will have significant operating losses for the next several years. Genzyme Molecular Oncology plans to spend substantial amounts of money on, among other things: (i) commercialization of the SAGE(TM) technology; (ii) research and development; (iii) preclinical and clinical testing; and (iv) pursuing regulatory approvals. There can be no assurance that the efforts underlying these expenditures will be successful or that Genzyme Molecular Oncology's operations will ever be profitable. It may be years before Genzyme Molecular Oncology generates any revenue from sales of products or services other than from the SAGE(TM) technology.

It is anticipated that Genzyme Molecular Oncology's current cash resources, together with amounts available under a line of credit from Genzyme General and revenues generated from SAGE(TM), license agreements and committed research funding from collaborators, will be sufficient to fund its operations through 2000. However, Genzyme Molecular Oncology's cash needs may differ from those planned because of many factors, including: (i) the results of research and development and clinical testing; (ii) the achievement of milestones under existing strategic alliances; (iii) the ability to establish and maintain additional strategic alliances and licensing arrangements; (iv) the enforcement of patent and other intellectual property rights; (v) the development of competitive products and services; and (vi) the ability to satisfy regulatory requirements of the FDA and other government authorities.

Genzyme Molecular Oncology may require significant additional financing to continue operations at anticipated levels. There can be no assurance that Genzyme Molecular Oncology will be able to obtain any additional financing or

find it on favorable terms. If Genzyme Molecular Oncology has insufficient funds or is unable to raise additional funds, it may delay, reduce or eliminate certain of its programs. Genzyme Molecular Oncology may also have to give rights to third parties to attempt to commercialize technologies or products that it would otherwise commercialize itself.

UNCERTAINTY REGARDING PATENTS AND PROTECTION OF PROPRIETARY TECHNOLOGY

Genzyme Molecular Oncology's long-term success largely depends on its ability to market technologically competitive products. Genzyme Molecular Oncology can prevent unauthorized third parties from using proprietary rights relating to its products and services only if these rights are covered by patents or are kept confidential as trade secrets.

Third party patent rights and pending patent applications filed by third parties, if issued, may cover some of the therapeutic products Genzyme Molecular Oncology Division is developing or testing. As a result, it may be required to obtain licenses from the holders of these patents in order to test, use or market certain products and services. There can be no assurance that these licenses will be available on acceptable terms, if at all.

Several patents have recently been issued that may affect Genzyme Molecular Oncology's business. The first is a U.S. patent issued to an academic institution that claims to cover the use of any recombinant viral vector in gene therapy, including adenoviral vectors. Based on public statements by the academic institution, Genzyme Molecular Oncology understands that the institution intends to make non-exclusive licenses under this patent widely available. The second is a group of U.S. and European patents that recently issued to a third party that relate to the collection and analysis of gene expression data from chemically exposed mammalian, plant and yeast cells. The third party has invited Genzyme to negotiate for a license for these patents. The third is a U.S. patent recently issued to a third party relating to methods for introducing DNA sequences encoding gene products into mammals systemically using lipid carriers. Genzyme Molecular Oncology is in the process of evaluating the scope and validity of each of these patents to determine whether obtaining licenses to these patents is necessary.

Genzyme Molecular Oncology Division has a right of first negotiation to exclusively license the rights to inventions made by the National Cancer Institute relating to its use of adenoviral vectors for the tumor antigens MART-1 and gp100. In addition, Genzyme Molecular Oncology may negotiate for pre-existing rights to MART-1 and gp100 held by National Cancer Institute. Genzyme Molecular Oncology is aware of a U.S. patent issued to a third party which appears to cover the MART-1 gene. Genzyme Molecular Oncology is continuing to evaluate this patent and is in discussions with the patent holder regarding a non-exclusive license to the MART-1 gene. Genzyme Molecular Oncology is also aware of two published Patent Cooperation Treaty applications by two different third party applicants which appear to cover the gp100 gene. Accordingly, there can be no assurance that the National Cancer Institute will ultimately obtain the patent rights to gp100. Genzyme Molecular Oncology may need to obtain licenses from both the National Cancer Institute and others in order to commercialize immunotherapy products based on MART-1 and gp100.

There can be no assurance that the patents issued or licensed to Genzyme will remain free from challenge by third parties. If Genzyme Molecular Oncology becomes involved in litigation to defend itself in patent suits brought by third parties or if it initiates such suits, it could consume a substantial portion of Genzyme Molecular Oncology's resources. Any legal action against Genzyme Molecular Oncology or its strategic partners claiming damages or seeking to stop commercial activities relating to the affected products and processes could subject Genzyme Molecular Oncology to potential liability for damages.

These actions may also require Genzyme Molecular Oncology or its strategic partner to obtain a license in order to continue to manufacture or market the affected products and services. There can be no assurance that Genzyme Molecular Oncology or its strategic partner would prevail in any legal action. If Genzyme Molecular Oncology is required to obtain a license, there can be no assurance that one would be made on acceptable terms, if at all.

Genzyme Molecular Oncology also relies upon trade secrets, proprietary know-how and continuing technological innovation to remain competitive. There can be no assurance that other parties will not independently develop such know-how or otherwise obtain access to Genzyme Molecular Oncology's technology. While Genzyme Molecular Oncology's employees, consultants and corporate partners with access to proprietary information are generally required to enter into confidentiality agreements, there can be no assurance that these agreements will be honored. In addition, some of Genzyme Molecular Oncology's consultants have developed portions of its proprietary technology at universities or in governmental laboratories. These universities or governmental authorities may

claim rights to the intellectual property arising out of the research performed at the university or governmental laboratory.

RELIANCE ON COLLABORATORS

Genzyme Molecular Oncology's strategy to develop and commercialize certain of its products and services entails entering into various arrangements with both academic collaborators and corporate partners and licensees. Genzyme Molecular Oncology will be dependent on the subsequent success of these parties in performing research, preclinical and clinical testing and marketing. These arrangements may require Genzyme Molecular Oncology to transfer certain material rights to such corporate partners and licensees. While Genzyme Molecular Oncology believes its collaborators and licensees will have an economic motivation to succeed in performing their contractual responsibilities, in some cases the amount and timing of resources to be devoted to their collaboration with Genzyme Molecular Oncology, and the ability to terminate the collaboration, will be controlled by the collaborators. Consequently, there can be no assurance that any revenues or profits will be derived from such arrangements, that any of Genzyme Molecular Oncology's current strategic alliances will be continued or not terminated early or that Genzyme Molecular Oncology will be able to enter into future collaborations.

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GENZYME MOLECULAR ONCOLOGY
COMBINED STATEMENTS OF OPERATIONS

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS, EXCEPT PER SHARE AMOUNTS)	FOR THE YEARS ENDED DECEMBER 31, 1998	1997	1996
<S>	<C>	<C>	<C>
Revenues:			
Service Revenue	$ 2,229	$ 467	$ --
Service revenue-related party	466	--	--
Research and development-related party	2,177	315	--
Research and development	14,535	--	--
Total revenues	19,407	782	--
Operating costs and expenses:			
Cost of service revenue	1,374	50	--
Cost of research and development revenue	4,073	287	--
Selling, general and administrative	7,155	2,118	185
Research and development	12,743	5,341	818
Amortization of intangibles	11,983	5,127	--
Charge for in-process technology	--	7,000	--
Total operating costs and expenses	37,328	19,923	1,003
Operating loss	(17,921)	(19,141)	(1,003)
Other income (expenses):			
Equity in net loss of joint venture	(1,647)	(258)	--
Interest income	782	392	--
Interest expense	(2,968)	(1,663)	--
Total other income (expenses)	(3,833)	(1,529)	--
Loss before income taxes	(21,754)	(20,670)	(1,003)
Tax benefit	2,647	1,092	--
Net loss attributable to Genzyme Molecular Oncology Stock	$(19,107)	$(19,578)	$(1,003)
Net loss per Genzyme Molecular Oncology basic and diluted common share:			
Net loss	$ (3.81)		
Weighted average shares outstanding	5,019		
Pro forma net loss per Genzyme Molecular Oncology basic and diluted common share:			
Pro forma net loss		$ (4.98)	$ (0.26)
Pro forma weighted average shares outstanding		3,929	3,929

Net loss attributable to Genzyme Molecular Oncology Stock.....	$(19,107)	$(19,578)	$(1,003)
Other comprehensive income (loss), net of tax:			
Unrealized gains (losses) on securities arising during the period....	7	(7)	--
Other comprehensive income.....	7	(7)	--
Comprehensive loss.....	$(19,100)	$(19,585)	$(1,003)

</TABLE>

The accompanying notes are an integral part of these combined financial statements.

GENZYME MOLECULAR ONCOLOGY
COMBINED BALANCE SHEETS

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS)	DECEMBER 31, 1998	1997
ASSETS		
<S>	<C>	<C>
Current assets:		
Cash and cash equivalents.....	$10,868	$15,010
Short-term investments.....	1,032	5,170
Accounts receivable.....	5,931	117
Other.....	85	706
Total current assets.....	17,916	21,003
Equipment, net.....	791	487
Long-term investments.....	-	1,049
Intangibles, net.....	17,245	30,688
Investment in joint venture.....	-	574
Total assets.....	$35,952	$53,801
LIABILITIES AND DIVISION EQUITY		
Current liabilities:		
Accrued expenses.....	$ 1,273	$ 2,015
Due to Genzyme General.....	4,773	5,434
Payable to joint venture.....	1,181	-
Deferred revenue.....	1,500	1,583
Other current liabilities.....	-	18
Total current liabilities.....	8,727	9,050
Long-term debt.....	-	5,000
Convertible debentures, net.....	-	17,024
Note payable to Genzyme General.....	-	2,582
Deferred tax liability.....	3,861	6,509
Other.....	-	170
Total liabilities.....	12,588	40,335
Commitments and contingencies (See Notes)		
Division equity (Note L).....	23,364	13,466
Total liabilities and division equity.....	$35,952	$53,801

</TABLE>

The accompanying notes are an integral part of these combined financial statements.

GENZYME MOLECULAR ONCOLOGY
COMBINED STATEMENTS OF CASH FLOWS
<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS)	FOR THE YEARS ENDED DECEMBER 31,		
	1998	1997	1996
<S>	<C>	<C>	<C>
OPERATING ACTIVITIES:			
Net loss	$(19,107)	$(19,578)	$(1,003)
Reconciliation of net loss to net cash used by operating activities:			
Depreciation and amortization	12,353	5,245	--
Charge for in-process technology	--	7,000	--
Deferred tax benefit	(2,647)	(1,092)	--
Accretion of debt conversion feature	1,867	957	--
Equity in loss of joint venture	1,647	258	--
Accrued interest/amortization of marketable securities	131	(141)	--
Non-cash compensation expense	114	58	--
Increase (decrease) in cash from working capital:			
Accounts receivable	(5,815)	(117)	--
Other current assets	986	(773)	--
Accrued expenses, deferred revenue and other	1,779	2,139	--
Due to Genzyme General	553	2,011	--
Net cash used by operating activities	(8,139)	(4,033)	(1,003)
INVESTING ACTIVITIES:			
Acquisition of PharmaGenics, Inc., net of acquired cash	--	9	--
Investment in unconsolidated affiliate	--	(724)	--
Purchases of investments	(2,056)	(6,086)	--
Maturities of investment	7,120	--	--
Acquisitions of equipment	(559)	(357)	--
Other	(488)	--	--
Net cash provided (used) by investing activities	4,017	(7,158)	--
FINANCING ACTIVITIES:			
Allocation of debt from Genzyme General	--	5,000	--
Cash allocated from Genzyme General	5,000	--	--
Proceeds from issuance of common stock	7	--	--
Proceeds from issuance of warrants	--	724	--
Proceeds from issuance of convertible debentures, net	--	19,150	--
Repayments of debt	(5,000)	--	--
Parent company investment, Genzyme General	--	1,371	1,003
Other	(27)	(44)	--
Net cash provided (used) by financing activities	(20)	26,201	1,003
Increase (decrease) in cash and cash equivalents	(4,142)	15,010	--
Cash and cash equivalents at beginning of period	15,010	--	--
Cash and cash equivalents at end of period	$ 10,868	$ 15,010	$ --

Supplemental disclosure of non-cash transaction:
Acquisition of PharmaGenics, Inc. -- See Note B
Conversion of debt to equity -- See Notes C and G
</TABLE>

The accompanying notes are an integral part of these combined financial statements.

NOTE A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BUSINESS

Genzyme Molecular Oncology is engaged in development and commercialization of novel cancer products focusing on cancer vaccines and angiogenesis inhibitors through the integration of its gene discovery, gene therapy, small molecule drug discovery, protein therapeutic and genetic diagnostic efforts. GMO is a division of Genzyme Corporation and has a separate series of common stock intended to reflect its value and track its economic performance. Genzyme formed GMO in June 1997 by acquiring PharmaGenics and combining it with several of Genzyme's existing programs in the field of oncology. Operations under the existing Genzyme programs that formed GMO commenced December 1, 1994 (Date of Inception).

BASIS OF PRESENTATION

The combined financial statements of GMO include the balance sheets, results of operations and cash flows of Genzyme's molecular oncology operations, which were part of Genzyme General through June 18, 1997. GMO's financial statements are prepared using amounts included in the consolidated financial statements of Genzyme and its subsidiaries ("Genzyme's Consolidated Financial Statements"). Corporate allocations reflected in these financial statements are determined based upon methods which management believes to be reasonable.

On June 18, 1997, Genzyme acquired PharmaGenics. Therefore, from June 18, 1997, the results of PharmaGenics are included in GMO's financial statements. The stockholders of PharmaGenics received approximately 3,929,000 shares of GMO Stock in the merger. As compensation to Genzyme General for its contribution to GMO, 6,000,000 GMO Designated Shares were reserved for issuance. GMO Designated Shares are shares of GMO Stock that are not outstanding, but which the Genzyme Board may from time to time issue, sell or otherwise distribute without allocating the proceeds to GMO. (See Note L., "Division Equity" below).

PRINCIPLES OF COMBINATION

The accompanying combined financial statements of GMO reflect the combined accounts of all of GMO's businesses. The equity method is used to account for investments in companies and joint ventures in which GMO has a substantial ownership interest (20% to 50%), or in which GMO participates in policy decisions. Accordingly, GMO's share of the earnings or losses of these entities is included in the computation of GMO's net loss. (See Note I. "Investments", to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference) All significant intercompany items and transactions have been eliminated in combination. Certain items in GMO's combined financial statements for the years ended December 31, 1997 and 1996 have been reclassified to conform with the December 31, 1998 presentation.

FINANCIAL INFORMATION

Genzyme provides to holders of GMO Stock separate financial statements, management's discussion and analysis, descriptions of business and other relevant information for GMO. Notwithstanding the allocation of assets and liabilities, including contingent liabilities, between Genzyme General, GTR and GMO for the purposes of preparing their respective financial statements, Genzyme Corporation continues to hold title to all of the assets and is responsible for all of the liabilities allocated to each of the divisions. Holders of GMO Stock are common stockholders of Genzyme and have no specific claim against the assets attributed to GMO. Liabilities or contingencies of Genzyme General, GTR or GMO could affect the financial condition or results of operations of the other divisions. Accordingly, the GMO combined financial statements should be read in connection with Genzyme's Consolidated Financial Statements included in this Annual Report.

Accounting policies and financial information specific to GMO are presented in these GMO combined financial statements. Accounting policies and financial information relevant to Genzyme, Genzyme General, GTR and GMO, collectively, are presented in Genzyme's Consolidated Financial Statements. The Company prepares the financial statements of GMO in accordance with generally accepted accounting principles, the management and accounting policies of Genzyme and the divisional accounting policies approved by the Genzyme Board (see Note A., "Summary of Significant Accounting Policies," to Genzyme's Consolidated Financial Statements which is incorporated herein by reference). Except as otherwise provided in such policies, the management and accounting policies applicable to the presentation of the financial statements of GMO may be modified or rescinded at the sole discretion of the Genzyme Board without approval of the stockholders, subject only to the Genzyme Board's fiduciary duty to Genzyme's stockholders.

DIVIDEND POLICY

Under the terms of the Charter, dividends that may be paid to the holders of GMO

Stock will be limited to the lesser of funds of Genzyme legally available for the payment of dividends and the Available GMO Dividend Amount, as defined in the Charter. Although there is no requirement to do so, the Genzyme Board would declare and pay cash dividends on GMO Stock, if any, based primarily on earnings, financial condition, cash flow and business requirements of Genzyme. Genzyme has never paid any cash dividends on shares of its capital stock. Genzyme currently intends to retain its earnings to finance future growth and therefore does not anticipate paying any cash dividends on GTR Stock in the foreseeable future.

REVENUE RECOGNITION

GMO recognizes service revenue when the service procedures have been completed or applicable milestones have been achieved. Revenues from research and development contracts are recognized over applicable contractural periods as specified by each contract and as costs related to the contracts are incurred.

NET LOSS PER SHARE

Historical loss per share information is presented for the year ending December 31, 1998, but is omitted for the years ended December 31, 1997 and 1996 as there were no shares of GMO Stock outstanding prior to June 18, 1997. Pro forma net loss per share is disclosed for the years ending December 31, 1997 and 1996. The pro forma shares outstanding represent the shares of GMO Stock issued to effect the acquisition of PharmaGenics. Following issuance of the GMO Stock, the method of calculating earnings per share for GMO reflects the terms of the Charter, which provides that dividends may be declared and paid out of the lesser of funds of Genzyme legally available for the payment of dividends and the Available GMO Dividend Amount, as defined.

Net income (loss) per share attributable to Genzyme General, GTR and GMO gives effect to the management and accounting policies adopted by the Genzyme Board and is reported in lieu of consolidated per share data. Genzyme computes net income (loss) per share for each division by dividing the earnings attributable to each series of stock by the weighted average number of shares of that stock outstanding during the period, for basic earnings per share, and by the weighted average shares of that stock, plus other potentially dilutive securities outstanding during the applicable period for diluted earnings per share. Earnings (loss) attributable to GMO Stock equals GMO's net income or loss for the relevant period determined in accordance with generally accepted accounting principles in effect at such time, adjusted by the amount of tax benefits allocated to or from the other divisions pursuant to the management and accounting policies adopted by the Genzyme Board.

The following table sets forth the computation of basic and diluted earnings per share:

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS, EXCEPT PER SHARE AMOUNTS)	DECEMBER 31,		
	1998	1997	1996
<S>	<C>	<C>	<C>
Net Loss	$(19,107)	$(19,578)	$(1,003)
Basic and diluted weighted average shares outstanding	5,019		
Net loss per common share - basic and diluted	$ (3.81)		
Pro forma basic and diluted weighted average shares outstanding		3,929	3,929
Pro forma net loss per common share -- basic and diluted		$ (4.98)	$ (0.26)

</TABLE>

During the years ended December 31, 1998, and 1997, certain securities were not included in the computation of diluted earnings per share because they would have an anti-dilutive effect due to the net loss for the years. Such securities include:

<TABLE>
<CAPTION>

Amount in thousands	December 31, 1998	1997
<S>	<C>	<C>
Shares of GMO Stock issuable for options	1,158	826
Warrants to purchase GMO Stock	10	10
GMO Designated Shares	1,410	6,000
Total shares excluded from the GMO diluted earnings per share calculation	2,578	6,836

</TABLE>

During the year ended December 31, 1996, there were no securities outstanding to be considered in this calculation.

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ACCOUNTING FOR STOCK-BASED COMPENSATION
GMO has elected the disclosure-only alternative permitted under Statement of Financial Accounting Standards ("SFAS") No. 123, "Accounting for Stock-Based Compensation". GMO has disclosed net income (loss) and earnings per share for 1998 and pro forma net loss and pro forma loss per share information using the fair value based method for 1997, as there were no GMO Stock Options issued under the above mentioned plan prior to 1997 (See Note L., "Division Equity" below).

NOTE B. PHARMAGENICS MERGER

Genzyme acquired PharmaGenics on June 18, 1997. This transaction was accounted for as a purchase. The aggregate purchase price of $27.5 million (net of $0.5 million, which represents the fees payable by PharmaGenics in connection with the merger and are included in accrued expenses), plus acquisition costs of $2.5 million and assumed liabilities of $4.9 million, has been allocated to the acquired tangible and intangible assets based on their estimated respective fair values (amounts in thousands):

<TABLE>
<CAPTION>

<S>	<C>
Equipment	$ 208
Other assets	50
Completed technology rights (to be amortized over 3 years)	20,000
Goodwill (to be amortized over 3 years)	15,193
Deferred tax liability (to be amortized over 3 years)	(7,600)
In-process technology	7,000
	$34,851

</TABLE>

In 1998 there were certain adjustments to the assumed liabilities totaling $0.5 million.

The $7.0 million allocated to in-process technology represents the value assigned to PharmaGenics's programs which are still in the development stage and for which there is no alternative use. The value assigned to these programs (both complete and in-process) has been determined by selecting the maximum anticipated value of these programs, based on comparable technologies. The amount allocated to in-process technology was charged to operations in June 1997, the period in which the merger was consummated.

The deferred tax liability of $7.6 million results from the temporary difference between the book and tax basis of the completed technology computed at a 38.0% incremental tax rate.

If the acquisition had taken place at the beginning of 1997, after giving effect for adjustments for increased amortization, increased interest expense, the tax benefit from the amortization of the deferred tax liability and the one time charge for in-process technology, the pro forma revenues, net loss and net loss per share for GMO would have been as follows. This pro forma information does not purport to be indicative of what would have occurred had the acquisition been made as of those dates or of results which may occur in the future.
<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS, EXCEPT PER SHARE AMOUNTS)	YEAR ENDED DECEMBER 31, 1997
	(Unaudited)
<S>	<C>
Pro forma revenues	$ 857
Pro forma net loss	$(25,926)
Pro forma basic and diluted net loss per share	$ (6.60)
Pro forma weighted average shares outstanding	3,929

</TABLE>

In connection with the PharmaGenics merger, a warrant to purchase certain shares of PharmaGenics Series A Preferred Stock was converted to a warrant to purchase approximately 10,000 shares of GMO Stock at $8.04 per share.

NOTE C. CREDIT FACILITY

Genzyme had made a credit facility (the "PGI Credit Facility") available to PharmaGenics to fund PharmaGenics' documented operating costs prior to completion of the merger. As of June 18, 1997, PharmaGenics had drawn $2,450,000 under the PGI Credit Facility. Following the merger, amounts advanced under the PGI Credit Facility were evidenced by a Subordinated Convertible Promissory Note which bore interest subsequent to June 18, 1997 at the best borrowing rate available to Genzyme (6.15% per annum as of December 31, 1997) and was due to mature on February 10, 2002 (the "Maturity Date"). Amounts drawn under the PGI Credit Facility were a liability allocated to GMO and the outstanding principal amount was treated as an intracompany loan by Genzyme General to GMO, due on the Maturity Date and convertible at any time prior thereto, at the Genzyme Board's option, into GMO Designated Shares pursuant to an established formula. In September 1998, the Genzyme Board approved the exchange of amounts drawn under the PGI Credit Facility in the amount of $2,450,000, plus accrued interest of $246,080, for approximately 386,000 GMO Designated Shares. The number of GMO Designated Shares created as a result of the exchange was based on the fair value of the GMO Stock ($7.00) as determined by the Genzyme Board. The amount of the note and accrued interest was reclassified to division equity upon the exchange.

NOTE D. POLICIES GOVERNING THE RELATIONSHIP OF GENZYME'S DIVISIONS

Genzyme allocates certain corporate costs for general and administrative, research and development, and cash management services to the divisions. Genzyme files a consolidated tax return and allocates income taxes to the divisions in accordance with the policies described below. With the exception of the policy regarding Interdivision Asset Transfers, policies may be modified or rescinded by action of the Genzyme Board, or the Genzyme Board may adopt additional policies, without approval of the stockholders of Genzyme, subject only to the Genzyme Board's fiduciary duty to the Genzyme stockholders. In addition, generally accepted accounting principles require that any change in policy be preferable (in accordance with such principles) to the previous policy.

FINANCIAL MATTERS
The Company manages the financial activities of Genzyme General, GTR and GMO. These financial activities include: the investment of surplus cash; the issuance, repayment and repurchase of short-term and long-term debt; and the issuance and repurchase of equity instruments.

Loans may be made from time to time between divisions. Any such loan of $1.0 million or less will mature within 18 months and interest will accrue at the lowest borrowing rate available to Genzyme for a loan with similar terms and duration. Amounts borrowed in excess of $1.0 million will require approval of the Genzyme Board, which approval shall include a determination by the Genzyme Board that the material terms of such loan, including the interest rate and maturity date, are fair and reasonable to each participating division and to holders of the common stock representing such division.

SHARED SERVICES
GMO operates as a division of Genzyme with its own personnel and financial resources, but GMO has access to Genzyme's extensive research and development capabilities, manufacturing facilities, worldwide clinical development and regulatory affairs staffs, marketing, infrastructure and experience in raising capital. Genzyme's corporate general and administrative, selling and marketing, and research and development expenses have been allocated to GMO in a reasonable and consistent manner based on the utilization by GMO of the services to which such costs relate. Genzyme's corporate general and administrative and research and development functions are performed primarily by Genzyme General. Management believes that such allocation is a reasonable estimate of such expenses. Genzyme General's allocations to GMO for general and administrative and selling and marketing expenses were $5.7 million, $2.1 million, and $0.2 million in 1998, 1997 and 1996, respectively. Genzyme General allocations to GMO for research and development expenses were $12.1 million, $5.3 million, and $0.8 million in 1998, 1997 and 1996 respectively.

INTERDIVISIONAL INCOME TAX ALLOCATIONS
GMO is included in the consolidated U.S. federal income tax return filed by Genzyme. Genzyme allocates current and deferred taxes to the divisions using the asset and liability method of accounting for income taxes as if the divisions were separate taxpayers. Accordingly, the realizability of deferred tax assets is assessed at the division level. The sum of the amounts calculated for individual divisions of Genzyme may not equal the consolidated amount under this approach.

Income taxes are allocated to each division based upon the financial statement income, taxable income, credits and other amounts properly allocable to such division under generally accepted accounting principles as if each division were a separate taxpayer; provided, however, that as of the end of any fiscal quarter of Genzyme, any projected annual tax benefit attributable to any division that cannot be utilized by such division to offset or reduce its current or deferred income tax expense may be allocated to the other divisions in proportion to their taxable income without any compensating payment or allocation. The treatment of such allocation for purposes of earnings per share computation is discussed in Note A., "Summary of Significant Accounting Policies -- Net Income (Loss) Per Share," to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference.

ACCESS TO TECHNOLOGY AND KNOW-HOW

GMO has free access to all technology and know-how of Genzyme that may prove useful in GMO's business, subject to any obligations or limitations applicable to Genzyme.

INTERDIVISION ASSET TRANSFERS

The following policy regarding the transfer of assets between divisions may not be changed by the Genzyme Board without the approval of the holders of GTR Stock and GMO Stock, each voting as a separate class; provided, however, that if a policy change affects GTR or GMO alone, only holders of shares representing the affected division will be entitled to a class vote on such matter.

The Genzyme Board may at any time and from time to time reallocate any program, product or other asset from one division to any other division. All such reallocations will be done at fair market value, determined by the Genzyme Board, taking into account, in the case of a program under development, the commercial potential of the program, the phase of clinical development of the program, the expenses associated with realizing any income from the program, the likelihood and timing of any such realization and other matters that the Genzyme Board and its financial advisors, if any, deem relevant. The consideration for such reallocation may be paid by one division to another in cash or other consideration with a value equal to the fair market value of the assets being reallocated or, in the case of a reallocation of assets from Genzyme General to GTR or GMO, the Genzyme Board may elect to account for such reallocation of assets as an increase in Designated Shares representing the division to which such assets are reallocated. Notwithstanding the foregoing, no Key GMO Program, as defined in the management and accounting policies, may be transferred out of GMO without a class vote of the holders of GMO Stock.

OTHER INTERDIVISION TRANSACTIONS

From time to time, a division may engage in transactions with one or more other divisions or jointly with one or more other divisions and with one or more third parties. Such transactions may include agreements by one division to provide products and services for use by another division and joint ventures or other collaborative arrangements involving more than one division to develop new products and services jointly and with third parties. SG&A or research and development performed by one division for the benefit of another division will be charged to the division for which work is performed on a cost basis. The division performing the research will not recognize revenue as a result of performing such research. Other interdivisional transactions shall be on terms and conditions that would be obtainable in transactions negotiated with unaffiliated third parties. Any interdivisional transaction to be performed on terms and conditions other than those previously set forth and that is material to one or more of the participating divisions will require the approval of the Genzyme Board, which approval shall include a determination by the Genzyme Board that the transaction is fair and reasonable to each participating division and to holders of the common stock representing each such division.

If a division (the "purchasing division") requires any product or service from which another division (the "selling division") derives revenue from sales to third parties (a "commercial product or service"), the purchasing division may solicit from the selling division a bid to provide such commercial product or service in addition to any bids solicited by the purchasing division from third parties. Subject to determination by the Genzyme Board that the bid of the selling division is fair and reasonable to each division and to their respective stockholders and that the purchasing division is willing to accept the selling division's bid, the purchasing division may accept any bid deemed to offer the most favorable terms and conditions for providing the commercial product or service sought by the purchasing division. As of December 31, 1998 GMO recorded $0.5 million of service revenue for services performed for Genzyme General.

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NOTE E. EQUIPMENT

Equipment at December 31 includes the following:

(DOLLARS IN THOUSANDS)	1998	1997
Equipment	$1,111	$552
Furniture and fixtures	13	13
	1,124	565
Less accumulated depreciation	(333)	(78)
Equipment, net	$ 791	$487

Depreciation expense was $255,000 in 1998 and $74,000 in 1997.

NOTE F. REVOLVING CREDIT FACILITY

Genzyme has a $225 million revolving credit facility with a syndicate of commercial banks. As of December 31, 1998, GMO had repaid the $5.0 million of debt it had outstanding under the revolving credit facility and currently has no amounts outstanding under this credit facility. GMO incurred $73,000 and $160,000 of interest expense in 1998 and 1997, respectively, related to this credit facility. (See Note K., "Long-Term Debt And Leases," to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference).

NOTE G. GMO DEBENTURES

Effective August 1998, all of the holders of the GMO Debentures exercised their option to exchange their GMO Debentures, plus accrued interest of $1.2 million, into the GGD Debentures. Approximately 3,029,000 GMO Designated Shares were reserved for issuance in connection with the exchange. The GMO Designated Shares are subject to adjustment based on the fair market value of GMO Stock on October 16, 1999. The number of GMO Designated Shares created as a result of the exchange was based on the fair value of the GMO Stock ($7.00) as determined by the Genzyme Board. The amount of the note and accrued interest was reclassified to division equity upon the exchange. (See Note L. "Division Equity" below and Note K., "Long-Term Debt and Leases," to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference).

NOTE H. GMO EQUITY LINE

In 1997, the Genzyme Board approved the allocation of up to $25.0 million in cash to GMO from Genzyme General (the "GMO Equity Line"). The amount available was reduced to $5.0 million as a result of the issuance of the GMO Debentures in 1997.

In September 1998, GMO made a draw of the remaining $5.0 million available under the GMO Equity Line. In August 1998, the Genzyme Board approved the allocation by Genzyme General of up to an additional $30.0 million in cash to GMO in exchange for an increase in the number of GMO Designated Shares. This is in addition to the GMO Equity Line. GMO has not yet drawn any funds under this arrangement.

NOTE I. REGISTRATION STATEMENT

In April 1998, Genzyme filed with the Securities and Exchange Commission an amended registration statement on Form S-3 covering the initial public offering of 3,450,000 shares of GMO Stock (including 450,000 shares issuable upon exercise of the underwriters' over-allotment option). In September 1998, GMO withdrew the registration statement because it no longer intended to conduct the offering of shares of GMO Stock contemplated in the registration statement. In 1998, GMO recorded a $0.6 million charge for previously capitalized costs in connection with this offering.

NOTE J. STRESSGEN/GENZYME LLC

The disclosures relating to StressGen/Genzyme LLC are included in Note I., "Investments," to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference.

For the years ended December 31, 1998 and 1997, GMO recorded $2.2 million and $0.3 million, respectively, of research and development revenue and $2.0 million and $0.3 million, respectively, in costs of research and development revenue, respectively, related to services billed to StressGen/Genzyme LLC. GMO had a receivable of $0.1 million from StressGen/Genzyme LLC at December 31, 1998, which is included in other current assets. Because CMDF has the right to require Genzyme and StressGen to purchase CMDF's membership interest, Genzyme records 50% of the losses incurred by the joint venture. For the years ended December 31, 1998 and December 31, 1997, GMO recorded $1.6 million and $0.3 million, respectively, of equity in net loss of joint venture. Summary financial

information for StressGen/Genzyme LLC is not presented as the impact of StressGen/Genzyme LLC's activities on the GMO's statement of operations for the years ended December 31, 1998 and 1997 is not considered to be material.

NOTE K. COMMITMENTS AND CONTINGENCIES

From time to time Genzyme has been subject to legal proceedings and claims arising in connection with its business. At December 31, 1998, there were no asserted claims against Genzyme which, in the opinion of management, if adversely decided, would have a material adverse effect on GMO's financial position and results of operations.

NOTE L. DIVISION EQUITY

The following presents the equity of GMO for the periods presented. The presentation of division equity reflects the amounts expended by Genzyme on programs being attributed to GMO and, accordingly, such amounts are reflected as a parent company investment.

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS)	DECEMBER 31,		
	1998	1997	1996
<S>	<C>	<C>	<C>
Balance at beginning of period	$13,466	$ --	$ --
Net loss	(19,107)	(19,578)	(1,003)
Allocation from Genzyme General for GMO Designated Shares	5,000	1,381	1,003
Conversion of note payable to Genzyme General into GMO Designated Shares	2,696	--	--
Exercise of stock options	7	--	--
Shares issued in connection with acquisition of PharmaGenics	--	27,369	--
Sale of warrants	--	724	--
Unearned compensation	114	(116)	--
Value of debt conversion feature	--	3,529	--
Conversion of GMO debentures to GGD debentures for GMO Designated Shares	19,802	--	--
Unrealized gain (loss) on investments	7	(7)	--
Other	1,379	164	--
Balance at end of period	$23,364	$13,466	$ --

</TABLE>

At December 31, 1998 and 1997, 40,000,000 shares of GMO Stock were authorized for issuance and 12,648,295 and 3,929,572 shares, respectively, were issued and outstanding.

On November 16, 1998, Genzyme distributed 8,717,000 shares of GMO Stock to holders of GGD Stock and released from escrow 3,929,000 shares of GMO Stock held by former PharmaGenics shareholders.

As of December 31, 1998 approximately 1,410,000 GMO Designated Shares were reserved for issuance.

PREFERRED STOCK, DIRECTORS' DEFERRED COMPENSATION PLAN, STOCK RIGHTS, STOCK OPTIONS, EMPLOYEE STOCK PURCHASE PLAN, STOCK COMPENSATION PLAN AND GMO DESIGNATED SHARES.

The disclosures relating to Genzyme's preferred stock, Directors' Deferred Compensation Plan, stock rights, stock options, Employee Stock Purchase Plan, Stock Compensation Plans and GMO Designated Shares are included in Note L., "Stockholder's Equity" to Genzyme's Consolidated Financial Statements which is incorporated herein by reference.

At December 31, 1998, approximately 4,139,000 shares of GMO Stock were reserved for issuance under the Company's 1990 Equity Incentive Plan, as amended, 1997 Equity Incentive Plan, 1998 Director Stock Option Plan, as amended, and 1990 Employee Stock Purchase Plan, as amended. At December 31, 1998, approximately 1,158,000 options to purchase shares of GMO Stock were outstanding.

STOCK COMPENSATION PLAN The Company applies Accounting Principles Board Opinion 25 and related interpretations in accounting for its four stock-based compensation plans, the 1997 Equity Incentive Plan and the 1990 Equity Incentive Plan (both of which are stock option plans), the 1990 Employee Stock Purchase Plan (a stock purchase plan), and the 1998 Director Stock Option Plan (a stock option plan) and, accordingly, no compensation expense has been recognized for shares purchased or for options granted to employees with an exercise price equal to fair market value. Had compensation expense for the stock-based compensation plans been determined based on the fair value at the grant dates for options granted and shares purchased under the plans consistent with the method of SFAS 123, GMO's net loss and loss per share would have been as follows (disclosure is presented only for the years ended December 31, 1998 and 1997, as there were no GMO Stock options issued under the above mentioned plans prior to 1997):

<TABLE>
<CAPTION>

(AMOUNTS IN THOUSANDS, EXCEPT FOR PER SHARE INFORMATION)	1998	1997
<S>	<C>	<C>
Net loss:		
As reported	$(19,107)	$(19,578)
Pro forma	$(20,018)	$(19,787)
Basic and diluted loss per share:		
As reported	$ (3.81)	$ (4.98)
Pro forma	$ (3.99)	$ (5.04)

</TABLE>

For assumptions used in the SFAS 123 calculations for GMO for the two years ended December 31, 1998 and 1997 (see Note L., "Stockholders Equity," to Genzyme's Consolidated Financial Statements, which is incorporated herein by reference).

The effects of applying SFAS 123 in this pro forma disclosure are not likely to be representative of the effects of reported net income for future years. SFAS 123 does not apply to awards granted prior to 1995 and additional awards are anticipated in future years.

NOTE M. INCOME TAXES

There was no provision for income taxes due to GMO's continuing operating losses. As part of the acquisition of PharmaGenics, GMO recorded a deferred tax liability of $7.6 million resulting from the difference between the book and tax basis of the completed technology computed at a 38% incremental tax rate. This amount is being amortized over three years consistent with the life of the completed technology. GMO recorded $2,647,000 and $1,092,000 of deferred tax benefit for the years ended December 31, 1998 and 1997, respectively.

The following summarizes GMO's provision for (benefit from) income taxes for the years ended December 31, 1998 and December 31, 1997:

<TABLE>
<CAPTION>

(DOLLARS IN THOUSANDS)	1998	1997
<S>	<C>	<C>
Federal income taxes:		
Current	$ --	$ --
Deferred	(2,438)	(1,006)
State income taxes:		
Current	--	--
Deferred	(209)	(86)
Total income tax benefit	$(2,647)	$(1,092)

</TABLE>

The differences between the effective tax rates and the U.S. federal statutory tax rates for the years ended December 31, 1998 and 1997 were as follows:

<TABLE>
<CAPTION>

<S>	<C>	<C>
U.S. Federal income tax statutory rate	(35.0)%	(35.0)%

State income taxes, net of federal benefit.....	(2.0)	(3.0)
Tax credits.....	(2.5)	(2.4)
Nondeductible amortization.....	8.1	6.4
Nondeductible interest.....	3.0	2.7
Deductions subject to deferred tax valuation allowance .	16.2	22.4
Effective tax rate.....	(12.2)%	(8.9)%

</TABLE>

At December 31, 1998 and 1997, the components of deferred tax assets and liabilities were as follows (in thousands):

<TABLE>
<CAPTION>

	1998	1997
<S>	<C>	<C>
Deferred tax assets:		
Net operating loss carryforwards	$ 8,166	$ 5,250
Tax credits.....	1,003	459
Gross deferred tax asset.....	9,169	5,709
Valuation allowance.....	(9,169)	(5,709)
Net deferred tax asset.....	--	--
Deferred tax liabilities:		
Intangible amortization.....	(3,861)	(6,509)
Net deferred tax liabilities.....	$(3,861)	$(6,509)

</TABLE>

Due to uncertainty surrounding the realization of certain favorable tax attributes, GMO placed a valuation allowance of $9.2 million and $5.7 million for December 31, 1998 and December 31, 1997, respectively, against otherwise recognizable deferred tax assets. At the time GMO recognizes these tax assets in accordance with generally accepted accounting principles, the resulting deferred tax benefits will be reflected in the tax provision for GMO. However, the benefit of these deferred tax assets has been previously allocated to Genzyme General in accordance with the management and accounting policies, and will be reflected as a reduction of GMO net income to determine net income attributable to GMO Stock.

NOTE N. BENEFIT PLANS

For discussion on the Company's benefit plans, see Note P., "Benefit Plans" to Genzyme's Consolidated Financial Statements which is incorporated herein by reference.

NOTE O. SIGNIFICANT CUSTOMERS

GMO has two significant customers that combined accounted for 78% of the total revenue earned during 1998. A large pharmaceutical company accounted for $13.0 million, or 67% of GMO's 1998 total revenue and StressGen/Genzyme LLC accounted for $2.2 million, or 11%, of GMO's 1998 total revenues.

GENZYME MOLECULAR ONCOLOGY

REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and Stockholders of Genzyme Corporation:

In our opinion, the accompanying combined balance sheets and the related combined statements of operations and of cash flows present fairly, in all material respects, the financial position of Genzyme Molecular Oncology (as described in Note A) at December 31, 1998 and 1997, and the results of its

operations and its 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 require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and 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.

As more fully described in Note A to these financial statements, Genzyme Molecular Oncology is a division of Genzyme Corporation; accordingly, the combined financial statements of Genzyme Molecular Oncology should be read in conjunction with the audited consolidated financial statements of Genzyme Corporation and Subsidiaries.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

Boston, Massachusetts
February 23, 1999

Exhibit 21

DESCRIPTION: SUBSIDIARIES OF THE REGISTRANT

<TABLE>
<CAPTION>

NAME	DIRECT PARENT	OWNERSHIP	JURISDICTION OF INCORPORATION
<S>	<C>	<C>	<C>
Allston Landing Corporation	Genzyme Corporation	100%	Massachusetts
Allston Landing Corporation II	Genzyme Corporation	100%	Massachusetts
Deknatel Snowden Pencer, Inc.	Genzyme Corporation	100%	Delaware
Genzyme B.V.	Genzyme Corporation	100%	Netherlands
Genzyme GmbH	Genzyme B.V.	100%	Germany
Genzyme France S.A.	Genzyme B.V.	100%	France
Genzyme Limited	Genzyme Corporation	100%	U.K.
Genzyme Securities Corporation	Genzyme Corporation	100%	Massachusetts
Genzyme Transgenics Corporation	Genzyme Corporation	40%	Massachusetts
Genzyme Virotech GmbH	Genzyme Corporation	100%	Germany
RenaGel LLC	Genzyme Corporation	50%	Delaware

</TABLE>

EXHIBIT 23.1

CONSENT OF INDEPENDENT ACCOUNTANTS

We consent to the incorporation by reference in the registration statements of Genzyme Corporation on Form S-8 (File Nos. 33-8881, 33-15616, 33-26329, 33-29918, 33-35067, 33-37236, 33-41933, 33-55656, 33-68188, 33-58359, 33-60437, 333-10003, 333-33249, 33-30007, 33-68208, 33-58351, 333-33265, 333-10005, 333-33251, 33-22464, 33-29440, 33-51416, 33-68186, 33-58353, 33-58355, 33-60435, 333-33291, 33-21241, 333-42371, 333-64103) and on Form S-3 (File Nos. 33-61853, 333-59513, 333-68629, 33-64901) of our reports, dated February __, 1999 on our audits of the consolidated financial statements and financial statement schedule of Genzyme Corporation, the combined financial statements and financial statement schedule of Genzyme General Division, the combined financial statements and financial statement schedule of Genzyme Tissue Repair Division and the combined financial statements of Genzyme Molecular Oncology Division as of December 31, 1998 and 1997, and for each of the three years in the period ended December 31, 1998, 1997 and 1996, which reports are included in this Annual Report on Form 10-K.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

Boston, Massachusetts

March 30, 1999

<TABLE> <S> <C>

<ARTICLE> 5
<LEGEND>
THIS SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM THE CONSOLIDATED FINANCIAL STATEMENTS OF GENZYME CORPORATION AND SUBSIDIARIES AND IS QUALIFIED IN ITS ENTIRETY BY REFERENCE TO SUCH FINANCIAL STATEMENTS AS PRESENTED IN THE 1998 ANNUAL REPORT ON FORM 10-K FOR GENZYME CORPORATION.
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<EPS-DILUTED> 1.48<F1>
<FN>
<F1>GENZYME CORPORATION REPORTS EARNINGS PER SHARE BASED ON ITS THREE TRACKING STOCKS-GENZYME GENERAL DIVISION COMMON STOCK ("GGD STOCK"), GENZYME TISSUE REPAIR DIVISION COMMON STOCK ("GTR STOCK") AND GENZYME MOLECULAR ONCOLOGY DIVISION COMMON STOCK ("GMO STOCK"). THE EARNINGS PER SHARE DATA PRESENTED ON THIS SCHEDULE REFLECTS THE EARNINGS PER SHARE DATA FOR NET INCOME ATTRIBUTABLE TO GGD STOCK. FOR THE YEAR ENDED DECEMBER 31, 1998, NET INCOME ATTRIBUTABLE FOR GENZYME GENERAL DIVISION WAS $121,053 AND NET INCOME PER SHARE OF GGD STOCK ON A BASIC AND DILUTED BASIS WAS $1.53 AND $1.48, RESPECTIVELY. NET LOSS FOR GENZYME TISSUE REPAIR DIVISION FOR THE YEAR ENDED DECEMBER 31, 1998 WAS $(40,386) OR $(1.99) PER BASIC AND DILUTED SHARE OF GTR STOCK. NET LOSSES FOR GENZYME MOLECULAR ONCOLOGY DIVISION FOR THE YEAR ENDED DECEMBER 31, 1998 WERE $(19,107) OR $(3.81) PER BASIC AND DILUTED SHARE OF GMO STOCK.
</FN>

</TABLE>

EXHIBIT 99.1

MANAGEMENT AND ACCOUNTING POLICIES GOVERNING THE RELATIONSHIP OF GENZYME DIVISIONS

The Genzyme Board of Directors (the "Genzyme Board") has adopted the following policies to govern the management of the General Division, the Tissue Repair Division and the Molecular Oncology Division and the relationships between such Divisions. Except as otherwise provided in the policies, the Genzyme Board may modify or rescind the policies in its sole discretion without approval of the stockholders, subject only to the Genzyme Board's fiduciary duty to Genzyme's stockholders.

1. PURPOSE OF THE TISSUE REPAIR AND MOLECULAR ONCOLOGY DIVISIONS. The purpose of the Tissue Repair Division is to create a business with a comprehensive approach to the field of tissue repair by developing and commercializing a portfolio of novel products for the treatment and prevention of serious tissue injury (excluding products developed on behalf of Genzyme Development Partners, L.P.). The purpose of the Molecular Oncology Division is to create a focused, integrated oncology business that will develop and commercialize novel therapeutic and diagnostic products and services based upon molecular tools and genomic information. In addition to the programs initially assigned to each of the Tissue Repair Division and the Molecular Oncology Division, it is expected that the product and service portfolio of each Division will expand through the addition of complementary programs, products and services developed either internally or externally to the Division, including acquiring or in-licensing programs, products and services from outside of Genzyme. Each of the Tissue Repair Division and the Molecular Oncology Division will be operated and managed similarly to the General Division.

2. REVENUE ALLOCATION. Other than revenues received in connection with transactions subject to Paragraph 8, revenues from the sale of a Division's products and services shall be credited to that Division.

3. EXPENSE ALLOCATION. Other than expenses incurred in connection with transactions subject to Paragraph 8, all direct expenses shall be charged to the Division for the benefit of which they are incurred. Corporate and general and administrative expenses or other indirect costs will be allocated to each Division in a reasonable and consistent manner based on utilization by the Division of the services to which such costs relate.

4. TAX ALLOCATIONS. Income taxes shall be allocated to each Division based upon the financial statement income, taxable income, credits and other amounts properly allocable to such Division under generally accepted accounting principles as if each Division were a separate taxpayer; provided, however, that as of the end of any fiscal quarter of Genzyme, any projected tax benefit attributable to any Division that cannot be utilized by such Division to offset or reduce its current or deferred income tax expense may be allocated to the

other Divisions in proportion to their taxable income without any compensating payment or allocation.

5. ACQUISITIONS OF PROGRAMS, PRODUCTS OR ASSETS. Upon the acquisition by Genzyme from a third party of any programs, products or assets (whether by acquisition of assets or stock, merger, consolidation or otherwise), the aggregate cost of the acquisition and the programs, products or assets acquired shall be allocated among the Divisions of Genzyme. In the case of material acquisitions, such allocation shall be made in a manner determined by the Genzyme Board to be fair and reasonable to each Division and to holders of the common stock representing each Division, taking into account such matters as the Genzyme Board and its financial advisors, if any, deem relevant. Any such determination by the Genzyme Board will be final and binding on all holders of common stock.

6. DISPOSITION OF PROGRAMS, PRODUCTS OR ASSETS. Upon any sale, transfer, assignment or other disposition by Genzyme of any product, program or asset not consisting of all or substantially all of the assets of a Division, all proceeds from such disposition shall be allocated to the Division to which the program, product or asset had been allocated. If the program, product or asset was allocated to more than one Division, the proceeds of the disposition shall be allocated among such Divisions based on their respective interests in such program, product or asset. Such allocation shall be made in a manner determined by the Genzyme Board to be fair and reasonable to such Divisions and to holders of the common stock representing such Divisions, taking into account such matters as the Genzyme Board and its financial advisors, if any, deem relevant. Any such determination by the Genzyme Board will be final and binding on all holders of common stock.

7. INTERDIVISION ASSET TRANSFERS. The Genzyme Board may at any time and from time to time reallocate any program, product or other asset from one Division to any other Division. All such reallocations shall be done at fair market value, determined by the Genzyme Board, taking into account, in the case of a program under development, the commercial potential of such program, the phase of clinical development of such program, the expenses associated with realizing any income from such program, the likelihood and timing of any such realization and other matters that the Genzyme Board and its financial advisors, if any, deem relevant. The consideration for such reallocation may be paid by one Division to another in cash or other consideration with a value equal to the fair market value of the assets being reallocated or, in the case of a reallocation of assets from the General Division to the Tissue Repair Division or to the Molecular Oncology Division, the Genzyme Board may elect to account for such reallocation as an increase in the Designated Shares representing the Division to which such assets are reallocated in accordance with the provisions of

Genzyme's Articles of Organization.

Notwithstanding the foregoing, no Key GTR Program or Key GMO Program, as defined below, may be transferred out of the Tissue Repair Division or the Molecular Oncology Division, respectively, without a class vote of the holders of the common stock representing the Division from which such Key GTR Program or Key GMO Program is to be removed unless the Genzyme Board determines that (i) in the case of a Key GTR Program, such Key GTR Program has application outside of the field of tissue repair (in which case it may be transferred out only for the non-tissue repair applications) and (ii) in the case of a Key GMO Program, such Key GMO Program has application outside of the field of oncology (in which case it may be transferred out only for the non-oncology applications; provided, however that the SAGE Service (as herein defined) may not be transferred out of the Molecular Oncology Division for any application without the approval of the holders of the GMO Stock voting as a separate class).

A "Key GTR Program" is any of the following: (i) Vianain7 for debridement of necrotic or damaged tissue; (ii) TGF-(beta)2 for all indications licensed from Celtrix Pharmaceuticals, Inc. as of December 16, 1994; (iii) Epicel(SM) cultured epithelial cell autografts for tissue replacement or repair; (iv) Acticel(SM) cultured epithelial cell allografts for tissue replacement or repair; (v) CARTICEL(TM) Autologous Chondrocyte Service; and (vi) any additional tissue repair program or product being developed from time to time in the Tissue Repair Division which (a) constituted 20% or more of the research and development budget of the Tissue Repair Division in any one of the three most recently completed fiscal years or (b) has had a cumulative investment of $8 million or more in research and development expenses by the Tissue Repair Division.

A "Key GMO Program" is any of the following: (i) use of the Serial Analysis of Gene Expression ("SAGE") technology licensed from The Johns Hopkins University School of Medicine for third parties ("SAGE Service"); (ii) the clinical program developing adenovirus vectors containing the tumor antigens Ad-MART 1 or Ad-gp100 for the treatment of melanoma; (iii) the "suicide" gene therapy research program developing adenovirus and lipid vectors containing genes to enhance chemotherapy for oncology indications; (iv) the research program developing adenovirus and lipid vectors containing tumor suppressor genes for oncology indications; (v) the research program developing adenovirus and lipid vectors containing genes to regulate the immune system for oncology indications, including heat shock proteins; (vi) the research program developing antibody-based gene therapy for the treatment of tumors; and (vii) any additional program, product or service being developed from time to time in the Molecular Oncology Division which (a) constituted 20% or more of the research and development budget of the Molecular Oncology Division in any one of the three most recently completed fiscal years or (b) has had a cumulative investment of $8 million or more in research and development expenses by the Molecular Oncology Division.

The foregoing policies regarding transfers of assets between Divisions will not be changed by the Genzyme Board without the approval of the holders of the GTR Stock and the GMO Stock, each voting as a separate class; provided,

however, that if a policy change affects the Tissue Repair Division or the Molecular Oncology Division alone, only holders of shares representing the affected Division will be entitled to vote on such matter.

8. OTHER INTERDIVISION TRANSACTIONS. This policy shall cover interdivision transactions other than asset transfers, which shall be subject to Paragraph 7. From time to time, a Division may engage in transactions directly with one or more other Divisions or jointly with one or more other Divisions and one or more third parties. Such transactions may include agreements by one Division to provide products and services for use by another Division and joint

ventures or other collaborative arrangements involving more than one Division to develop new products and services jointly and with third parties. Such transactions shall be subject to the following conditions:

(a) Research performed by one Division for the benefit of another Division will be charged to the Division for which the work is performed on a cost basis, such costs will be allocated in the manner described in Paragraph 3, and the Division performing the research will not recognize revenue as a result of performing such research.

(b) Corporate and general and administrative services will be provided by each Division to any other Division requesting such services on a cost basis and such costs shall be allocated in the manner described in Paragraph 3.

(c) Other than research, corporate and general and administrative services, interdivision transactions will be on terms and conditions that would be obtainable in transactions negotiated at arm's length with unaffiliated third parties.

(d) Any interdivision transaction (i) to be performed on terms and conditions that deviate from the policies set forth in subparagraphs (a), (b) or (c) of this Paragraph 8 and (ii) that is material to one or more of the participating Divisions will require approval by the Genzyme Board, which approval shall include a determination by the Genzyme Board that the transaction is fair and reasonable to each participating Division and to holders of the common stock representing each such Division.

(e) If a Division (the "Purchasing Division") requires any product or service from which another Division (the "Selling Division") derives revenues from sales to third parties (a "Commercial Product or Service"), the Purchasing Division may solicit from the Selling Division a bid to provide such Commercial Product or Service in addition to any bids solicited by the Purchasing Division from third parties. Subject to the determination by Genzyme Board that the bid of the Selling Division is fair and reasonable to each Division and to holders of the common stock representing each Division and that the Purchasing Division will accept the Selling Division=s bid, the Purchasing Division may accept any

bid deemed to offer the most favorable terms and conditions for providing the Commercial Product or Service sought by the Purchasing Division.

(f) Loans may be made from time to time between Divisions. Any such loan of $1 million or less will mature within 18 months and interest will accrue at the best borrowing rate available to Genzyme for a loan of like type and duration. Amounts borrowed in excess of $1 million will require approval of the Genzyme Board, which approval shall include a determination by the Genzyme Board that the material terms of such loan, including the interest rate and maturity date, are fair and reasonable to each participating Division and to holders of the common stock representing each such Division.

9. ACCESS TO TECHNOLOGY AND KNOW-HOW. Each of the General Division, the Tissue Repair Division and the Molecular Oncology Division will have free access to all technology and know-how of Genzyme that may be useful in such Division's business, subject to any obligations or limitations applicable to Genzyme.

10. DISPOSITION OF GTR AND GMO DESIGNATED SHARES.

(a) The GTR Designated Shares and the GMO Designated Shares may be (i) issued upon the exercise or conversion of outstanding stock options, warrants or convertible securities allocated to the General Division, (ii) subject to the restrictions set forth in Paragraph 11, sold for any valid business purpose, or (iii) distributed as a dividend to the holders of shares of GGD Stock, all as determined from time to time by the Genzyme Board in its sole discretion.

(b) If, as of May 31 of each year starting May 31, 1997, the number of GTR Designated Shares on such date exceeds the sum of (i) ten percent (10%) of the number of shares of GTR Stock then issued and outstanding and (ii) the number of shares of GTR Stock issuable on such date with respect to stock options, stock purchase rights, warrants or other securities convertible into or exercisable for shares of GTR Stock outstanding on such date, substantially all GTR Designated Shares will be distributed to holders of record of GGD Stock (a

"Distribution"), subject to reservation of a number of such shares equal to the sum of (x) the number of GTR Designated Shares reserved for issuance with respect to stock options, stock purchase rights, warrants or other securities convertible into or exercisable for shares of GGD Stock outstanding on such date (AGGD Convertible Securities@) as a result of anti-dilution adjustments required by the terms of such instruments or approved by the Genzyme Board and (y) the number of GTR Designated Shares reserved by the Genzyme Board as of such date for sale not later than six months after such date, the proceeds of which sale will be allocated to the General Division.

(c) If, as of November 30 of each year starting November 30, 1998, the number of GMO Designated Shares on such date exceeds the sum of (i) ten percent (10%) of the number of shares of GMO Stock then issued and outstanding and (ii)

the number of shares of GMO Stock issuable on such date with respect to stock options, stock purchase rights, warrants or other securities convertible into or exercisable for shares of GMO Stock outstanding on such date, substantially all GMO Designated Shares will be distributed to holders of record of GGD Stock, subject to reservation of a number of such shares equal to the sum of (x) the number of GMO Designated Shares reserved for issuance upon the exercise or conversion of GGD Convertible Securities as a result of anti-dilution adjustments required by the terms of such instruments or approved by the Genzyme Board and (y) the number of GMO Designated Shares reserved by the Genzyme Board as of such date for sale not later than six months after such date, the proceeds of which sale will be allocated to the General Division; provided, however, that if, prior to November 30, 1998, Genzyme has completed the initial public offering of GMO Stock, Genzyme may defer the distribution of GMO Designated Shares provided in this policy until the later of November 30, 1998 or 360 days after the date such offering was completed.

11. ISSUANCE AND SALE OF ADDITIONAL SHARES OF COMMON STOCK. When additional shares of common stock are issued and sold by Genzyme, Genzyme will identify (i) the number of such shares issued and sold for the account of the Division to which they relate, the proceeds of which will be allocated to and reflected in the financial statements of such Division and (ii) the number of such shares issued and sold that shall reduce the number of Designated Shares of such Division. Notwithstanding the foregoing, Genzyme will not sell any GTR Designated Shares or GMO Designated Shares (except upon exercise or conversion of options, warrants or convertible securities issued by the General Division that were adjusted as a result of a dividend of GTR or GMO Stock paid to holders of GGD Stock) unless (i) the Genzyme Board determines that the Tissue Repair Division or the Molecular Oncology Division, as the case may be, has cash sufficient to fund its operations for at least the next 12 months or (ii) shares of GTR Stock or GMO Stock, as the case may be, are concurrently being sold for the account of the Tissue Repair Division or the Molecular Oncology Division, respectively, in an amount that will produce proceeds sufficient to fund such Division's cash needs for the next 12 months.

12. OPEN MARKET PURCHASES OF SHARES OF COMMON STOCK. Genzyme may make open market purchases of its common stock in accordance with applicable securities law requirements; provided, however, that in no event shall any such purchases be made if as an immediate result thereof the number of Designated Shares representing a Division will exceed 60% of the number of shares of such Division outstanding plus such number of Designated Shares. Notwithstanding the foregoing, within 90 days of any open market purchase of the common stock representing any Division, Genzyme may not exercise the right provided under its Articles of Organization to exchange shares representing such Division for cash and/or shares of GGD Stock.

13. CLASS VOTING. In addition to any stockholder approval required by Massachusetts law, whenever the approval of the holders of the common stock representing a Division is required to take any action pursuant to these policies or Genzyme's Articles of Organization, such requirement shall be satisfied if a meeting of the holders of the common stock representing such Division is held at which a quorum is present and the votes cast in favor of the

proposed action exceed the votes cast against.

14. NON-COMPETE. Genzyme will not develop products or services outside of the Tissue Repair Division or the Molecular Oncology Division which compete or would compete with products or services being developed or sold by the Tissue Repair Division or the Molecular Oncology Division, respectively, other than through joint ventures or other collaborative arrangements involving more than one Division to develop new products and services jointly and with third parties, which transactions shall be subject to the conditions set forth in Paragraph 8.