SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

Mark One

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

For the Fiscal Year Ended December 31, 2002
OR
[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____.

Commission File No. 0-20720

LIGAND PHARMACEUTICALS INCORPORATED
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiciton of incorporation or organization)

77-0160744
(I. R. S. Employer Identification No.)

10275 Science Center Drive San Diego, CA
(Address of Principal Executive Offices)

92121-1117
(Zip Code)

Registrant's telephone number, including area code: (858) 550-7500

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

Securities registered pursuant to Section 12(g) of the Act:
Common Stock, $.001 par value

Preferred Share Purchase Rights
(Title of Class)

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

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

The aggregate market value of the Registrant's voting stock held by non-affiliates as of June 28, 2002 was approximately $700,311,546. For purposes of this calculation, shares of Common Stock held by directors, officers and 5% stockholders known to the Registrant have been deemed to be owned by affiliates which should not be construed to indicate that any such person possesses the power, direct or indirect, to direct or cause the direction of the management or policies of the Registrant or that such person is controlled by or under common control with the Registrant.

As of February 28, 2003 the registrant had 69,226,092 shares of Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Proxy Statement to be filed not later than 120 days after December 31, 2002, in connection with the Registrant's 2003 Annual Meeting of Stockholders, referred to herein as the "Proxy Statement," are incorporated by reference into Part III of this Form 10-K. Certain exhibits filed with the Registrant's prior registration statements and period reports under the Securities Exchange Act of 1934 are incorporated herein by reference into Part IV of this Report.

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GLOSSARY

PRODUCTS AND INDICATIONS

ONTAK®(denileukin diftitox)	Approved in February 1999 for sale in the U.S. for the treatment of patients with persistent or recurrent cutaneous T-cell lymphoma whose malignant cells express the CD25 component of the Interleukin-2 receptor.
Targretin®(bexarotene) capsules	Approved in December 1999 for sale in the U.S. and in March 2001 for sale in Europe for the treatment of cutaneous manifestations of cutaneous T-cell lymphoma in patients who are refractory to at least one prior systemic therapy.
Targretin® (bexarotene) gel 1%	Approved in June 2000 for sale in the U.S. for the topical treatment of cutaneous lesions in patients with cutaneous T-cell lymphoma (Stage 1A and 1B) who have refractory or persistent disease after other therapies or who have not tolerated other therapies.
Panretin® gel (alitretinoin) 0.1%	Approved in February 1999 for sale in the U.S. and in October 2000 for sale in Europe for the topical treatment of cutaneous lesions of patients with AIDS-related Kaposi's sarcoma.
AVINZA® gel (alitretinoin) 0.1%	Approved in March 2002 for sale in the U.S. for the once-daily treatment of moderate-to-severe pain in patients who require continuous, around-the-clock opioid therapy for an extended period of time.

CTCL	Cutaneous T-cell lymphoma
HIV	Human immunodeficiency virus
HRT	Hormone replacement therapy
KS	Kaposi's sarcoma
NHL	Non-Hodgkin's lymphoma
NSCLC	Non-small cell lung cancer
CLL	Chronic lymphocytic leukemia
GVHD	Graft-versus-host disease

SCIENTIFIC TERMS

AR	Androgen Receptor
ER	Estrogen Receptor
GR	Glucocorticoid Receptor
IR	Intracellular Receptor
JAK	Janus Kinase family of tyrosine protein kinases
MR	Mineralocorticoid Receptor
PPAR	Peroxisome Proliferation Activated Receptor
PR	Progesterone Receptor
RAR	Retinoic Acid Receptor
RR	Retinoid Responsive Intracellular Receptor
RXR	Retinoid X Receptor
SARM	Selective Androgen Receptor Modulator
SERM	Selective Estrogen Receptor Modulator
STAT	Signal Transducer and Activator of Transcription

REGULATORY TERMS

CPMP	Committee for Proprietary Medicinal Products (Europe)
EC	European Commission
EMEA	European Agency for the Evaluation of Medicinal Products
FDA	United States Food and Drug Administration
IND	Investigational New Drug Application (United States)
MA	Marketing Authorization (Europe)
MAA	Marketing Authorization Application (Europe)
NDA	New Drug Application (United States)

PART I

Item 1. Business

Caution: The discussion and analysis of our business contained in this annual report on Form 10-K may contain predictions, estimates and other forward-looking statements that involve a number of risks and uncertainties, including those discussed at "Risks and Uncertainties" in "Item 1 - Business". This outlook represents our current judgment on the future direction of our business. Such risks and uncertainties could cause actual results to differ materially from any future performance suggested. We undertake no obligation to release publicly the results of any revisions to these forward-looking statements to reflect events or circumstances arising after the date of this annual report. This caution is made under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995.

Our trademarks, trade names and service marks referenced in this annual report include Ligand®, ONTAK®, Panretin®, Targretin®, and AVINZA®. Each other trademark, trade name or service mark appearing in this annual report belongs to its owner.

References to Ligand Pharmaceuticals Incorporated ("Ligand", the "Company", "we" or "our") include our wholly owned subsidiaries - Glycomed Incorporated; Ligand Pharmaceuticals (Canada) Incorporated; Ligand Pharmaceuticals International, Inc.; and Seragen, Inc. ("Seragen").

We were incorporated in Delaware in 1987. Our principal executive offices are located at 10275 Science Center Drive, San Diego, California, 92121. Our telephone number is (858) 550-7500.

Overview

Our goal is to build a profitable pharmaceutical company that discovers, develops and markets new drugs that address critical unmet medical needs in the areas of cancer, men's and women's health, skin diseases, osteoporosis, and metabolic, cardiovascular and inflammatory diseases. We strive to develop drugs that are more effective and/or safer than existing therapies, that are more convenient (taken orally or topically administered) and that are cost effective. We plan to build a profitable pharmaceutical company by generating income from the specialty pharmaceutical products we develop and market, and from research, milestone and royalty revenues resulting from our collaborations with large pharmaceutical partners, which develop and market products in large markets that are beyond our strategic focus or resources.

We currently market four oncology products in the United States: Panretin® gel, ONTAK® and Targretin® capsules, each of which was approved by the FDA in 1999; and Targretin® gel, which was approved by the FDA in 2000. Our fifth and newest product, AVINZA®, is a treatment for chronic, moderate-to-severe pain that was approved by the FDA in March 2002. In Europe, the EC granted a Marketing Authorization (MA) for Panretin® gel in October 2000 and an MA for Targretin® capsules in March 2001. We submitted a Marketing Authorization Application (MAA) to the European Agency for the Evaluation of Medicinal Products (EMEA) for ONZAR™ (the brand name of ONTAK® in Europe) in December 2001. We also continue efforts to acquire or in-license products, such as ONTAK® (acquired in the 1998 acquisition of Seragen) and AVINZA ® (licensed from Elan Corporation, plc and formerly called Morphelan™), which have near-term prospects of FDA approval and which can be marketed by our specialty sales forces. We are developing additional products through our internal development programs and currently have various products in clinical development, including marketed products that we are testing for larger market indications such as non-small cell lung cancer (NSCLC), chronic lymphocytic leukemia (CLL) and hand dermatitis.

We have formed research and development collaborations with numerous global pharmaceutical companies, including Abbott Laboratories, Allergan, Inc., Bristol-Myers Squibb, Eli Lilly & Company, GlaxoSmithKline, Organon (AKZO-Nobel), Pfizer Inc., TAP Pharmaceutical Products, Inc. (TAP), and Wyeth. At the end of 2002, our corporate partners had 10 Ligand products in human development, and numerous compounds on an IND track, or in preclinical and research stages. These corporate partner products are being studied for the treatment of large market indications such as osteoporosis, diabetes, contraception and cardiovascular disease. Three of these partner products are in pivotal Phase III clinical trials: lasofoxifene, which is being developed by Pfizer for osteoporosis and other indications; and bazedoxifene, which is being developed by Wyeth as monotherapy for osteoporosis and in combination with Wyeth's PREMARIN® as hormone replacement therapy (HRT).

Internal and collaborative research and development programs are built around our proprietary science technology, which is based on our leadership position in gene transcription technology. Our proprietary technologies involve two natural mechanisms that regulate gene activity: non-peptide hormone-activated IRs, and cytokine and growth factor activated STATs. Panretin® gel, Targretin® capsules, Targretin® gel and most of our corporate partner products currently on human development track are IR modulators, discovered using our IR technology. SB-497115, which Glaxo moved into clinical studies for thrombocytopenia in 2002, was discovered using our STAT technology.

In late 1998, we assembled a specialty oncology and HIV-center sales and marketing team to market in the U.S. products developed, acquired or licensed by us. In late 1999, we expanded our U.S. sales force from approximately 20 to approximately 40 sales representatives to support the launch of Targretin® capsules and Targretin® gel and increase market penetration of ONTAK® and Panretin® gel. In 2001, we expanded our sales force to approximately 50 sales representatives, including approximately 20 full-time contract sales representatives who focus on the dermatology market. In 2002, to support the launch of AVINZA ®, we redirected these contract sales representatives to call on high-prescribing pain specialists. Also in 2002, we hired approximately another 30 representatives to call on pain specialists, bringing the total number of representatives selling only AVINZA ® to approximately 50. We plan to expand our specialty pain sales force to approximately 70 representatives in the first half of 2003. In addition, more than 700 Organon sales representatives will initially promote AVINZA ® as a result of the co-promotion agreement we established in early 2003 (see "AVINZA ® Co-Promotion Agreement with Organon"). At the end of 2002, we had approximately 25 sales representatives promoting our in-line oncology products. Internationally, through marketing and distribution agreements with Elan, Ferrer International and Alfa Wassermann, we have established marketing and distribution capabilities in Europe, as well as Central and South America.

Business Strategy

Our goal is to become a profitable pharmaceutical research, development and marketing company that generates significant cash flow. Building primarily on our proprietary IR and STAT technologies, our strategy is to generate cash flow primarily from the sale in the U.S., Europe and Latin America of specialty pharmaceutical products we develop, acquire or in-license, and from research, milestone and royalty revenues from the development and sale of products our collaborative partners develop and market.

Building a Specialty Pharmaceutical Franchise in the U.S., Europe and Latin America.

Our strategy with respect to specialty pharmaceutical products is to develop a product pipeline based on our IR and STAT technologies and acquired and in-licensed products, and to market these products initially with a specialized sales force in the U.S. and through marketing partners in selected international markets. Ligand's international partners are Elan (principally in Western and Eastern Europe), Ferrer (in Spain, Portugal, Greece, Central and South America) and Alfa Wassermann (in Italy).

Focusing initially on niche pharmaceutical and dermatology indications with the possibility of expedited regulatory approval has allowed us to bring products to market quickly. This strategy also has allowed us to spread the cost of our sales and marketing infrastructure across multiple products. Our goal is to expand the markets for our products through approvals in additional indications and in international markets. To further leverage our sales forces, we intend to acquire selectively or license-in complementary technology and/or products currently being marketed or in advanced stages of development.

Building a Collaborative-Based Business in Large Product Markets.

Our strategy in our collaborative research and development business is to share the risks and benefits of discovering and developing drugs to treat diseases that are beyond our strategic focus or resources. These diseases typically affect large populations often treated by primary care physicians. Drugs to treat these diseases may be more costly to develop and/or market effectively with a small specialty sales force. On the other hand, drugs approved for these indications may have large market potential – often in excess of $1 billion in global sales.

We currently have nine collaborations with global pharmaceutical companies focusing on a broad range of disease targets.

Corporate Collaborator	Initiation of Collaboration	Focus
Pfizer Inc.	May 1991	Osteoporosis, breast cancer prevention
Allergan, Inc.	June 1992	Skin disorders
GlaxoSmithKline (Glaxo Wellcome plc)	September 1992	Cardiovascular diseases
Abbott Laboratories	July 1994	Inflammatory diseases
Wyeth	September 1994	Women's and men's health, oncology
GlaxoSmithKline (SmithKline Beecham)	February 1995	Blood disorders
Eli Lilly & Company	November 1997	Type II diabetes, metabolic and cardiovascular diseases
Organon	February 2000	Women's health
TAP Pharmaceutical Products, Inc.	June 2001	Men's and women's health

Our collaborative programs focus on discovering drugs for cardiovascular, inflammatory, metabolic and other diseases, as well as broad applications for women's and men's health. We believe that our collaborators have the resources, including clinical and regulatory experience, manufacturing capabilities and marketing infrastructure, needed to develop and commercialize drugs for these large markets. The arrangements generally provide for collaborative discovery programs funded largely by the corporate partners aimed at discovering new therapies for diseases treated by primary care physicians. In general, drugs resulting from these collaborations will be developed, manufactured and marketed by the corporate partners. Our collaborative agreements provide for us to receive: research revenue during the drug discovery stage; milestone revenue for compounds successfully moving through clinical development and regulatory submission and approval; and royalty revenue from the sale of approved drugs developed through collaborative efforts.

Ligand Marketed Products

U.S. Specialty Pharmaceutical Franchise. We currently market five pharmaceutical products in the U.S.

Marketed Product	Approved Indication	European Status	Additional Indications in Development
AVINZA®	Chronic, moderate-to-severe pain	N/A	None
ONTAK®	CTCL	MAA submitted	CLL, B-cell NHL, other T-cell lymphomas, psoriasis
Targretin® capsules	CTCL	MA issued	NSCLC, psoriasis, renal cell cancer, prostate/colon cancer
Targretin® gel	CTCL	MAA withdrawn	Hand dermatitis, psoriasis
Panretin® gel	KS	MA issued	None

CTCL Market. CTCL is a type of NHL that appears initially in the skin, but over time may involve other organs. CTCL is a cancer of T-lymphocytes, white blood cells that play a central role in the body's immune system. The disease can be extremely disfiguring and debilitating. Median survival for late-stage patients is less than three years. The prognosis for CTCL is based in part on the stage of the disease when diagnosed. CTCL is most commonly a slowly progressing cancer, and many patients live with the complications of CTCL for 10 or more years after diagnosis. However, some patients have a much more aggressive form of this disease. CTCL affects an estimated 16,000 people in the U.S. and 12,000 to 14,000 in Europe. With ONTAK®, Targretin® capsules, and Targretin® gel currently approved in the U.S. for the treatment of CTCL, our strategy is to have multiple products available for treating this disease.

ONTAK®. ONTAK® was approved by the FDA and launched in the U.S. in February 1999 as our first product for the treatment of patients with CTCL. ONTAK® was the first treatment to be approved for CTCL in nearly 10 years. ONTAK® is currently in Phase II clinical trials for the treatment of patients with CLL, B-cell NHL, other T-cell lymphomas, and GVHD. Results from several of these studies were reported in 2002. Ligand's top priority for additional ONTAK® development is CLL, and we expect to begin a large-scale Phase II study in 2003. Clinical trials using ONTAK® for the treatment of patients with psoriasis and rheumatoid arthritis also have been conducted, and further trials are being considered. These indications provide significantly larger market opportunities than CTCL. A European MAA for CTCL was filed in December 2001, and we expect a CPMP recommendation this year. In Europe, ONTAK® will be marketed as ONZAR™ if approved.

Targretin® capsules. We launched U.S. sales and marketing of Targretin® capsules in January 2000 following receipt of FDA approval in December 1999. Targretin® capsules offer the convenience of a daily oral dose administered by the patient at home. We are developing Targretin® capsules in a variety of larger market opportunities, including NSCLC, moderate to severe plaque psoriasis and renal cell cancer. NSCLC is Ligand's largest and most important development program. In March 2001, the European Commission granted marketing authorization for Targretin® capsules in Europe for the treatment of patients with CTCL, and our network of distributors began marketing the drug in the fourth quarter of 2001 in Europe.

Targretin® gel. We launched U.S. sales and marketing of Targretin® gel in September 2000 following receipt of FDA approval in June 2000. Targretin® gel offers patients with refractory, early stage CTCL a novel, non-invasive, self-administered treatment topically applied only to the affected areas of the skin. Targretin® gel is currently in clinical development for hand dermatitis. In 2002 and early 2003, we reported exciting Phase I/II data that showed nearly 40% of patients with chronic, severe hand dermatitis improved by 90% or more after being treated with Targretin® gel monotherapy and nearly 80% responded with greater than 50% improvement. Based on these promising results, we intend to design and implement Phase II/III registration trials in hand dermatitis. We filed an MAA in Europe for CTCL in March of 2001, but withdrew it in 2002. Due to the small size of the European CTCL market and the limited revenue potential of Targretin® gel, we believed that the additional comparative clinical studies requested by the EMEA were not economically justified.

Panretin® gel. Panretin® gel was approved by the FDA and launched in February 1999 as the first FDA-approved patient-applied topical treatment for AIDS-related KS. Panretin® gel represents a non-invasive option to the traditional management of this disease. Most approved therapies require the time and expense of periodic visits to a healthcare facility, where treatment is administered by a doctor or nurse. AIDS-related KS adversely affects the quality of life of thousands of people in the U.S. and Europe. Panretin® gel was approved in Europe for the treatment of patients with KS in October 2000, and was launched through our distributor network in the fourth quarter of 2001 in Europe.

AVINZA®. AVINZA® was approved by the FDA in March 2002 for the once-daily treatment of moderate-to-severe pain in patients who require continuous, around-the-clock opioid therapy for an extended period of time. We launched the product in the second quarter of 2002. AVINZA® consists of two components: an immediate-release component that rapidly achieves plateau morphine concentrations in plasma, and an extended-release component that maintains plasma concentrations throughout a 24-hour dosing interval. This unique drug delivery technology makes AVINZA® the only true once-daily sustained release opioid. AVINZA® was developed by Elan, which licensed the U.S. and Canadian rights to us in 1998. The U.S. sustained-release opioid market grew to approximately $2.7 billion in 2002, the largest initial market we have entered. Because tens of thousands of U.S. physicians prescribe sustained-release opioids, our goal has long been to co-promote the product with another company to maximize its potential. Early in 2003, we finalized a co-promotion agreement with Organon. Together, we expect to achieve the No. 2 share of voice in the sustained-release opioid marketplace with initially more than 800 combined sales representatives.

AVINZA® Co-Promotion Agreement with Organon

In February 2003, Organon, a business unit of Akzo Nobel, and Ligand announced that the companies will co-promote AVINZA® with initially more than 800 sales representatives in the United States.

Organon brings strong relationships in primary care, anesthesiology, hospitals and managed care to support AVINZA®. Through the agreement with Organon, Ligand gains strong partner resource commitments in primary care, hospitals and managed care to maximize AVINZA®'s potential as our largest near-term commercial opportunity. In addition, the agreement includes a risk/return-balanced set of economics that incentivizes Organon to achieve much greater success than Ligand could alone, that provides a positive operational EPS driver to Ligand, and that enables an attractive return on our cumulative investments in AVINZA®. Finally, the agreement strengthens our capabilities in retail and wholesale distribution, medical marketing and managed care to support AVINZA®. Joint co-promotion efforts are expected to begin in March and April of 2003.

We expect AVINZA® to achieve the No. 2 share of voice in the sustained-release opioid marketplace with a combined sales force of more than 800 representatives, and appropriately scaled investments in other medical marketing. Ligand will promote AVINZA® with its expanding specialty pain sales force of nearly 70 representatives. Organon will promote the product with more than 700 representatives in three sales forces: primary care, hospital (anesthesiology) and specialty (pain centers). In addition, Organon brings critical capabilities with key accounts, managed care and long-term care to accelerate AVINZA®'s growth.

Under the companies' agreement, Ligand will record all sales of AVINZA®. Ligand will pay Organon a percentage of AVINZA®'s net sales based on the following schedule:

Annual Net Sales of AVINZA®	% of Incremental Net Sales Paid to Organon by Ligand
$0-35 million (2003 only)	0% (2003 only)
$0-150 million	30%
$150-300 million	40%
$300-425 million	50%
>$425 million	45%

Organon and Ligand will share equally all costs for advertising and promotion, medical affairs and clinical trials. Each company is responsible for its own sales force costs and other expenses. Both companies have made significant commitments to conduct a minimum number of sales calls, with AVINZA® in primary or secondary position, over the term of the agreement.

The initial term of the co-promotion agreement, which applies only to the U.S. market, is 10 years. Any time prior to the end of year five, Organon has an option to extend the agreement to 2017, the end of a key AVINZA® patent's term, by making a $75 million payment to Ligand.

To provide overall governance of the partnership, Organon and Ligand will establish a steering committee with three senior executives from each company. The chair of the steering committee will alternate between Organon and Ligand on an annual basis. Organon and Ligand also will form a commercial committee to design and coordinate all sales, marketing and distribution activities for AVINZA®. The commercial committee will be co-chaired by one Organon and one Ligand employee. The commercial committee will establish a clinical/regulatory subcommittee to design and coordinate all medical, clinical and regulatory activities for AVINZA®.

Product Development Process

There are three phases in product development — the research phase, the preclinical phase and the clinical trials phase. See "Government Regulation" for a more complete description of the regulatory process involved in developing drugs. At Ligand, activities during the research phase include research related to specific IR and STATs targets and the identification of lead compounds. Lead compounds are chemicals that have been identified to meet pre-selected criteria in cell culture models for activity and potency against IR or STATs targets. More extensive evaluation is then undertaken to determine if the compound should enter preclinical development. Once a lead compound is selected, chemical modification of the compound is undertaken to create an optimal drug candidate.

The preclinical phase includes pharmacology and toxicology testing in preclinical models (*in vitro* and *in vivo*), formulation work and manufacturing scale-up to gather necessary data to comply with applicable regulations prior to commencing human clinical trials. Development candidates are lead compounds that have successfully undergone *in vitro* and *in vivo* evaluation to demonstrate that they have an acceptable profile that justifies taking them through preclinical development with the intention of filing an IND and initiating human clinical testing.

Clinical trials are typically conducted in three sequential phases that may overlap. In Phase I, the initial introduction of the pharmaceutical into humans, the emphasis is on testing for adverse effects, dosage tolerance, absorption, metabolism, distribution, excretion and clinical pharmacology. Phase II involves studies in a representative patient population to determine the efficacy of the pharmaceutical for specific targeted indications, to determine dosage tolerance and optimal dosage, and to identify related adverse side effects and safety risks. Once a compound is found to be effective and to have an acceptable safety profile in Phase II studies, Phase III trials are undertaken to evaluate clinical efficacy further and to test further for safety. Sometimes Phase I and II trials or Phase II and III trials are combined. In the U.S., the FDA reviews both clinical plans and results of trials, and may discontinue trials at any time if there are significant safety issues.

Ligand Product Development Programs

We are developing several proprietary products for which we have worldwide rights for a variety of cancers and skin diseases, as summarized in the table below. This table is not intended to be a comprehensive list of our internal research and development programs. Many of the indications being pursued may present larger market opportunities for our currently marketed products. Our clinical development programs are primarily based on products discovered through our IR technology, with the exception of ONTAK®, which was developed using Seragen's fusion protein technology, and AVINZA® , which was developed by Elan. Five of the products in our proprietary product development programs are retinoids, discovered and developed using our proprietary IR technology. Our research is based on both our IR and STAT technologies. See "Technology" for a discussion of our IR and STAT technologies and retinoids.

Program	Disease/Indication	Development Phase
AVINZA®	Chronic, moderate-to-severe pain	Marketed in U.S. Phase IIIB/IV
ONTAK®	CTCL	Marketed in U.S.
	CLL	Phase II
	Peripheral T-cell lymphoma	Phase II
	B-cell NHL	Phase II
	Psoriasis (severe)	Phase II
Targretin® capsules	CTCL	Marketed in U.S.
	NSCLC first-line	Phase III
	NSCLC monotherapy	Planned Phase II/III
	Advanced breast cancer	Phase II
	Psoriasis (moderate to severe)	Phase II
	Renal cell cancer	Phase II
Targretin® gel	CTCL	Marketed in U.S.
	Hand dermatitis(eczema)	Phase II
	Psoriasis	Phase II

Program	Disease/Indication	Development Phase
Panretin® gel	KS	Marketed in U.S.
Panretin®capsules	KS Bronchial metaplasia	Phase II Phase II
LGD1550 (RAR agonist)	Advanced cancers Acne Psoriasis	Phase II Phase II Pre-clinical
LGD1331 (Androgen antagonist)	Prostate cancer, hirsutism, acne, androgenetic alopecia	Pre-clinical
Glucocorticoid agonists	Inflammation, cancer	Pre-clinical
Mineralocorticoid receptor modulators	Congestive heart failure, hypertension	Research

ONTAK® Development Programs

ONTAK® is the first of a new class of targeted cytotoxic biologic agents called fusion proteins. ONTAK® was acquired in the acquisition of Seragen in 1998 and is marketed in the U.S. for patients with CTCL. CTCL affects approximately 16,000 people in the U.S. In addition to ongoing CTCL trials, we are, or may be, conducting clinical trials with ONTAK® in patients with CLL, peripheral T-cell lymphoma, B-cell NHL, psoriasis, and GVHD, indications that represent significantly larger market opportunities than CTCL.

In early 1999, ONTAK® entered Phase II trials for the treatment of patients with NHL. One study is assessing ONTAK® in patients with certain types of low-grade B-cell NHL who have previously been treated with at least one systemic anti-cancer treatment. A second multi-center trial for ONTAK® is being conducted in patients with low-grade B-cell NHL who have been previously treated with at least one chemotherapy regimen and at least one monoclonal antibody therapy. A third trial allows certain patients to enter with low to intermediate grade B-cell NHL.

Separately, a study of ONTAK® in patients with relapsed or refractory B-and T-cell NHL conducted by researchers from the M.D. Anderson Cancer Center and published at the annual meeting of the American Society of Hematology showed that among 25 patients who could be evaluated for a response, one had a complete response, four had partial responses, and eight had stable disease, indicating that more than half of patients with relapsed or refractory NHL benefited from treatment. NHL affects approximately 300,000 people in the U.S. and Ligand estimates that more than 50,000 of these patients would be candidates for ONTAK® therapy.

ONTAK® is also being evaluated to treat chronic lymphocytic leukemia (CLL), which affects more than 60,000 people in the U.S. At the American Society of Hematology (ASH) annual meeting in 2002, researchers from Wake Forest University reported results from a preliminary Phase II study that showed ONTAK reduced CLL in blood cells, lymph nodes and bone marrow. In the study, nine of 10 patients with fludarabine-refractory, CD25-positive, B-cell CLL who received at least three courses of ONTAK® experienced reductions in peripheral CLL cells, with three of these patients showing reductions of at least 99%. In addition, six of 10 patients showed reductions in the diameter of their cancerous lymph nodes, with one patient showing an 80% reduction. One of 12 patients showed a partial remission, with 80% node shrinkage and 100% clearance of CLL cells from bone marrow. Based on these encouraging results, Ligand plans to begin a large-scale Phase II study in 2003.

Clinical trials with ONTAK® have demonstrated benefits in patients with long-standing, previously treated severe psoriasis, and in patients with steroid-resistant acute GVHD. For example, according to results of a Phase I/II study presented by independent researchers in early 2003, ONTAK® generated complete remission of acute GVHD in five of 11 steroid-resistant patients after allogeneic stem cell transplants, and partial remission in two more patients.

Targretin® CapsulesDevelopment Programs

Targretin® capsules are marketed in the U.S. for patients with refractory CTCL. Ligand also is investigating the use of Targretin® capsules in several cancer and skin disease markets that represent significantly larger market opportunities than CTCL.

In August 2000, we reported that Phase I/II clinical results demonstrated that Targretin® capsules, in conjunction with chemotherapy, may be an effective treatment for patients with NSCLC and renal cell cancer. These results were published in the May 2001 issue of the Journal of Clinical Oncology. These results add to a growing body of evidence that suggests Targretin® therapy may delay disease progression and extend survival of patients with some forms of solid tumors. This body of evidence led us to begin two large-scale Phase III clinical studies in 2001 to demonstrate conclusively Targretin® capsules' benefit in the treatment of patients with NSCLC. One of these multi-center studies is evaluating Targretin® in combination with the chemotherapy drugs cisplatin and vinorelbine, and is being conducted primarily in Europe. The other multi-center study is examining Targretin® in combination with carboplatin and paclitaxel, and is being conducted mainly in the U.S. Both studies are randomized with approximately 600 patients each, and have survival as the primary endpoint. By early 2003, we had enrolled approximately 50% of the required patients. We expect to complete enrollment of the studies in 2003, and announce survival data in 2004. The studies are designed to support a supplemental indication for Targretin® capsules for first-line treatment of patients with advanced NSCLC. We also are planning a Phase III study of Targretin® as monotherapy for late-stage lung cancer patients who have failed treatment with chemotherapy or cannot tolerate it. The American Cancer Society estimates that nearly 170,000 Americans were diagnosed with lung cancer in 2002; of those approximately 80% were diagnosed with NSCLC.

Our primary focus for Targretin® capsules during 2003 and 2004 will be NSCLC. We will, however, continue to explore in Phase II trials the potential of Targretin® capsules in combination regimens for the treatment of patients in solid tumor indications as well as psoriasis.

Targretin® Gel Development Program

Targretin® gel is marketed in the U.S. for patients with refractory CTCL. In 2002 and early 2003, we reported exicting Phase I/II data that showed 39% of patients with chronic, severe hand dermatitis improved by 90% or more after being treated with Targretin® gel monotherapy. In addition, 79% of patients improved by at least 50%. Fifty-five patients with a history of chronic severe hand dermatitis for at least six months were enrolled in the 22-week, randomized, open-label study, which was designed to evaluate safety, tolerability and activity. Patients were treated with Targretin® alone, Targretin® in combination with a medium potency topical steroid, and Targretin® in combination with a low potency topical steroid. Based on these promising results, we intend to design and implement Phase II/III registration trials in hand dermatitis. There are many subtypes of hand dermatitis, and many causes. Most hand dermatitis is caused by contact with irritating environmental substances, such as chemicals, soaps and cleaning fluids, and some cases are caused by allergic reactions to a wide variety of environmental substances. Ligand estimates that more than 4 million people in the United States have hand dermatitis and seek treatment.

We filed an MAA for Targretin® gel in Europe for CTCL in March of 2001, but withdrew it in 2002. Due to the small size of the European CTCL market and the limited revenue potential of Targretin® gel, we believed that the additional comparative clinical studies requested by the EMEA were not economically justified.

Panretin ®Capsules Development Programs

Panretin® capsules have demonstrated clinical promise for the systemic treatment of cutaneous AIDS-related KS, other cancers and skin disorders. We have reported favorable results in two Phase II trials with Panretin® capsules in patients with KS. Encouraging results from a Phase II trial with Panretin® capsules in bronchial metaplasia were published in 2002. The study showed that treatment with Panretin® capsules reversed biomarkers of pre-lung cancer among former smokers. Ligand believes the promising results seen with Panretin® capsules further support the potential benefits of using retinoids to treat lung cancer. Toward that end, Ligand's top development priority is to move ahead with Phase III studies of Targretin® capsules, which binds selectively to retinoid X receptors, in combination with chemotherapy to treat NSCLC.

LGD1550 Capsules Development Programs

LGD1550 is a potent RAR agonist that strongly inhibits growth *in vitro* of several human cancer cell lines. In Phase I/II clinical trials in advanced cancer, LGD1550 capsules were well tolerated. Investigators observed dose-limiting skin toxicities, diarrhea and abdominal cramps. Other potentially dose-limiting toxicities, such as headache and lipid abnormalities, frequently observed with other retinoids, have not been observed with LGD1550. Unlike all-trans retinoic acid, a retinoid approved for the treatment of acute promyelocytic leukemia, LGD1550 does not appear to induce its own metabolism over the dose range tested since blood levels are maintained with continued therapy. Phase I/II studies with LGD1550 for the treatment of patients with acne and psoriasis are being considered.

Glucocorticoid Receptor Research and Development Program

As part of the research and development collaboration we entered into with Abbott in 1994, Ligand received exclusive worldwide rights for all anti-cancer products discovered in the collaboration. When the research phase of the collaboration ended in July 1999, Abbott retained rights to certain specific glucocorticoid receptor modulators, or SGRMs. Ligand retained rights to all other compounds discovered through the collaboration, as well as recapturing technology rights. Ligand then initiated an internal effort to develop SGRMs for inflammation, oncology and other therapeutic applications. As a result of that effort, in 2001, we moved several SGRMs into late preclinical development. These non-steroidal molecules have anti-inflammatory activity that may be useful against diseases such as asthma and rheumatoid arthritis, as well as anti-proliferative effects that could be beneficial in treating certain leukemias and myelomas. Our goal is to develop novel products that maintain the efficacy of corticosteroids but lack the side effects of current therapies, which can include osteoporosis, hyperglycemia and hypertension.

SARM Programs

We are pioneering the development of tissue selective SARMs, a novel class of non-steroidal, orally active molecules that selectively modulate the activity of the AR in different tissues, providing a wide range of opportunities for the treatment of many diseases and disorders in both men and women. Tissue-selective AR agonists or antagonists may provide utility in male HRT and the treatment of patients with hypogonadism, osteoporosis, male and female sexual dysfunction, frailty, prostate cancer, benign prostatic hyperplasia, skin disorders and other diseases. The use of androgen antagonists has shown efficacy in the treatment of prostate cancer, with three androgen antagonists currently approved by the FDA for use in the treatment of the disease. However, we believe that there is a substantial medical need for improved androgen modulators for use in the treatment of prostate cancer due to the significant side effects seen with currently available drugs.

SARM programs have been one of our largest programs over the past several years. We have assembled an extensive SARM compound library and one of the largest and most experienced AR drug discovery teams in the pharmaceutical industry. We intend to pursue the specialty applications emerging from SARMs internally, but may seek collaborations with major pharmaceutical companies to exploit broader clinical applications.

Consistent with this strategy, we formed in June 2001 a joint research and development alliance with TAP Pharmaceutical Products to focus on the discovery and development of SARMs. Please see the “Collaborative Research and Development Programs/Sex Hormone Modulators Collaborative Programs/TAP Collaboration” section below for more details on this alliance.

Apart from the TAP alliance, Ligand has conducted preclinical development for LGD1331, an androgen antagonist for acne, prostate cancer, hirsutism and androgenetic alopecia. Preclinical studies of LGD1331 indicate that it may have utility for treating acne and hirsutism disorders that affect a significant number of women. *In vivo* studies of LGD1331 have revealed favorable characteristics, including indirect evidence of diminished effects on the central nervous system, compared with currently marketed drugs of this type for the treatment of these conditions.

STAT Research Programs

In contrast to our IR programs, our STAT programs focus on cytokines and growth factors whose receptors are found on the surface of the cell. STATs play a modulating role in the biology of cytokines and growth factors. Many diseases, such as inflammatory conditions, may result from excessive cytokine activity, and others may result from insufficient cytokine activity. See "Technology/Signal Transducers and Activators of Transcription Technology" for a more complete discussion of our STATs technology. In our STAT programs, we seek to develop drug candidates that mimic the activity of thrombopoietin (TPO) for use in a variety of conditions including cancer and disorders of blood cell formation. In 2002, our partner GlaxoSmithKline moved into clinical studies the first product discovered from our STAT expertise, SB-497115, an oral TPO agonist for the treatment of thrombocytopenia.

Collaborative Research and Development Programs

We are pursuing several major collaborative drug discovery programs to further develop the research and development of compounds based on our IR and STAT technologies. These collaborations focus on several large market indications as estimated in the table below.

Indication	U.S. Prevalence
Menopausal symptoms	40 million
Osteoporosis (men and women)	44 million
Dyslipidemas	41 million
Contraception	38 million
Type II diabetes	16 million
Breast cancer	2 million

At the end of 2002, 10 of our collaborative product candidates were in human development - lasofoxifene, bazedoxifene, bazedoxifene+PREMARIN®, ERA-923, GW516, LY818, LY929, LY674, NSP989 and SB497115. Please see note 12 of notes to consolidated financial statements for a description of the financial terms of our key ongoing collaboration agreements. The table below summarizes our collaborative research and development programs, but is not intended to be a comprehensive summary of these programs.

Program	Disease/Indication	Development Phase	Marketing Rights
SEX HORMONE MODULATORS			
SERMs			
• Lasofoxifene	Osteoporosis, breast cancer prevention	Phase III	Pfizer
• Bazedoxifene	Osteoporosis	Phase III	Wyeth
• Bazedoxifene+PREMARIN®	HRT	Phase III	Wyeth
• Pipendoxifene (formerly ERA-923)	Breast cancer	Phase II	Wyeth
PR modulators			
• NSP-989 (PR agonist)	Contraception, HRT	Phase I	Wyeth
• NSP-808 (PR agonist)	Contraception, HRT	IND track	Wyeth
• PR antagonist	Contraception, reporductive disorders	Pre-clinical	Wyeth
• PR agonist	HRT, contraception, reproductive disorders	Pre-clinical	Organon
SARMs			
• LGD2226 / back-ups (androgen agonist)	Male hypogonadism, HRT; female sexual dysfunction, osteoporosis	IND track	TAP

Program	Disease/Indication	Development Phase	Marketing Rights
METABOLIC/CARDIOVASCULAR DISEASES			
PPAR modulators			
• GW516	Cardiovascular disease, dyslipidemia	Phase I	GlaxoSmithKline
• LY818	Type II diabetes, metabolic diseases	Phase II	Lilly
• LY929	Type II diabetes, metabolic diseases, dyslipidemia	Phase I	Lilly
• LY674	Dyslipidemia	Phase I	Lilly
• LYWWW*	Dyslipidemia	IND track	Lilly
• LYYYY*	Type II diabetes, metabolic diseases, dyslipidemia	IND track	Lilly
• PPAR modulators	Type II diabetes, metabolic diseases, dyslipidemia	Pre-clinical	Lilly
HNF-4 modulators	Type II diabetes, metabolic diseases	Research	Lilly
INFLAMMATORY DISEASES, ONCOLOGY, ANEMIA			
Glucorcorticoid agonists	Inflammation	Pre-clinical	Abbott
SB-497115 (TPO agonist)	Thrombocytopenia	Phase I	GlaxoSmithKline

* Compound number not disclosed

Sex Hormone Modulators Collaborative Programs

The primary objective of our sex hormone modulators collaborative programs is to develop drugs for hormonally responsive cancers of men and women, hormone replacement therapies, the treatment and prevention of diseases affecting women's health, and hormonal disorders prevalent in men. Our programs, both collaborative and internal, target development of tissue-selective modulators of the PR, the ER and the AR. Through our collaborations with Pfizer and Wyeth, three SERM compounds are in development for osteoporosis, breast cancer and HRT. In addition, we entered into a joint research and development program in 2001 with TAP Pharmaceutical Products to focus on the discovery and development of SARMs.

Pfizer Collaboration. In May 1991, we entered into a research and development collaboration with Pfizer to develop better therapies for osteoporosis. In November 1993, we jointly announced the successful completion of the research phase of our alliance with the identification of a development candidate and backups for the prevention and treatment of osteoporosis. In preclinical studies, the candidates from the program mimic the beneficial effects of estrogen on bone and have an impact on blood serum lipids often associated with cardiac benefits without increasing uterine or breast tissue proliferation.

We have milestone and royalty rights to lasofoxifene, which is being developed by Pfizer for osteoporosis prevention and other diseases. Lasofoxifene is a second-generation estrogen partial agonist discovered through our collaboration with Pfizer. Pfizer has retained marketing rights to the drug. Lasofoxifene has been shown in Phase II clinical studies to reduce bone loss and decrease low-density lipoprotein ("LDL" or "bad" cholesterol) levels. In September 2000, Pfizer announced that it initiated Phase III studies of lasofoxifene for the treatment and prevention of osteoporosis in post menopausal women. In December 2001, Pfizer announced that two Phase III studies were fully enrolled with more than 1800 patients, and that an additional Phase III risk reduction trial was underway to evaluate lasofoxifene's effects on bone mineral density, lipid-lowering and breast cancer prevention. In January of 2003, Pfizer disclosed that this large, 7,500-patient risk-reduction study was fully enrolled.

Wyeth Collaboration. In September 1994, we entered into a research and development collaboration with Wyeth-Ayerst Laboratories, the pharmaceutical division of American Home Products (AHP), to discover and develop drugs that interact with ERs or PRs for use in HRT, anti-cancer therapy, gynecological diseases, and central nervous system disorders associated with menopause and fertility control. AHP has since changed its name to Wyeth. We granted Wyeth exclusive worldwide rights to all products discovered in the collaboration that are agonists or antagonists to the PR and ER for application in the fields of women's health and cancer therapy.

As part of this collaboration, we tested Wyeth's extensive chemical library for activity against a selected set of targets. In 1996, Wyeth exercised its option to include compounds we discovered that modulate PRs, and to expand the collaboration to encompass the treatment or prevention of osteoporosis through the ER. Wyeth also added four advanced chemical compound series from its internal ER-osteoporosis program to the collaboration. The research phase of the collaboration ended in August 1998.

Wyeth has ongoing clinical studies with two SERMs from the collaboration. Wyeth is developing bazedoxifene (TSE-424) and bazedoxifene+PREMARIN® for the treatment of post-menopausal osteoporosis and as HRT. Phase III trials were initiated in June 2001. In late 2002, Wyeth disclosed that it had completed enrollment in a Phase III osteoporosis prevention trial, that it expects enrollment in a bazedoxifene fracture prevention trial to finish in 2003, and that bazedoxifene is on track for regulatory submission in 2005. In addition, Wyeth reiterated its commitment to developing bazedoxifene+PREMARIN® as a progesterone-free treatment for menopausal symptoms in the wake of the well-publicized Women's Health Initiative (WHI) study of hormone replacement therapies. Ligand believes it is important to recognize that bazedoxifene is a synthetic drug that was specifically designed to increase bone density and reduce cholesterol levels while at the same time protecting breast and uterine tissue. In other words, bazedoxifene may represent a potential solution to some of the side effects associated with progestin in the WHI study.

Wyeth also has conducted Phase II studies of pipendoxifene (formerly ERA 923) for the treatment of breast cancer. In 2002, Wyeth began Phase I studies of NSP-989, a progesterone agonist that may be useful in contraception and HRT. Wyeth also continues to do preclinical work in the area of PR antagonists.

Organon Collaboration. In February 2000, we entered into a research and development collaboration with Organon to focus on small molecule compounds with potential effects for the treatment and prevention of gynecological diseases mediated through the PR. The objective of the collaboration is the discovery of new non-steroidal compounds that are tissue-selective in nature and that may have fewer side effects. Such compounds may provide utility in hormone replacement therapy, oral contraception, reproductive diseases, and other hormone-related disorders. The initial research phase concluded in February 2002, and preclinical candidates have been selected.

Bristol-Myers Squibb Collaboration. In May 2000, we entered into a research and development collaboration with Bristol-Myers Squibb Company to focus on the discovery, design and development of orally active compounds that selectively modulate the MR. This receptor plays a critical role in many illnesses, particularly cardiovascular diseases such as congestive heart failure and hypertension. Bristol-Myers Squibb terminated this collaboration in June 2001.

TAP Collaboration. In June 2001, we entered into a joint research and development alliance with TAP Pharmaceutical Products to focus on the discovery and development of SARMs. SARMs may contribute to the prevention and treatment of diseases including hypogonadism (low testosterone), male and female sexual dysfunction, male and female osteoporosis, frailty, and male HRT. The three-year collaboration carries an option to extend by up to two additional one-year terms.

Under the terms of the agreement, TAP received exclusive worldwide rights to manufacture and sell any products resulting from the collaboration in its field, which would include treatment and prevention of hypogonadism, male sexual dysfunction, female osteoporosis, male HRT and other indications not retained by Ligand. Ligand retains certain rights in the androgen receptor field, including the prevention or treatment of prostate cancer, benign prostatic hyperplasia, acne and hirsutism. In addition, Ligand has an option at the expiration of the original three-year term to develop one compound not being developed by TAP in its field, with TAP retaining an option to negotiate to co-develop and co-promote such compounds with Ligand.

Metabolic and Cardiovascular Disease Collaborative Programs

We are exploring the role of certain IRs, including the PPARs, in cardiovascular and metabolic diseases. PPARs, a subfamily of orphan IRs, have been implicated in processes that regulate plasma levels of very low density lipoproteins and triglycerides. See "Technology/Intracellular Receptor Technology" for a discussion of PPARs and orphan IRs. Data implicate PPARs in the mechanism of action of lipid-lowering drugs such as Lopid®. There are three subtypes of the PPAR subfamily with defined novel aspects of their action — alpha, beta and gamma. The subtype PPAR alpha appears to regulate the metabolism of certain lipids and is useful in treating hyperlipidemia. PPAR gamma plays a role in fat cell differentiation and cellular responses to insulin. Modulators of PPAR gamma activity (e.g., the glitazone class of insulin sensitizers) have utility in managing type II diabetes. PPARs are believed to function in cells in partnership with RXRs. In addition to compounds that act directly on PPARs and that may have utility in various cardiovascular and metabolic diseases, certain retinoids (e.g., Targretin® capsules) are able to activate this RXR:PPAR complex and may also have utility in these disorders. We have two collaborative partners, GlaxoSmithKline and Lilly, in the areas of cardiovascular and metabolic diseases, with four compounds in clinical development.

GlaxoSmithKline Collaboration. In September 1992, we entered into a research and development collaboration with Glaxo Wellcome plc (now GlaxoSmithKline) to discover and develop drugs for the prevention or treatment of atherosclerosis and other disorders affecting the cardiovascular system. The collaboration focuses on discovering drugs that produce beneficial alterations in lipid and lipoprotein metabolism in three project areas: (1) regulation of cholesterol biosynthesis and expression of a receptor that removes cholesterol from the blood stream, (2) the IRs influencing circulating HDL levels, and (3) PPARs, the subfamily of IRs activated by lipid lowering drugs such as Lopid® and Atromid-S. The research phase was successfully completed in 1997 with the identification of a novel lead structure that activates selected PPAR subfamily members and the identification of a different lead compound that shows activity in preclinical models for lowering LDL cholesterol by up-regulating LDL receptor gene expression in liver cells. We retain the right to develop and commercialize products arising from the collaboration in markets not exploited by GlaxoSmithKline, or where GlaxoSmithKline is not developing a product for the same indication.

In 1999, two compounds were advanced to exploratory development: (1) GW544, a PPAR agonist for cardiovascular disease and dyslipidemia; and (2) GW516, a second candidate that is in clinical development for cardiovascular disease and dyslipidemia. GW516 remains in Phase I studies. The American Heart Association estimates that 62 million Americans have some form of cardiovascular disease, and that cardiovascular disease accounts for more than 40% of deaths in the U.S. annually.

Eli Lilly Collaboration. In November 1997, we entered into a research and development collaboration with Eli Lilly & Co. (Lilly) for the discovery and development of products based upon our IR technology with broad applications in the fields of metabolic diseases, including diabetes, obesity, dyslipidemia, insulin resistance and cardiovascular diseases associated with insulin resistance and obesity. Under the collaboration, Lilly received: (1) worldwide, exclusive rights to our compounds and technology associated with the RXR receptor in the field; (2) rights to use our technology to develop an RXR compound in combination with a SERM in cancer; (3) worldwide, exclusive rights in certain areas to our PPAR technology, along with rights to use PPAR research technology with the RXR technology; and (4) exclusive rights to our HNF-4 receptor and obesity gene promoter technology. Lilly has the right to terminate the development of compounds under the agreements. We would receive rights to certain of such compounds in return for a royalty to Lilly, the rate of which is dependent on the stage at which the development is terminated. In April 2002, Lilly and Ligand announced the companies would extend the collaboration until November of 2003. Lilly may extend the term for up to two additional one-year terms.

Under the Lilly collaboration, we retained or received: (1) exclusive rights to independently research, develop and commercialize Targretin® and other RXR compounds in the fields of cancer and dermatology; (2) an option to obtain selected rights to one of Lilly's specialty pharmaceutical products; and (3) rights to receive milestones, royalties and options to obtain certain co-development and co-promotion rights for the Lilly-selected RXR compound in combination with a SERM.

Our rights under the initial agreements have changed. In connection with the acquisition of Seragen in 1998, we obtained from Lilly its rights to ONTAK® in satisfaction of our option to obtain selected rights to one of Lilly's specialty pharmaceutical products. In 1999, we agreed to focus our collaborative efforts on the RXR modulator second-generation program, which has compounds with improved therapeutic indices relative to the three first-generation compounds, and on co-agonists of the PPAR receptor program. In early 1999, Lilly opted not to proceed with the development of certain first-generation compounds, including Targretin®, in the RXR program for diabetes. As a result of this decision, all rights to the oral form of Targretin® reverted to us, and LGD1268 and LGD1324 returned to the pool of eligible RXR modulators for possible use in oncology in combination with a SERM under the collaboration agreement between Ligand and Lilly.

In September 2001, we announced that we had earned an undisclosed milestone from Lilly as a result of Lilly's filing with the FDA an IND for LY818, a PPAR modulator for type II diabetes and metabolic diseases. LY818 entered Phase II studies early in 2003. In June 2002, we announced that we had earned a $1.1 million milestone payment as a result of Lilly's filing with the FDA an IND for LY929, a PPAR modulator for the treatment of Type II diabetes, metabolic diseases and dyslipidemias. In November 2002, we announced that we had earned a $2.1 million milestone payment as a result of Lilly's filing with the FDA an IND for LY674, a PPAR modulator for the treatment of dyslipidemias. We will receive additional milestones if these products continue through the development process, and royalties on product sales if the products receive marketing approval. During 2002, Lilly also moved to IND track two other PPAR products, the compound numbers for which have not been disclosed. Lilly and Ligand also have an active preclinical development program.

Inflammatory Disease Collaborative Program

Abbott Collaboration. In July 1994, we entered into a research and development collaboration with Abbott Laboratories ("Abbott") to discover and develop small molecule compounds for the prevention or treatment of inflammatory diseases. The collaborative program includes several molecular approaches to discovering modulators of glucocorticoid receptor activity that have significantly improved therapeutic profiles relative to currently known anti-inflammatory steroids such as prednisone and dexamethasone. The collaboration is focused on the development of novel non-steroidal glucocorticoids that maintain the efficacy of corticosteroids, but lack some or all of corticosteroids' dose-limiting side effects. The research phase concluded in July 1999. Certain compounds discovered during the collaboration have progressed to advanced preclinical testing in an effort to select a clinical candidate.

When the research phase of the collaboration ended in July 1999, Abbott retained rights to certain specific glucorcorticoid receptor modulators, or SGRMs. Ligand retained rights to all other compounds discovered through the collaboration, as well as recapturing technology rights. Abbott will make milestone and royalty payments on products targeted at inflammation resulting from the collaboration. Each party will be responsible for the development, registration and commercialization of the products in its respective field.

STATs/Blood Disorders Collaborative Program

Our proprietary STAT technology is distinct from our IR technology platform. STATs are activated through a receptor located on the surface of the cell, rather than a receptor located within the cell. STAT technology provides us with a second broadly enabling drug discovery platform that has potential applications in cancer, inflammation, asthma, allergy, infectious disease, anemia, obesity, diabetes and growth disorders. See "Technology/Signal Transducers and Activators of Transcription Technology" for a more complete discussion of our STAT technology. We are pursuing product development opportunities based on our STAT expertise through a collaboration with GlaxoSmithKline.

GlaxoSmithKline Collaboration. In February 1995, we entered into a research and development collaboration with SmithKline Beecham (now GlaxoSmithKline) to use our proprietary STATs technology to discover and characterize small molecule, orally bioavailable drugs to control hematopoiesis (the formation and development of blood cells) for the treatment of a variety of blood cell deficiencies. In 1998, we announced the discovery of the first non-peptide small molecule that mimics in mice the activity of Granulocyte-Colony Stimulating Factor ("G-CSF"), a natural protein that stimulates production of infection-fighting neutrophils (a type of white blood cell). While this lead compound has only been shown to be active in mice, its discovery is a major scientific milestone and suggests that orally active, small-molecule mimics can be developed not only for G-CSF, but for other cytokines as well.

A number of lead molecules have been found that mimic the activity of natural growth factors for white cells and platelets. In the fourth quarter of 2002, Ligand earned a $2.0 million milestone payment from GlaxoSmithKline, which has begun human trials of SB-497115, an oral, small molecule drug that mimics the activity of thrombopoietin (TPO), a protein factor that promotes growth and production of blood platelets. There are no approved TPO agents for the treatment or prevention of thrombocytopenias (decreased platelet count). Investigational use of injectable forms of recombinant human TPO has been efficacious in raising platelet levels in cancer patients undergoing chemotherapy, and has led to accelerated hematopoietic recovery when given to stem cell donors. Some of these investigational treatments have not moved forward to registration due to the development of neutralizing antibodies. Thus, a small molecule TPO mimic with no apparent immunogenic potential and oral activity that may facilitate dosing may provide an attractive therapeutic profile for a major unmet medical need.

The research phase of the collaboration concluded in February 2001. Under the collaboration, we have the right to select up to three compounds related to hematopoietic targets for development as anti-cancer products other than those compounds selected for development by GlaxoSmithKline. GlaxoSmithKline has the option to co-promote these products with us in North America and to develop and market them outside North America.

Dermatology Program

Allergan. In September 1997, in conjunction with the buyback of Allergan Ligand Retinoid Therapeutics, Inc. (ALRT), we agreed with Allergan to restructure the terms and conditions relating to research, development, and commercialization and sublicense rights for the ALRT compounds. Under the restructured arrangement, we received exclusive, worldwide development, commercialization and sublicense rights to Panretin® capsules and Panretin® gel, LGD1550, LGD1268 and LGD1324. Allergan received exclusive, worldwide development, commercialization and sublicense rights to LGD4310, an RAR antagonist. Allergan also received LGD4326 and LGD4204, two advanced preclinical RXR selective compounds. In addition, we participated in a lottery with Allergan for each of the approximately 2,000 retinoid compounds existing in the ALRT compound library as of the closing date, with each party acquiring exclusive, worldwide development, commercialization and sublicense rights to the compounds that they selected. Ligand and Allergan will each pay the other a royalty based on net sales of products developed from the compounds selected by each in the lottery and the other ALRT compounds to which each acquires exclusive rights. We will also pay to Allergan royalties based on our net sales of Targretin® for uses other than oncology and dermatology indications. In the event that we license commercialization rights to Targretin® to a third party, we will pay to Allergan a percentage of royalties payable to us with respect to sales of Targretin® other than in oncology and dermatology indications. During 2001, Allergan elected not to proceed with development of AGN4310 for mucocutaneous toxicity.

Royalty Pharma Agreement

In March 2002, Ligand announced an agreement with Royalty Pharma AG, which purchased rights to a share of future payments from Ligand's collaborative partners' sales of three SERMs in Phase III development. The SERM products included in the transaction are lasofoxifene, which is in Phase III studies for osteoporosis and other indications at Pfizer, bazedoxifene and bazedoxifene/PREMARIN®, which are in Phase III trials at Wyeth for osteoporosis and as HRT.

Royalty Pharma paid Ligand $6.0 million in March 2002 in exchange for a right to receive 0.250% of net sales of the three SERMs for a period of 10 years. In the second quarter of 2002, Royalty Pharma exercised its first option to purchase for $3 million an additional 0.125% of the SERMs' potential future sales. In the third quarter, Royalty Pharma exercised another option to purchase for $3.5 million an additional 0.125% of the SERMs' potential future sales. In the fourth quarter of 2002, Ligand and Royalty Pharma expanded their SERM royalty agreement and formed a new royalty-sharing partnership around Ligand's approved cancer drug Targretin® capsules. Under the revised agreement, Royalty Pharma exercised an expanded option in December 2002 and agreed to pay Ligand $6.775 million for 0.1875% of the SERMs' potential future sales and for 1% of worldwide sales of Targretin® capsules from January 2003 through 2016. The agreement does not apply to sales of Targretin® capsules outside the United States for CTCL until the product is approved for an indication other than CTCL. Overall, through December 2002 Royalty Pharma purchased for $19.3 million the right to receive 0.6875% of the SERMs' potential future sales, plus 1% of Targretin® capsules sales. Royalty Pharma has remaining options, exercisable at its discretion, to purchase at escalating prices rights to receive up to another 0.875% of the SERMs' potential future sales for up to $25 million in two installments in 2003, and up to $26.5 million in two installments in 2004.

Under the terms of the agreement, unexercised options expire on their due date and cannot be deferred or accelerated. All payments are non-refundable, regardless of whether the products are ever successfully registered or marketed. Milestone payments owed by Ligand's partners as the products complete development and registration are not included in the Royalty Pharma agreement and will be paid to Ligand as earned.

Technology

In our successful efforts to discover new and important medicines, we and our academic collaborators and consultants have concentrated on two areas of research: advancing the understanding of the activities of hormones and hormone-related drugs, and making scientific discoveries related to IR and STAT technologies. We believe that our expertise in these technologies will enable us to develop novel, small-molecule drugs acting through IRs or STATs with more target-specific properties than currently available drugs. Our efforts may result either in improved therapeutic and side effect profiles and new indications for IRs, or in novel mechanisms of action and oral activity for STATs. Both IRs and STATs are families of transcription factors that change cell function by selectively turning on or off particular genes in response to circulating signals that impinge on cells. In addition to our proprietary IR and STAT technologies, we have acquired fusion protein technology, which was used by Seragen in the development of ONTAK®.

Intracellular Receptor Technology

Hormones occur naturally within the body and control processes such as reproduction, cell growth and differentiation. Hormones generally fall into two classes, non-peptide hormones and peptide hormones. Non-peptide hormones include retinoids, sex steroids (estrogens, progestins and androgens), adrenal steroids (glucocorticoids and mineralocorticoids), vitamin D and thyroid hormone. These non-peptide hormones act by binding to their corresponding IRs to regulate the expression of genes in order to maintain and restore balanced cellular function within the body. Hormonal imbalances can lead to a variety of diseases. The hormones themselves and drugs that mimic or block hormone action may be useful in the treatment of these diseases. Furthermore, hormone mimics (agonists) or blockers (antagonists) can be used to treat diseases in which the underlying cause is not hormonal imbalance. The effectiveness of IRs as drug targets is clearly demonstrated by currently available drugs acting through IRs for several diseases. However, the use of most of these drugs has been limited by their often significant side effects. Examples of currently marketed hormone-related drugs acting on IRs are glucocorticoids (steroids used to treat inflammation), natural and synthetic estrogens and progesterones (used for hormone replacement therapy and contraception), tamoxifen (an estrogen antagonist used in the treatment of breast cancer), and various retinoids such as Accutane® and Retin-A® (used to treat acne) and Dovonex® (used to treat psoriasis).

We have built a strong proprietary position and accumulated substantial expertise in IRs applicable to drug discovery and development. Building on our scientific findings about the molecular basis of hormone action, we have created proprietary new tools to explore and manipulate non-peptide hormone action for potential therapeutic benefit. We employ a proprietary cell-culture based assay system for small molecules that can modulate IRs, referred to as the co-transfection assay. The co-transfection assay system simulates the actual cellular processes controlled by IRs and is able to detect whether a compound interacts with a particular human IR and whether this interaction mimics or blocks the effects of the natural regulatory molecules on target gene expression.

The understanding of non-peptide hormones and their actions has increased substantially in the last 15 years. Driving this rapid expansion of knowledge has been the discovery of the family of IRs through which all known small-molecule, non-peptide hormones act. We and our academic collaborators and consultants have made major discoveries pertaining to IRs and to small molecule hormones and compounds that interact with these IRs. These discoveries include: (1) the identification of the IR superfamily, (2) the recognition of IR subtypes, (3) the heterodimer biology of RXR-selective compounds and (4) the discovery of orphan IRs. We believe that each of these broad areas of knowledge provides important opportunities for drug discovery.

IR Superfamily. The receptors for all non-peptide hormones are closely related members of a superfamily of proteins known as IRs. Human IRs for all the known non-peptide hormones now have been cloned, in many cases by our scientists or our collaborators. The structure and underlying mechanism of action of IRs have many common features, such that drug discovery insights about one IR often can be directly applied to other members of the IR superfamily, bringing synergy to our IR-focused drug discovery efforts. First-generation drugs were developed and commercialized for their therapeutic benefits prior to the discovery of IRs. As a result, they often cross-react with the IRs for hormones other than the intended target, which can result in significant side effects. The understanding that IRs are structurally similar has enabled us to determine the basis for the side effects of some first-generation drugs and to discover improved drug candidates.

IR Subtypes. For some of the non-peptide hormones, several closely related but non-identical IRs, known as IR subtypes, have been discovered. These include six subtypes of the IRs for retinoids, two subtypes of the IRs for thyroid hormone, two subtypes for the ER, and three subtypes for the PPARs. Patent applications covering many of these IR subtypes have been exclusively licensed by us. We believe that drugs capable of selective modulation of IR subtypes will allow more specific pharmacological intervention that is better matched to therapeutic need. Targretin®, an RXR selective molecule, was discovered as a result of our understanding of retinoid receptor subtypes.

Retinoid Responsive IRs. Retinoic acid, a derivative of Vitamin A, is one of the body's natural regulatory hormones that has a broad range of biological actions, influencing cell growth, differentiation, programmed cell death and embryonic development. Many chemical analogues of retinoic acid, called retinoids, also have biological activity. Specific retinoids have been approved by the FDA for the treatment of psoriasis and certain severe forms of acne. Evidence also suggests that retinoids can be used to arrest and, to an extent, reverse the effects of skin damage arising from prolonged exposure to the sun. Other evidence suggests that retinoids are useful in the treatment of a variety of cancers, including kidney cancer and certain forms of leukemia. For example, all-trans-retinoic-acid has been approved by the FDA to treat acute promyelocytic leukemia. Retinoids also have shown an ability to reverse precancerous (premalignant) changes in tissues, reducing the risk of development of cancer, and may have potential as preventive agents for a variety of epithelial malignancies, including skin, head and neck, bladder and prostate cancer. Currently marketed retinoids, which were developed and commercialized prior to the discovery of retinoid-responsive IRs, cause significant side effects. These include severe birth defects if fetal exposure occurs, severe irritation of the skin and mucosal surfaces, elevation of plasma lipids, headache and skeletal abnormalities.

The six RRs that have been identified to date can be grouped in two subfamilies -- RARs and RXRs. Patent applications covering members of both families of RRs have been licensed exclusively to us primarily from The Salk Institute. The RR subtypes appear to have different functions, based on their distribution in various tissues within the body and data arising from *in vitro* and *in vivo* studies, including studies of transgenic mice. Several of the retinoids currently in commercial use are either non-selective in their pattern of RR subtype activation or are not ideal drugs for other reasons. We are developing chemically synthesized retinoids that, by selectively activating RR subtypes, may preserve desired therapeutic effects while reducing side effects.

We have three retinoid products approved by the FDA (Panretin® gel, Targretin® capsules and Targretin® gel) and four retinoid products in clinical trials (Panretin® capsules, Targretin® capsules, Targretin® gel and LGD1550 capsules). Panretin® gel and Panretin® capsules incorporate 9-*cis* retinoic acid, a retinoid isolated and characterized by us in 1991 in collaboration with scientists at The Salk Institute and Baylor. 9-*cis* retinoic acid is the first non-peptide hormone discovered in more than 25 years and appears to be a natural ligand for the RAR and RXR subfamilies of retinoid receptors. Bexarotene, the active substance in Targretin®, is a synthetic retinoid developed by us that shows selective retinoid receptor subtype activity that is different from that of 9-*cis* retinoic acid, the active substance in Panretin®. Targretin® selectively activates a subclass of retinoid receptors called RXRs. RXRs play an important role in the control of a variety of cellular functions. LGD1550 is a potent RAR agonist that strongly inhibits growth of several human cancer cell lines.

RXRs. RXRs can form a dimer with numerous IRs, such as the RAR, thyroid hormone receptor and vitamin D receptor. While RXRs are widely expressed, their IR partners are more selectively expressed in different tissues, such as liver, fat or muscle. As a result, compounds that bind RXRs offer the unique potential to treat a variety of diseases, including cancer and metabolic diseases. In preclinical models of type II diabetes, RXR agonists appear to stimulate the physiological pathways responsive to RXR-PPAR receptor partners expressed in key target tissues that are involved in glucose metabolism. As a result, a discrete set of genes is activated in these tissues, resulting in a decrease in serum glucose levels and insulin.

Orphan Receptors. More than 50 additional members of the IR superfamily that do not interact with the known non-peptide hormones have been discovered. These members of the IR superfamily have been designated orphan receptors. We believe that among the orphan IRs there may be receptors for uncharacterized small molecule hormones, and that the physiological roles of the various orphan IRs are likely to be diverse. We have devised strategies to isolate small molecules that interact with orphan IRs. In 1999, we invested in and exclusively licensed specified orphan IR technology to a new private corporation, X-Ceptor Therapeutics, Inc., which is conducting research to identify therapeutic products from orphan nuclear receptors. Please see note 13 of notes to consolidated financial statements for further details regarding our investment in X-Ceptor.

Signal Transducers and Activators of Transcription Technology

STATs are a family of proteins that are a key part of the signal transduction pathway for a variety of biologically important polypeptide hormones (e.g., interferons, interleukins, leptin and hematopoietic growth factors). STATs play a role in the biology of cytokines and growth factors functionally analogous to that played by IRs in the biology of the non-peptide hormones. When various cytokines or growth factors bind to their receptors on the cell surface, this triggers the activation of specific members of the JAKs, which in turn activate specific STATs. The activated STATs enter the cell nucleus and bind to the control regions of specific target genes and alter their expression, thereby modulating physiologic or pathophysiologic processes.

The discovery of STATs, the elucidation of their roles in interferon signal transduction, and the first cloning of genes encoding STATs were all accomplished by our exclusive collaborator, Dr. James Darnell, and were described initially in 1992. A total of seven members of the STAT family have been identified and a large number of peptide hormones have been shown to utilize STAT signaling pathways. These peptide hormones include the interferons (alpha, beta and gamma), the hematopoietic colony stimulating factors (interleukin-3, EPO, G-CSF, GM-CSF and thrombopoietin), growth hormone, prolactin, leptin and many of the interleukins.

In certain conditions it may prove beneficial to block the actions of specific cytokines. In other pathological states, there is insufficient activity of specific cytokines. For example, in patients with chronic renal failure, diminished erythropoietin (“EPO”) release by the damaged kidneys results in the inadequate production of red blood cells, causing anemia. Recombinant human EPO protein (Epogen®) can be administered to correct this anemia effectively, but must be injected. Other cytokines are useful as injected protein medicines, including interferons (Intron-A®, Roferon®, Betaseron®) and interleukins (Proleukin®) and G-CSF (Neupogen®). Each of these and many other cytokines appear to exert their actions through JAK/STAT signal transduction pathways.

We have established a collaboration with GlaxoSmithKline to discover and characterize small molecule drugs to modulate specific JAK/STAT pathways to control the formation of red, white and platelet blood cells for treating patients with cancer, anemia, or platelet deficiency disorders. Proof of principle for this approach was achieved with GlaxoSmithKline in the area of G-CSF and thrombopoietin mimics. In 2002, GlaxoSmithKline moved into clinical studies the first product discovered from our STAT technology, SB-497115, an oral TPO agonist for the treatment of thrombocytopenia.

Fusion Protein Technology

Our fusion protein technology was developed by Seragen, which we acquired in 1998. Seragen's fusion proteins consist of a fragment of diphtheria toxin genetically fused to a ligand that binds to specific receptors on the surface of target cells. Once bound to the cell, the fusion proteins are designed to enter the cell and destroy the ability of the cell to manufacture proteins, resulting in cell death. Using this platform, Seragen genetically engineered six fusion proteins, each of which consists of a fragment of diphtheria toxin fused to a different targeting ligand, such as a polypeptide hormone or growth factor. ONTAK®, which is approved in the U.S. for the treatment of patients with persistent or recurrent CTCL, is a fusion protein consisting of a fragment of diphtheria toxin genetically fused to a part of interleukin-2. In addition to treatment of CTCL, fusion proteins may have utility in oncology, dermatology, infectious diseases and autoimmune diseases. Seragen has entered into exclusive license agreements with Harvard University and other parties for patents related to fusion protein technology and has been issued four U.S. patents for improvements in the technology licensed from Harvard University.

Academic Collaborations

To date, we have licensed technology from The Salk Institute, Baylor College of Medicine and Rockefeller University and developed relationships with key scientists to further the development of our core IR and STAT technologies.

The Salk Institute of Biological Studies. In 1988, we established an exclusive relationship with The Salk Institute, which is one of the research centers in the area of IR technology. We amended and restated this agreement in April 2002. Under our agreement, we have an exclusive, worldwide license to certain IR technology developed in the laboratory of Dr. Ronald Evans, a Salk professor and Howard Hughes Medical Institute Investigator. Dr. Evans cloned and characterized the first IR in 1985 and is an inventor of the co-transfection assay used by us to screen for IR modulators. Under the agreement, we are obligated to make certain royalty payments based on sales of certain products developed using the licensed technology, as well as certain minimum annual royalty payments and a percentage of milestones and other payments received.

We have also entered into a consulting agreement with Dr. Evans that continues through February 2004. Dr. Evans serves as Chairman of Ligand's Scientific Advisory Board.

Baylor College of Medicine. In 1990, we established an exclusive relationship with Baylor, which is a center of IR technology. We entered into a series of agreements with Baylor under which we have an exclusive, worldwide license to IR technology developed at Baylor and to future improvements made in the laboratory of Dr. Bert W. O'Malley through the life of the related patents. Dr. O'Malley is a professor and the Chairman of the Department of Cell Biology at the Baylor College of Medicine and the Director of the Center for Reproductive Biology. He leads IR research at Baylor.

We work closely with Dr. O'Malley and Baylor in scientific IR research, particularly in the area of sex steroids and orphan IRs. Under our agreement, we are obligated to make certain royalty payments based on the sales of products developed using the licensed technology. Dr. O'Malley is a member of Ligand's Scientific Advisory Board.

Rockefeller University. In September 1992, we entered into a worldwide, exclusive license agreement with Rockefeller University, and exclusive consulting agreements with Dr. James Darnell of Rockefeller University and Dr. David Levy of NYU, to develop and commercialize certain technology involving STATs to control gene expression. Dr. Darnell is one of the leading investigators of the control of gene expression by STATs. Rockefeller University will receive a royalty on any commercialized products developed using the technology. Related technology was assigned by NYU to Rockefeller University and is covered by the license agreement with us.

In addition to the collaborations discussed above, we also have a number of other consulting, licensing, development and academic agreements by which we strive to advance our technology.

Manufacturing

We currently have no manufacturing facilities and, accordingly, rely on third parties, including our collaborative partners, for commercial or clinical production of any products or compounds.

Certain raw materials necessary for the commercial manufacturing of our products are custom and must be obtained from a specific sole source. In addition, our finished products are produced by sole source manufacturers. We currently attempt to manage the risk associated with such sole source raw materials and production by actively managing our inventories and supply and production arrangements. We attempt to remain appraised of the financial condition of our suppliers and their ability to continue to supply our raw materials and finished products in an uninterrupted and timely manner. Unavailability of certain materials or the loss of current sources of production could cause an interruption in production and a reduced supply of finished product pending establishment of new sources, or in some cases, implementation of alternative processes. For a discussion of the risks associated with manufacturing, see “Risks and Uncertainties.”

Quality Assurance

Our success depends in great measure upon customer confidence in the quality of our products and in the integrity of the data that support their safety and effectiveness. The quality of our products arises from our total commitment to quality in all aspects of our business, including research and development, purchasing, manufacturing and distribution. Quality-assurance procedures have been developed relating to the quality and integrity of our scientific information and production processes.

Control of production processes involves rigid specifications for ingredients, equipment, facilities, manufacturing methods, packaging materials and labeling. Control tests are made at various stages of production processes and on the final product to assure that the product meets all regulatory requirements and our standards. These tests may involve chemical and physical microbiological testing, preclinical testing, human clinical trials, or a combination of these trials.

Commercial

Ligand’s practices with respect to working capital items are similar to comparable companies in the industry. The Company accepts the return of pharmaceuticals that have reached their expiration date. Our policy for returns allows customers, primarily wholesale distributors, to return the product three months prior to and six months after expiration. The level of actual returns can be influenced by a number of factors including the dating of product when shipped to the customer, the amount of product subsequently shipped by the wholesale distributor to their customers, pricing adjustments, and competing products. Actual product returns may differ from our estimates.

We have offered and may in the future offer special payment terms as part of promotional launch and other commercial programs such as those that provide customers with discounts off wholesale price and 90-day payment terms instead of our normal 30-day terms. We offered such special terms, for example, in our launch of AVINZA®.

For the year ended December 31, 2002, revenues from sales to and agreements with five customers each accounted for more than 10% of total revenues and in the aggregate represented more than 85% of total revenues. These were AmerisouceBergen Corporation, Cardinal Health, Inc., McKesson Corporation, Royalty Pharma AG and Eli Lilly & Company. Of these, there were three wholesale distributors, AmerisouceBergen Corporation, Cardinal Health Inc., and McKesson Corporation, that individually represented 10% or more of the Company's product sales and in the aggregate represented approximately 92% of product sales.

Substantially all of the Company's revenues are attributable to customers in the United States; likewise substantially all of our long-lived assets are located in the United States.

For further discussion of these items, as well as a discussion of inventories, see below under "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Critical Accounting Policies" and "Management's Discussion and Analysis of Financial Condition and Results of Operations - New Accounting Policies."

Research and Development Expenses

Research and development expenses were $58.8 million, $51.1 million and $51.3 million in fiscal 2002, 2001 and 2000, respectively, of which approximately 75%, 70% and 68%, respectively, we sponsored, and the remainder of which was funded pursuant to collaborative research and development arrangements.

Competition

Some of the drugs we are developing will compete with existing therapies. In addition, a number of companies are pursuing the development of novel pharmaceuticals that target the same diseases we are targeting. A number of pharmaceutical and biotechnology companies are pursuing IR-related or STAT-related approaches to drug discovery and development. Furthermore, academic institutions, government agencies, and other public and private organizations conducting research may seek patent protection with respect to potentially competing products or technologies and may establish collaborative arrangements with our competitors.

Our competitive position also depends upon our ability to attract and retain qualified personnel, obtain patent protection or otherwise develop proprietary products or processes, and secure sufficient capital resources for the often substantial period between technological conception and commercial sales. For a discussion of the risks associated with competition, see "Risks and Uncertainties."

Government Regulation

The manufacturing and marketing of our products, our ongoing research and development activities, and products being developed by our collaborative partners are subject to regulation for safety and efficacy by numerous governmental authorities in the United States and other countries. In the United States, pharmaceuticals are subject to rigorous regulation by federal and various state authorities, including the FDA. The Federal Food, Drug and Cosmetic Act and the Public Health Service Act govern the testing, manufacture, safety, efficacy, labeling, storage, record keeping, approval, advertising and promotion of our products. There are often comparable regulations that apply at the state level. Product development and approval within this regulatory framework takes a number of years and involves the expenditure of substantial resources.

The steps required before a pharmaceutical agent may be marketed in the United States include (1) preclinical laboratory tests, (2) the submission to the FDA of an IND, which must become effective before human clinical trials may commence, (3) adequate and well-controlled human clinical trials to establish the safety and efficacy of the drug, (4) the submission of a NDA to the FDA and (5) the FDA approval of the NDA prior to any commercial sale or shipment of the drug. A company must pay a one-time user fee for NDA submissions, and annually pay user fees for each approved product and manufacturing establishment. In addition to obtaining FDA approval for each product, each domestic drug-manufacturing establishment must be registered with the FDA and, in California, with the Food and Drug Branch of California. Domestic manufacturing establishments are subject to pre-approval inspections by the FDA prior to marketing approval, then to biennial inspections, and must comply with current Good Manufacturing Practices (cGMP). To supply products for use in the United States, foreign manufacturing

establishments must comply with cGMP and are subject to periodic inspection by the FDA or by regulatory authorities in such countries under reciprocal agreements with the FDA.

For both currently marketed and future products, failure to comply with applicable regulatory requirements after obtaining regulatory approval can, among other things, result in the suspension of regulatory approval, as well as possible civil and criminal sanctions. In addition, changes in existing regulations could have a material adverse effect to us.

For marketing outside the United States before FDA approval to market, we must submit an export permit application to the FDA. We also are subject to foreign regulatory requirements governing human clinical trials and marketing approval for drugs. The requirements relating to the conduct of clinical trials, product licensing, pricing and reimbursement vary widely from country to country and there can be no assurance that we or any of our partners will meet and sustain any such requirements. For a discussion of the risks associated with government regulations, see "Risks and Uncertainties."

Patents and Proprietary Rights

We believe that patents and other proprietary rights are important to our business. Our policy is to file patent applications to protect technology, inventions and improvements to our inventions that are considered important to the development of our business. We also rely upon trade secrets, know-how, continuing technological innovations and licensing opportunities to develop and maintain our competitive position.

To date, we have filed or participated as licensee in the filing of approximately 88 currently pending patent applications in the United States relating to our technology, as well as foreign counterparts of certain of these applications in many countries. In addition, we own or have licensed rights covered by approximately 297 patents issued or applications, granted or allowed worldwide, including United States patents and foreign counterparts to United States patents. With a few immaterial exceptions, these patents and applications will expire between 2003 and 2023. Our marketed products are expected to have patent protection in the United States and Europe that does not expire until between 2011 and 2017. Subject to compliance with the terms of the respective agreements, our rights under our licenses with our exclusive licensors extend for the life of the patents covering such developments. For a discussion of the risks associated with patent and proprietary rights, see "Risks and Uncertainties."

Human Resources

As of February 28, 2003, we had 402 full-time employees, of whom 209 were involved directly in scientific research and development activities. Of these employees, approximately 66 hold Ph.D. or M.D. degrees.

Available Information

We file electronically with the Securities and Exchange Commission (or SEC) our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K and, as necessary, amendments to these reports, pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934. The public may read or copy any materials we file with the SEC at the SEC's Public Reference Room at 450 Fifth Street, NW, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The address of that site is <http://www.sec.gov>.

You may obtain a free copy of our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K and amendments to those reports which are posted as soon as reasonably practicable after filing on our website on the World Wide Web at <http://www.ligand.com>, by contacting the Investor Relations Department at our corporate offices by calling (858) 550-7500 or by sending an e-mail message to investors@ligand.com. You may also request information via the Investor Relations page of our Web site.

Risks and Uncertainties

The following is a summary description of some of the many risks we face in our business. You should carefully review these risks in evaluating our business, including the businesses of our subsidiaries. You should also consider the other information described in this report.

Our product development and commercialization involves a number of uncertainties, and we may never generate sufficient revenues from the sale of products to become profitable.

We were founded in 1987. We have incurred significant losses since our inception. At December 31, 2002, our accumulated deficit was approximately $618 million. To date, we have received the majority of our revenues from our collaborative arrangements and only began receiving revenues from the sale of pharmaceutical products in 1999. To become profitable, we must successfully develop, clinically test, market and sell our products. Even if we achieve profitability, we cannot predict the level of that profitability or whether we will be able to sustain profitability. We expect that our operating results will fluctuate from period to period as a result of differences in when we incur expenses and receive revenues from product sales, collaborative arrangements and other sources. Some of these fluctuations may be significant.

Most of our products in development will require extensive additional development, including preclinical testing and human studies, as well as regulatory approvals, before we can market them. We cannot predict if or when any of the products we are developing or those being co-developed with our partners will be approved for marketing. There are many reasons that we or our collaborative partners may fail in our efforts to develop our other potential products, including the possibility that:

- preclinical testing or human studies may show that our potential products are ineffective or cause harmful side effects;
- the products may fail to receive necessary regulatory approvals from the FDA or foreign authorities in a timely manner, or at all;
- the products, if approved, may not be produced in commercial quantities or at reasonable costs;
- the products, once approved, may not achieve commercial acceptance;
- regulatory or governmental authorities may apply restrictions to our products, which could adversely affect their commercial success; or
- the the proprietary rights of other parties may prevent us or our partners from marketing the products.

We are building marketing and sales capabilities in the United States and Europe which is an expensive and time-consuming process and may increase our operating losses.

Developing the sales force to market and sell products is a difficult, expensive and time-consuming process. We have developed a US sales force of about 90 people. We also rely on third-party distributors to distribute our products. The distributors are responsible for providing many marketing support services, including customer service, order entry, shipping and billing and customer reimbursement assistance. In Europe, we will rely initially on other companies to distribute and market our products. We have entered into agreements for the marketing and distribution of our products in territories such as the United Kingdom, Germany, France, Spain, Portugal, Greece, Italy and Central and South America and have established a subsidiary, Ligand Pharmaceuticals International, Inc., with a branch in London, England, to coordinate our European marketing and operations. Our reliance on these third parties means our results may suffer if any of them are unsuccessful or fail to perform as expected. We may not be able to continue to expand our sales and marketing capabilities sufficiently to successfully commercialize our products in the territories where they receive marketing approval. With respect to our co-promotion or licensing arrangements, for example our co-promotion agreement for AVINZA®, any revenues we receive will depend substantially on the marketing and sales efforts of others, which may or may not be successful.

Our small number of products means our results are vulnerable to setbacks with respect to any one product.

We currently have only five products approved for marketing and a handful of other products/indications that have made significant progress through development. Because these numbers are small, especially the number of marketed products, any significant setback with respect to any one of them could significantly impair our operating results and/or reduce the market prices for our securities. Setbacks could include problems with shipping, distribution, manufacturing, product safety, marketing, government licenses and approvals, intellectual property rights and physician or patient acceptance of the product.

Sales of our specialty pharmaceutical products may significantly fluctuate each period based on the nature of our products, our promotional activities and wholesaler purchasing and stocking patterns.

Excluding AVINZA®, our products are small-volume specialty pharmaceutical products that address the needs of cancer patients in relatively small niche markets with substantial geographical fluctuations in demand. To ensure patient access to our drugs, we maintain broad distribution capabilities with inventories held at approximately 125 locations throughout the United States. Furthermore, the purchasing and stocking patterns of our wholesaler customers are influenced by a number of factors that vary with each product, including but not limited to overall level of demand, periodic promotions, required minimum shipping quantities and wholesaler competitive initiatives. As a result, the level of product in the distribution channel may average from two to six months' worth of projected inventory usage. If any or all of our major distributors decide to substantially reduce the inventory they carry in a given period, our sales for that period could be substantially lower than historical levels.

Our drug development programs will require substantial additional future funding which could hurt our operational and financial condition.

Our drug development programs require substantial additional capital to successfully complete them, arising from costs to:

- conduct research, preclinical testing and human studies,
- establish pilot scale and commercial scale manufacturing processes and facilities, and
- establish and develop quality control, regulatory, marketing, sales and administrative capabilities to support these programs.

Our future operating and capital needs will depend on many factors, including:

- the pace of scientific progress in our research and development programs and the magnitude of these programs,
- the scope and results of preclinical testing and human studies,
- the time and costs involved in obtaining regulatory approvals,
- the time and costs involved in preparing, filing, prosecuting, maintaining and enforcing patent claims, competing technological and market developments,
- our ability to establish additional collaborations,
- changes in our existing collaborations,
- the cost of manufacturing scale-up, and
- the effectiveness of our commercialization activities.

We currently estimate our research and development expenditures over the next 3 years to range between $200 million and $275 million. However, we base our outlook regarding the need for funds on many uncertain variables. Such uncertainties include regulatory approvals, the timing of events outside our direct control such as product launches by partners and the success of such product launches, negotiations with potential strategic partners and other factors. Any of these uncertain events can significantly change our cash requirements as they determine such one-time events as the receipt of major milestones and other payments.

While we expect to fund our research and development activities from cash generated from internal operations to the extent possible, if we are unable to do so we may need to complete additional equity or debt financings or seek other external means of financing. If additional funds are required to support our operations and we are unable to obtain them on terms favorable to us, we may be required to cease or reduce further development or commercialization of our products, to sell some or all of our technology or assets or to merge with another entity.

Some of our key technologies have not been used to produce marketed products and may not be capable of producing such products.

To date, we have dedicated most of our resources to the research and development of potential drugs based upon our expertise in our IR and STAT technologies. Even though there are marketed drugs that act through IRs, some aspects of our IR technologies have not been used to produce marketed products. In addition, we are not aware of any drugs that have been developed and successfully commercialized that interact directly with STATs. Much remains to be learned about the location and function of IRs and STATs. If we are unable to apply our IR and STAT technologies to the development of our potential products, we will not be successful in developing new products.

We may require additional money to run our business and may be required to raise this money on terms which are not favorable or which reduce our stock price.

We have incurred losses since our inception and may not generate positive cash flow to fund our operations for one or more years. As a result, we may need to complete additional equity or debt financings to fund our operations. Our inability to obtain additional financing could adversely affect our business. Financings may not be available at all or on favorable terms. In addition, these financings, if completed, still may not meet our capital needs and could result in substantial dilution to our stockholders. For instance, in February and March 2002 we issued to Elan 6.3 million shares upon the conversion of zero coupon convertible senior notes held by Elan, and in April 2002 we issued 4.3 million shares of our common stock in a private placement. These transactions have resulted in the issuance of significant numbers of new shares. In addition, in November 2002 we issued in a private placement $155,250,000 in aggregate principal amount of our 6% convertible subordinated notes due 2007, which could be converted into 25,149,025 shares of our common stock.

If adequate funds are not available, we may be required to delay, reduce the scope of or eliminate one or more of our research or drug development programs, or our marketing and sales initiatives. Alternatively, we may be forced to attempt to continue development by entering into arrangements with collaborative partners or others that require us to relinquish some or all of our rights to technologies or drug candidates that we would not otherwise relinquish.

Our products face significant regulatory hurdles prior to marketing which could delay or prevent sales. Even after approval, government regulation of our business is extensive.

Before we obtain the approvals necessary to sell any of our potential products, we must show through preclinical studies and human testing that each product is safe and effective. We and our partners have a number of products moving toward or currently in clinical trials, the most significant of which are our Phase III trials for Targretin® capsules in non-small cell lung cancer and three Phase III trials by our partners involving bazedoxifene and lasofoxifene. Failure to show any product's safety and effectiveness would delay or prevent regulatory approval of the product and could adversely affect our business. The clinical trials process is complex and uncertain. The results of preclinical studies and initial clinical trials may not necessarily predict the results from later large-scale clinical trials. In addition, clinical trials may not demonstrate a product's safety and effectiveness to the satisfaction of the regulatory authorities. A number of companies have suffered significant setbacks in advanced clinical trials or in seeking regulatory approvals, despite promising results in earlier trials. The FDA may also require additional clinical trials after regulatory approvals are received, which could be expensive and time-consuming, and failure to successfully conduct those trials could jeopardize continued commercialization.

The rate at which we complete our clinical trials depends on many factors, including our ability to obtain adequate supplies of the products to be tested and patient enrollment. Patient enrollment is a function of many factors, including the size of the patient population, the proximity of patients to clinical sites and the eligibility criteria for the trial. For example, each of our Phase III Targretin® clinical trials will involve approximately 600 patients and may require significant time and investment to complete enrollments. Delays in patient enrollment may result in increased costs and longer development times. In addition, our collaborative partners have rights to control product development and clinical programs for products developed under the collaborations. As a result, these collaborators may conduct these programs more slowly or in a different manner than we had expected. Even if clinical trials are completed, we or our collaborative partners still may not apply for FDA approval in a timely manner or the FDA still may not grant approval.

In addition, the manufacturing and marketing of approved products is subject to extensive government regulation, including by the FDA, DEA and state and other territorial authorities. The FDA administers processes to assure that marketed products are safe, effective, consistently of uniform, high quality and marketed only for approved indications. For example, while our products are prescribed legally by some physicians for unapproved uses, we may not market our products for such uses. Failure to comply with applicable regulatory requirements can result in sanctions up to the suspension of regulatory approval as well as civil and criminal sanctions.

We face substantial competition which may limit our revenues.

Some of the drugs that we are developing and marketing will compete with existing treatments. In addition, several companies are developing new drugs that target the same diseases that we are targeting and are taking IR-related and STAT-related approaches to drug development. The principal products competing with our products targeted at the cutaneous t-cell lymphoma market are Supergen/Abbott's Nipent and interferon, which is marketed by a number of companies, including Schering-Plough's Intron A. Products that will compete with AVINZA® include Purdue Pharma L.P.'s OxyContin and MS Contin, Janssen Pharmaceutica Products, L.P.'s Duragesic, Elan's Oramorph SR and Faulding's Kadian, each of which is currently marketed. Many of our existing or potential competitors, particularly large drug companies, have greater financial, technical and human resources than us and may be better equipped to develop, manufacture and market products. Many of these companies also have extensive experience in preclinical testing and human clinical trials, obtaining FDA and other regulatory approvals and manufacturing and marketing pharmaceutical products. In addition, academic institutions, governmental agencies and other public and private research organizations are developing products that may compete with the products we are developing. These institutions are becoming more aware of the commercial value of their findings and are seeking patent protection and licensing arrangements to collect payments for the use of their technologies. These institutions also may market competitive products on their own or through joint ventures and will compete with us in recruiting highly qualified scientific personnel.

Third-party reimbursement and health care reform policies may reduce our future sales.

Sales of prescription drugs depend significantly on the availability of reimbursement to the consumer from third party payers, such as government and private insurance plans. These third party payers frequently require drug companies to provide predetermined discounts from list prices, and they are increasingly challenging the prices charged for medical products and services. Our current and potential products may not be considered cost-effective, and reimbursement to the consumer may not be available or sufficient to allow us to sell our products on a competitive basis. For example, we have current and recurring discussions with insurers regarding reimbursement rates for our drugs, including AVINZA® which was recently approved for marketing. We may not be able to negotiate favorable reimbursement rates for our products or may have to pay significant discounts to obtain favorable rates. Only one of our products, ONTAK®, is currently eligible to be reimbursed by Medicare. Proposed changes by Medicare to the hospital outpatient payment reimbursement system may adversely affect reimbursement rates for ONTAK®.

In addition, the efforts of governments and third-party payers to contain or reduce the cost of health care will continue to affect the business and financial condition of drug companies such as us. A number of legislative and regulatory proposals to change the health care system have been discussed in recent years, including price caps and controls for pharmaceuticals. These proposals could reduce and/or cap the prices for our products or reduce government reimbursement rates for products such as ONTAK®. In addition, an increasing emphasis on managed care in the United States has and will continue to increase pressure on drug pricing. We cannot predict whether legislative or regulatory proposals will be adopted or what effect those proposals or managed care efforts may have on our business. The announcement and/or adoption of such proposals or efforts could adversely affect our profit margins and business.

We rely heavily on collaborative relationships and termination of any of these programs could reduce the financial resources available to us, including research funding and milestone payments.

Our strategy for developing and commercializing many of our potential products, including products aimed at larger markets, includes entering into collaborations with corporate partners, licensors, licensees and others. These collaborations provide us with funding and research and development resources for potential products for the treatment or control of metabolic diseases, hematopoiesis, women's health disorders, inflammation, cardiovascular disease, cancer and skin disease, and osteoporosis. These agreements also give our collaborative partners significant discretion when deciding whether or not to pursue any development program. Our collaborations may not continue or be successful.

In addition, our collaborators may develop drugs, either alone or with others, that compete with the types of drugs they currently are developing with us. This would result in less support and increased competition for our programs. If products are approved for marketing under our collaborative programs, any revenues we receive will depend on the manufacturing, marketing and sales efforts of our collaborators, who generally retain commercialization rights under the collaborative agreements. Our current collaborators also generally have the right to terminate their collaborations under specified circumstances. If any of our collaborative partners breach or terminate their agreements with us or otherwise fail to conduct their collaborative activities successfully, our product development under these agreements will be delayed or terminated.

We may have disputes in the future with our collaborators, including disputes concerning which of us owns the rights to any technology developed. For instance, we were involved in litigation with Pfizer, which we settled in April 1996, concerning our right to milestones and royalties based on the development and commercialization of droloxifene. These and other possible disagreements between us and our collaborators could delay our ability and the ability of our collaborators to achieve milestones or our receipt of other payments. In addition, any disagreements could delay, interrupt or terminate the collaborative research, development and commercialization of certain potential products, or could result in litigation or arbitration. The occurrence of any of these problems could be time-consuming and expensive and could adversely affect our business. Challenges to or failure to secure patents and other proprietary rights may significantly hurt our business. Our success will depend on our ability and the ability of our licensors to obtain and maintain patents and proprietary rights for our potential products and to avoid infringing the proprietary rights of others, both in the United States and in foreign countries. Patents may not be issued from any of these applications currently on file, or, if issued, may not provide sufficient protection. In addition, disputes with licensors under our license agreements may arise which could result in additional financial liability or loss of important technology and potential products and related revenue, if any.

Our patent position, like that of many pharmaceutical companies, is uncertain and involves complex legal and technical questions for which important legal principles are unresolved. We may not develop or obtain rights to products or processes that are patentable. Even if we do obtain patents, they may not adequately protect the technology we own or have licensed. In addition, others may challenge, seek to invalidate, infringe or circumvent any patents we own or license, and rights we receive under those patents may not provide competitive advantages to us. Further, the manufacture, use or sale of our products may infringe the patent rights of others.

Several drug companies and research and academic institutions have developed technologies, filed patent applications or received patents for technologies that may be related to our business. Others have filed patent applications and received patents that conflict with patents or patent applications we have licensed for our use, either by claiming the same methods or compounds or by claiming methods or compounds that could dominate those licensed to us. In addition, we may not be aware of all patents or patent applications that may impact our ability to make, use or sell any of our potential products. For example, US patent applications may be kept confidential while pending in the Patent and Trademark Office and patent applications filed in foreign countries are often first published six months or more after filing. Any conflicts resulting from the patent rights of others could significantly reduce the coverage of our patents and limit our ability to obtain meaningful patent protection. While we routinely receive communications or have conversations with the owners of other patents, none of these third parties have directly threatened an action or claim against us. If other companies obtain patents with conflicting claims, we may be required to obtain licenses to those patents or to develop or obtain alternative technology. We may not be able to obtain any such licenses on acceptable terms, or at all. Any failure to obtain such licenses could delay or prevent us from pursuing the development or commercialization of our potential products.

We have had and will continue to have discussions with our current and potential collaborators regarding the scope and validity of our patents and other proprietary rights. If a collaborator or other party successfully establishes that our patent rights are invalid, we may not be able to continue our existing collaborations beyond their expiration. Any determination that our patent rights are invalid also could encourage our collaborators to terminate their agreements where contractually permitted. Such a determination could also adversely affect our ability to enter into new collaborations.

We may also need to initiate litigation, which could be time-consuming and expensive, to enforce our proprietary rights or to determine the scope and validity of others' rights. If litigation results, a court may find our patents or those of our licensors invalid or may find that we have infringed on a competitor's rights. If any of our competitors have filed patent applications in the United States which claim technology we also have invented, the Patent and Trademark Office may require us to participate in expensive interference proceedings to determine who has the right to a patent for the technology.

We have learned that Hoffmann-La Roche Inc. has received a US patent and has made patent filings in foreign countries that relate to our Panretin® capsules and gel products. We filed a patent application with an earlier filing date than Hoffmann-La Roche's patent, which we believe is broader than, but overlaps in part with, Hoffmann-La Roche's patent. We believe we were the first to invent the relevant technology and therefore are entitled to a patent on the application we filed. The Patent and Trademark Office has initiated a proceeding to determine whether we or Hoffmann-La Roche are entitled to a patent. We may not receive a favorable outcome in the proceeding. In addition, the proceeding may delay the Patent and Trademark Office's decision regarding our earlier application. If we do not prevail, the Hoffmann-La Roche patent might block our use of Panretin® capsules and gel in specified cancers.

We have also learned that Novartis AG has filed an opposition to our European patent that covers the principal active ingredient of our ONTAK® drug. We are currently investigating the scope and merits of this opposition. If the opposition is successful, we could lose our ONTAK® patent protection in Europe which could substantially reduce our future ONTAK® sales in that region. We could also incur substantial costs in asserting our rights in this opposition proceeding, as well as in other interference proceedings in the United States.

We also rely on unpatented trade secrets and know-how to protect and maintain our competitive position. We require our employees, consultants, collaborators and others to sign confidentiality agreements when they begin their relationship with us. These agreements may be breached, and we may not have adequate remedies for any breach. In addition, our competitors may independently discover our trade secrets.

Reliance on third-party manufacturers to supply our products risks supply interruption or contamination and difficulty controlling costs.

We currently have no manufacturing facilities, and we rely on others for clinical or commercial production of our marketed and potential products. In addition, certain raw materials necessary for the commercial manufacturing of our products are custom and must be obtained from a specific sole source. Elan manufactures AVINZA® for us, Cambrex manufactures ONTAK® for us and RP Scherer and Raylo manufacture Targretin® capsules for us.

To be successful, we will need to ensure continuity of the manufacture of our products, either directly or through others, in commercial quantities, in compliance with regulatory requirements and at acceptable cost. Any extended and unplanned manufacturing shutdowns could be expensive and could result in inventory and product shortages. While we believe that we would be able to develop our own facilities or contract with others for manufacturing services with respect to all of our products, if we are unable to do so our revenues could be adversely affected. In addition, if we are unable to supply products in development, our ability to conduct preclinical testing and human clinical trials will be adversely affected. This in turn could also delay our submission of products for regulatory approval and our initiation of new development programs. In addition, although other companies have manufactured drugs acting through IRs and STATs on a commercial scale, we may not be able to do so at costs or in quantities to make marketable products.

The manufacturing process also may be susceptible to contamination, which could cause the affected manufacturing facility to close until the contamination is identified and fixed. In addition, problems with equipment failure or operator error also could cause delays in filling our customers' orders.

Our business exposes us to product liability risks or our products may need to be recalled, and we may not have sufficient insurance to cover any claims.

Our business exposes us to potential product liability risks. Our products also may need to be recalled to address regulatory issues. A successful product liability claim or series of claims brought against us could result in payment of significant amounts of money and divert management's attention from running the business. Some of the compounds we are investigating may be harmful to humans. For example, retinoids as a class are known to contain compounds which can cause birth defects. We may not be able to maintain our insurance on acceptable terms, or our insurance may not provide adequate protection in the case of a product liability claim. To the extent that product liability insurance, if available, does not cover potential claims, we will be required to self-insure the risks associated with such claims. We believe that we carry reasonably adequate insurance for product liability claims.

We use hazardous materials which requires us to incur substantial costs to comply with environmental regulations.

In connection with our research and development activities, we handle hazardous materials, chemicals and various radioactive compounds. To properly dispose of these hazardous materials in compliance with environmental regulations, we are required to contract with third parties at substantial cost to us. Our annual cost of compliance with these regulations is approximately $600,000. We cannot completely eliminate the risk of accidental contamination or injury from the handling and disposing of hazardous materials, whether by us or by our third-party contractors. In the event of any accident, we could be held liable for any damages that result, which could be significant. We believe that we carry reasonably adequate insurance for toxic tort claims.

Our stock price may be adversely affected by volatility in the markets.

The market prices and trading volumes for our securities, and the securities of emerging companies like us, have historically been highly volatile and have experienced significant fluctuations unrelated to operating performance. For example, in 2002, the intraday sale price of our common stock on the Nasdaq National Market was as high as $20.50 and as low as $4.64. Future announcements concerning us or our competitors as well as other companies in our industry and other public companies may impact the market price of our common stock. These announcements might include:

- the results of research or development testing of ours or our competitors' products;
- technological innovations related to diseases we are studying;
- new commercial products introduced by our competitors;
- government regulation of our industry;
- receipt of regulatory approvals by our competitors;
- our failure to receive regulatory approvals for products under development;
- developments concerning proprietary rights;
- litigation or public concern about the safety of our products; or
- intent to sell or actual sale of our stock held by our corporate partners.

Future sales of our securities may depress the price of our securities.

Sales of substantial amounts of our securities in the public market could seriously harm prevailing market prices for our securities. These sales might make it difficult or impossible for us to sell additional securities when we need to raise capital.

You may not receive a return on your securities other than through the sale of your securities.

We have not paid any cash dividends on our common stock to date. We intend to retain any earnings to support the expansion of our business, and we do not anticipate paying cash dividends on any of our securities in the foreseeable future.

Our shareholder rights plan and charter documents may hinder or prevent change of control transactions.

Our shareholder rights plan and provisions contained in our certificate of incorporation and bylaws may discourage transactions involving an actual or potential change in our ownership. In addition, our board of directors may issue shares of preferred stock without any further action by you. Such issuances may have the effect of delaying or preventing a change in our ownership. If changes in our ownership are discouraged, delayed or prevented, it would be more difficult for our current board of directors to be removed and replaced, even if you or our other stockholders believe that such actions are in the best interests of us and our stockholders.

Item 2. Properties

We currently lease and occupy office and laboratory facilities in San Diego, California. These include a 52,800 square foot facility leased through July 2015 and an 82,500 square foot facility leased through February 2014. We believe these facilities will be adequate to meet our near-term space requirements.

Item 3. Legal Proceedings

Seragen, Inc., our subsidiary, and Ligand, were named parties to *Sergio M. Oliver, et al. v. Boston University, et al.*, a putative shareholder class action filed on December 17, 1998 in the Court of Chancery in the State of Delaware in and for New Castle County, C.A. No. 16570NC, by Sergio M. Oliver and others against Boston University and others, including Seragen, its subsidiary Seragen Technology, Inc. and former officers and directors of Seragen. The complaint, as amended, alleged that Ligand aided and abetted purported breaches of fiduciary duty by the Seragen related defendants in connection with the acquisition of Seragen by Ligand and made certain misrepresentations in related proxy materials and seeks compensatory and punitive damages of an unspecified amount. On July 25, 2000, the Delaware Chancery Court granted in part and denied in part defendants' motions to dismiss. Seragen, Ligand, Seragen Technology, Inc. and our acquisition subsidiary, Knight Acquisition Corporation, were dismissed from the action. Claims of breach of fiduciary duty remain against the remaining defendants, including the former officers and directors of Seragen. The hearing on the plaintiffs' motion for class certification took place on February 26, 2001. The court certified a class consisting of shareholders as of the date of the acquisition and on the date of an earlier business unit sale by Seragen. The litigation is currently in the discovery phase. While Ligand and its subsidiary Seragen have been dismissed from the action, such dismissal is subject to a possible subsequent appeal upon judgment in the action against the remaining parties.

On December 11, 2001, a lawsuit was filed in the United States District Court for the District of Massachusetts against Ligand by the Trustees of Boston University and other former stakeholders of Seragen. The suit was subsequently transferred to federal district court in Delaware. The complaint alleges breach of contract, breach of the implied covenants of good faith and fair dealing and unfair and deceptive trade practices based on, among other things, allegations that Ligand wrongfully withheld approximately $2.1 million in consideration due the plaintiffs under the Seragen acquisition agreement. The complaint seeks payment of the withheld consideration and treble damages. Ligand has filed a motion to dismiss the unfair and deceptive trade practices claim, which motion is pending.

We believe that each of these lawsuits is without merit and intend to vigorously defend against each of such lawsuits. Due to the uncertainty of the ultimate outcome of these matters, the impact on future financial results is not subject to reasonable estimates.

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

There were no matters submitted to a vote of security holders in the fourth quarter ended December 31, 2002.

PART II

Item 5. Markets for Registrant's Common Stock and Related Stockholder Matters

(a) Market Information

Our common stock trades on the Nasdaq National Market tier of the Nasdaq Stock Market under the symbol "LGND." The following table sets forth the high and low intraday sales prices for our common stock on the Nasdaq National Market for the periods indicated.

	Price Range	
	High	Low
Year Ended December 31, 2002:		
1st Quarter	$ 20.50	$ 12.65
2nd Quarter	20.25	11.70
3rd Quarter	14.72	5.75
4th Quarter	8.15	4.64
Year Ended December 31, 2001:		
1st Quarter	14.75	7.81
2nd Quarter	14.04	8.06
3rd Quarter	11.75	7.30
4th Quarter	19.10	8.73

(b) Holders

As of February 28, 2003, there were approximately 2,065 holders of record of the common stock.

(c) Dividends

We have never declared or paid any cash dividends on our capital stock and do not intend to pay any cash dividends in the foreseeable future. We currently intend to retain our earnings, if any, to finance future growth.

(d) Recent Sales of Unregistered Securities

On November 26 and 27, 2002 we issued and sold an aggregate of $155,250,000 of 6% convertible subordinated notes due 2007 in a private placement in reliance on an exemption from registration under Section 4(2) of the Securities Act. The initial purchaser of the notes in that offering was UBS Warburg LLC. These initial purchasers purchased the convertible notes at an aggregate purchase price equal to 97% of the aggregate principal amount of the convertible notes. The initial purchaser then resold the notes in offerings in reliance on an exemption from registration under Rule 144A of the Securities Act. The notes are convertible into 161.9905 shares of our common stock, par value $0.001 per share, per $1,000 principal amount of notes and subject to adjustment in certain circumstances. This results in an initial conversion price of $6.17 per share.

(e) Securities Authorized for Issuance under Equity Compensation Plans

Refer to PART III, Item 12, "Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters".

Item 6. Selected Consolidated Financial Data

The selected financial data set forth below with respect to our consolidated financial statements has been derived from the audited financial statements. The data set forth below should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and related notes included elsewhere in this filing.

	Year Ended December 31,				
	2002	2001	2000	1999	1998
	(in thousands, except loss per share data)				
Consolidated Statement of Operations Data:					
Product sales (1)	$ 54,522	$ 45,623	$ 22,910	$ 11,307	$ 406
Collaborative research and development and other revenues	42,118	30,718	25,200	29,588	17,267
Cost of products sold (1)	20,306	13,947	8,591	3,563	466
Research and development expenses	58,807	51,104	51,287	59,442	70,273
Loss from operations (2)	(24,151)	(23,137)	(45,882)	(61,293)	(114,634)
Loss before cumulative effect of a change in accounting principle	(32,596)	(42,995)	(59,277)	(74,719)	(117,886)
Cumulative effect on prior years (to December 31, 1999) of changing method of revenue recognition (3)	—	—	(13,099)	—	—
Net loss	(32,596)	(42,995)	(72,376)	(74,719)	(117,886)
Basic and diluted per share amounts:					
Loss before cumulative effect of a change in accounting princlple	$ (0.47)	$ (0.72)	$ (1.06)	$ (1.58)	$ (2.92)
Cumulative effect on prior years (to December 31, 1999) of changing method of revenue recognition (3)	—	—	(0.24)	—	—
Net loss	$ (0.47)	$ (0.72)	$ (1.30)	$ (1.58)	$ (2.92)
Weighted average number of common shares	69,118,976	59,413,270	55,664,921	47,146,312	40,392,421
Pro forma amounts assuming the changed revenue recognition method is applied retroactively:					
Net loss			$ (59,277)	$ (73,131)	$ (114,136)
Basic and diluted net loss per share			$ (1.06)	$ (1.55)	$ (2.83)

	Year Ended December 31,				
	2002	2001	2000	1999	1998
	(in thousands)				
Consolidated Balance Sheet Data:					
Cash, cash equivalents, short-term investments and restricted investments	$ 74,894	$ 40,058	$ 25,097 (4)	$ 49,166	$ 72,521
Working capital	53,218	21,848	16,234	35,978	51,098
Total assets	270,609	117,473	113,422	134,645	156,020
Long-term liabilities	166,059	143,622	140,132	139,534	140,487
Accumulated deficit	(618,316)	(585,720)	(542,725)	(470,349)	(395,630)
Total stockholders' equity (deficit)	74,015	(57,875)	(55,125)	(25,590)	(11,362)

(1) We began selling ONTAK(R)and Panretin® gel in 1999 and Targretin® capsules and Targretin® gel in 2000. AVINZA® was approved by the FDA in March 2002 and subsequently launched in the U.S. in June 2002.

(2) Includes write-offs of $5 million in 1999 and $45 million in 1998 related to technology acquired from Elan in 1999 and 1998, and the acquisition of Seragen in 1998.

(3) In 2000, we changed our policy for the recognition of revenue related to up-front fees in accordance with Staff Accounting Bulletin No. 101, Revenue Recognition. See Note 2 (revenue recognition) of the notes to consolidated financial statements.

(4) In January 2001, we received net cash proceeds of $10 million from the issuance of convertible notes to Elan and $22.4 million from a private placement of our common stock. The convertible notes were issued to Elan on December 29, 2000 and the funds received on January 2, 2001.

Item 7. Management's Discussion And Analysis Of Financial Condition And Results Of Operations

Caution: This discussion and analysis may contain predictions, estimates and other forward-looking statements that involve a number of risks and uncertainties, including those discussed in Item 1 – Business at "Risks and Uncertainties". This outlook represents our current judgment on the future direction of our business. Such risks and uncertainties could cause actual results to differ materially from any future performance suggested. We undertake no obligation to release publicly the results of any revisions to these forward-looking statements to reflect events or circumstances arising after the date of this quarterly report. This caution is made under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995.

Our trademarks, trade names and service marks referenced herein include Ligand®, AVINZA®, ONTAK®, Panretin® and Targretin®. Each other trademark, trade name or service mark appearing in this quarterly report belongs to its owner.

Overview

We discover, develop and market drugs that address patients' critical unmet medical needs in the areas of cancer, pain, men's and women's health or hormone-related health issues, skin diseases, osteoporosis, and metabolic, cardiovascular and inflammatory diseases. Our drug discovery and development programs are based on our proprietary gene transcription technology, primarily related to Intracellular Receptors, also known as IRs, a type of sensor or switch inside cells that turns genes on and off, and Signal Transducers and Activators of Transcription, also known as STATs, which are another type of gene switch.

We currently market five products in the United States: AVINZA®, for the relief of chronic, moderate to severe pain; ONTAK®, for the treatment of patients with persistent or recurrent cutaneous T-cell lymphoma (or CTCL); Targretin® capsules and Targretin® gel, for the treatment of CTCL in patients who are refractory to at least one prior systemic therapy; and Panretin® gel, for the treatment of Kaposi's sarcoma in AIDS patients. In March 2002, the Food and Drug Administration (or FDA) approved AVINZA®, which was subsequently launched in the U.S. in June 2002. In Europe, we were granted a marketing authorization for Panretin® gel in October 2000 and for Targretin® capsules in March 2001 and have a marketing authorization application (or MAA) under review for ONZAR (ONTAK® in the U.S.). Targretin® capsules and Panretin® gel were launched in Europe in the fourth quarter of 2001. During the second quarter of 2002, we withdrew our Targretin® gel MAA in Europe due to a request for additional clinical trials in CTCL which we judged uneconomic given the size of the CTCL market and the existing approval for Targretin® capsules in Europe.

We are currently involved in the research phase of research and development collaborations with Eli Lilly and Company and TAP Pharmaceutical Products Inc. (or TAP). Collaborations in the development phase are being pursued by Abbott Laboratories, Allergan, Inc., GlaxoSmithkline, Organon, Pfizer Inc. and Wyeth. We receive funding during the research phase of the arrangements and milestone and royalty payments as products are developed and marketed by our corporate partners. In addition, in connection with some of these collaborations, we received non-refundable up-front payments. As of December 31, 2002, we had deferred revenue of $1.5 million resulting from an up-front payment received under our collaboration agreement with TAP. This amount is being amortized as revenue over the service period of the agreement which runs from June 2001 to June 2004.

We have been unprofitable since our inception. We expect to incur additional operating losses until sales of our products generate sufficient revenues to cover our expenses. We expect that our operating results will fluctuate from period to period as a result of differences in the timing of expenses incurred, revenues earned from product sales, collaborative arrangements and other sources. Some of these fluctuations may be significant.

Recent Developments

In February 2003, we announced that we had entered into an agreement for the co-promotion of AVINZA® with Organon Pharmaceuticals USA Inc. ("Organon"). Under the terms of the agreement, Organon committed to specified numbers of primary and secondary product calls delivered to certain high prescribing physicians and hospitals. In exchange, we will pay Organon a percentage of AVINZA® net sales based on the following schedule:

Annual Net Sales of Avinza®	% of Incremental Net Sales Paid to Organon by Ligand
$0-35 million (2003 only)	0% (2003 only)
$0-150 million	30%
$150-300 million	40%
$300-425 million	50%
>$425 million	45%

Additionally, both companies agreed to share equally all costs for AVINZA® advertising and promotion, medical affairs and clinical trials. Each company will be responsible for its own sales force costs and other expenses. The initial term of the co-promotion agreement is 10 years. Organon has the option any time prior to the end of year five to extend the agreement to 2017 by making a $75.0 million payment to us.

Results of Operations

Total revenues for 2002 increased to $96.6 million compared to $76.3 million in 2001 and $48.1 million in 2000. Net loss for 2002 decreased to $32.6 million or $0.47 per share, compared to $43.0 million or $0.72 per share in 2001 and $72.4 million or $1.30 per share in 2000. As more fully described in Note 2 of the notes to consolidated financial statements, results for 2000 reflect the implementation of SAB No. 101 effective January 1, 2000. The cumulative effect of this change to December 31, 1999, which was recorded in 2000, was $13.1 million or $0.24 per share. The effect on 2000 operating results increased revenue and reduced loss before cumulative effect of a change in accounting principle by $1.3 million or $0.02 per share.

Product Sales

Product sales for 2002 were $54.5 million compared to $45.6 million in 2001, and $22.9 million in 2000. Product revenue in 2002 includes sales of $12.2 million for AVINZA® which was launched in the U.S. in June 2002. In connection with the launch, we initially shipped $11.5 million of AVINZA® to wholesaler customers. This product was sold under certain promotional launch programs, not uncommon with new product launches, that provided customers with discounts off wholesale price and 90-day payment terms instead of our normal 30-day terms. The promotions were implemented to ensure the availability of a sufficient retail supply of AVINZA® in those territories where our sales representatives were initially promoting the product. Our policy is to defer recognition of revenue associated with promotional terms for a new product launch requiring broad retail pharmacy distribution. Accordingly, we deferred $6.1 million of net revenue in the second quarter. The amount of deferred revenue we recognize in subsequent periods is determined based on an estimate, using available market information, of the level of product that will sell through from wholesalers to pharmacies. Through December 31, 2002, $14.6 million of AVINZA® has been shipped to wholesaler customers. Of the amount shipped during 2002, net revenue of $12.2 million was recognized and $750,000 remained deferred.

Excluding AVINZA®, sales of our in-line products for 2002 were $42.3 million compared to $45.6 million in 2001 and $22.9 million in 2000. Sales of ONTAK® increased to $26.6 million in 2002 from $24.3 million in 2001 and $13.2 million in 2000. Sales of Targretin® capsules were $12.2 million in 2002 compared to $14.6 million in 2001 and $6.7 million in 2000 while sales of Targretin® gel and Panretin® gel were $3.5 million in 2002 compared to $6.8 million in 2001 and $3.0 million in 2000.

The increase in ONTAK® sales in 2002 compared to 2001 reflects price increases, further penetration of private oncology practices and a higher level of use for indications where the product may be effective but for which registration clinical trials have not been completed and for which FDA approval has not yet been granted. These indications include chronic lymphocytic leukemia (CLL), B- and T-cell non-Hodgkins Lymphoma (NHL) and graft-versus-host disease (GVHD). Likewise, demand for Targretin® capsules in 2002 benefited from growing prescriptions for treatment of non-small cell lung cancer (NSCLC) as well as increased use in CTCL. Sales of both ONTAK® and Targretin® capsules in 2002 were negatively impacted, however, by lower than expected demand growth in the first half of 2002 due to delays in completion and data publication of key ongoing, expanded-use clinical trials and physician initiated studies, as well as a lower company-wide focus on these products as

commercial resources were shifted to assist in the launch of AVINZA®. Sales of all in-line products were further negatively impacted by decisions made by several of our major wholesaler customers during 2002 to purchase lower quantities of our products in order to reduce inventory carrying levels as well as the effect of incremental wholesaler purchases in the fourth quarter of 2001 made in advance of announced price increases that became effective in 2002. Sales for 2002 also reflect a reduction of $1.5 million for higher than estimated returns of expired product resulting from the lower than expected demand growth and inconsistent inventory rotation by certain wholesaler distributors.

The increase in product sales for 2001 compared to 2000 was due to growing penetration of private oncology practices, price increases and increased expanded use. Sales in 2001 also benefited from the concentrated marketing efforts on Targretin® capsules which was approved for marketing in December 1999 and Targretin® gel which was approved for marketing in June 2000. Additionally sales of ONTAK® and Targretin® capsules in 2001 reflect the impact of purchases made in advance of announced price increases effective in 2002 and for ONTAK®, the initiation of wholesaler distribution stocking.

Our product sales for any individual quarter or annual period can be influenced by a number of factors including changes in demand for a particular product, the level and nature of promotional activity, the timing of announced price increases, and wholesaler inventory practices. We expect that product sales will increase in 2003 due primarily to higher sales of AVINZA®, which will be promoted for an entire year and will benefit from our co-promotion arrangement with Organon. We also continue to expect that demand for and sales of ONTAK® and Targretin® capsules will increase when and as further data is obtained from ongoing expanded-use clinical trials and the initiation of new expanded-use trials. The level and timing of any such increases, however, are influenced by a number of factors including the accrual of patients and overall progress of clinical trials which are managed by third parties.

Excluding AVINZA®, our products are small-volume specialty pharmaceutical products that address the needs of cancer patients in relatively small niche markets with substantial geographical fluctuations in demand. To ensure patient access to our drugs, we maintain broad distribution capabilities with inventories held at approximately 125 locations throughout the United States. Furthermore, the purchasing and stocking patterns of our wholesaler customers are influenced by a number of factors that vary with each product including but not limited to overall level of demand, periodic promotions, required minimum shipping quantities and wholesaler competitive initiatives. As a result, the level of product in the distribution channel may average from two to six months' worth of projected inventory usage. If any or all of our major distributors decide to substantially reduce the inventory they carry in a given period, our sales for that period could be substantially lower than historical levels.

Collaborative Research and Development and Other Revenues

Collaborative research and development and other revenues for 2002 were $42.1 million, compared to $30.7 million for 2001 and $25.2 million for 2000. The comparison of collaborative research and development and other revenues is as follows (in thousands):

	Year ended December 31,		
	2002	**2001**	**2000**
Collaborative research and development	$ 23,328	$ 25,725	$ 23,135
Royalty sale	18,275	—	—
Distribution agreements	311	4,787	922
Other	204	206	1,143
	$ 42,118	$ 30,718	$ 25,200

Collaborative research and development revenue includes reimbursement for ongoing research activities, earned development milestones and SAB No. 101 recognition of prior years' up-front fees. Royalty sale revenue represents the sale to third parties of rights and options to future royalties we may earn from the sale of products now in development with our collaborative partners. Revenue from distribution agreements includes recognition of up-front fees collected upon contract signing and deferred over the life of the distribution arrangement and milestones achieved under such agreements.

The decrease in collaborative research and development revenue in 2002 compared to 2001 is due to the loss of funding from collaborative research arrangements with Bristol-Myers Squibb, which was terminated in June 2001, and Organon, the research phase of which concluded in February 2002. These arrangements contributed $4.1 million to 2001 collaborative revenues. This decrease was partially offset by collaborative research funding earned under our agreement with TAP which was entered into in June 2001 and contributed $5.0 million to 2002 revenue compared to $2.6 million for 2001. Revenue from up-front fees, which we recognize over the period during which we provide research services, decreased to $4.7 million in 2002 from $7.1 million in 2001 also in connection with the termination of the research phases of the Bristol-Myers Squibb and Organon collaborations. The decrease in revenue recognized from up-front fees is offset by development milestones earned in 2002 of $5.1 million compared to milestones in 2001 of $3.1 million.

Royalty sale represents revenue earned from the sale to Royalty Pharma AG of rights and options to future royalties from certain collaborative partners' net sales of three selective estrogen receptor modulator (SERM) products. These products are now in Phase III clinical development. The royalty purchase agreement provided for the initial sale of rights to 0.25% of such product net sales and granted Royalty Pharma options to acquire up to an additional 1.00% of net sales for $50.0 million. In July and December of 2002, the agreement was amended to replace the existing options with new options providing for the rights to acquire an additional 1.3125% of net sales for $63.8 million. We earned $6.0 million upon the initial sales of rights and $12.3 million subsequently upon Royalty Pharma's exercise of the first three options, as amended, to acquire rights to an additional 0.4375% of such product net sales.

The increase in 2001 collaborative research and development revenue compared to 2000 is due to the collaboration agreement entered into with TAP in June 2001. The increase in revenue from distributor agreements in 2001 compared to 2000 reflects milestones earned under a 2001 distribution agreement with Elan for the European submission of Marketing Authorization Approval ("MAA") for Targretin gel and ONTAK and the European grant of an MAA for Targretin capsules.

Gross Margin

Gross margin on product sales was 62.8% in 2002 compared to 69.4% in 2001 and 62.5% in 2000. The decrease in margin for 2002 was primarily due to sales of AVINZA®, which prior to the restructuring of the AVINZA® license and supply agreement discussed below, had higher product costs than our in-line products. The margin was further negatively impacted by higher than estimated returns of expired products recorded in the second quarter of 2002 and the final annual increase in the contractual royalty rate on ONTAK®.

Through November 2002, we purchased AVINZA® from Elan at a cost of approximately 30% of the net sales price of AVINZA®. In November 2002, we and Elan agreed to amend the terms of the AVINZA® license and supply agreement for purchases of product starting in December 2002. Under the terms of the amendment, we paid Elan approximately $100.0 million in exchange for a reduction in the royalty and supply price of AVINZA® to approximately 10% of the product's net sales, and certain other manufacturing and promotional rights. The total capitalized license and royalty rights paid for AVINZA® of approximately $114.0 million, including milestone and transaction fees, will be amortized to cost of sales on a straight-line basis over 15 years.

The increase in the 2001 margin compared to 2000 is due to higher product sales over which we spread fixed costs (amortization of acquired technology) and to greater proportionate sales of higher margin products.

Research and Development Expenses

Research and development expenses were $58.8 million in 2002 compared to $51.1 million in 2001 and $51.3 million in 2000. The increase in the expense for 2002 is due to the development funding of Phase III clinical trials for Targretin® capsules in non-small cell lung cancer and research costs incurred on our selective glucocorticoid receptor modulator (SGRM) program. SGRMs are non-steroidial molecules that may be useful in treating asthma, rheumatoid arthritis, and certain leukemias and myelomas. The increase in expenses on these programs was partially offset by decreased research efforts on our collaboration programs in connection with the loss of research

funding under our arrangement with Bristol-Myers Squibb, which was terminated in June 2001, and Organon, the research phase of which concluded in February 2002; lower expenses on post-marketing regulatory commitments; and lower expenses associated with the clinical trial stages of AVINZA® development prior to FDA approval in March 2002. The major components of research and development expenses are as follows (in thousands):

	Year ended December 31,		
Research	2002	2001	2000
Research performed under collaboration agreements	$ 15,474	$ 20,442	$ 21,460
Internal reserch programs	10,371	5,737	5,131
Total research	25,845	26,179	26,591
Development			
New product development	20,756	9,514	10,744
Existing product support (1)	12,206	15,411	13,952
Total development	32,962	24,925	24,696
Total research and development	$ 58,807	$ 51,104	$ 51,287

(1) Includes costs incurred to comply with U.S. post-marketing regulatory commitments.

We expect research and development expenses to further increase in 2003 as additional patients are accrued under the Phase III clinical trials of Targretin® capsules in non-small cell lung cancer.

A summary of our significant internal research and development programs is as follows:

Program	Disease/Indication	Development Phase
AVINZA®	Chronic, moderate-to-severe pain	Marketed in U.S. Phase IIIB/IV
ONTAK®	CTCL CLL Peripheral T-cell lymphoma B-cell NHL Psoriasis (severe)	Marketed in U.S. Phase II Phase II Phase II Phase II
Targretin® capsules	CTCL NSCLC first-line NSCLC monotherapy Advanced breast cancer Psoriasis (moderate to severe) Renal cell cancer	Marketed in U.S. Phase III Planned Phase II/III Phase II Phase II Phase II
Targretin® gel	CTCL Hand dermatitis(eczema) Psoriasis	Marketed in U.S. Phase II Phase II
Panretin® gel	KS	Marketed in U.S.
Panretin® capsules	KS Bronchial metaplasia	Phase II Phase II
LGD1550 (RAR agonist)	Advanced cancers Acne Psoriasis	Phase II Phase II Pre-clinical

Program	Disease/Indication	Development Phase
LGD1331 (Androgen antagonist)	Prostate cancer, hirsutism, acne, androgenetic alopecia	Pre-clinical
Glucocorticoid agonists	Inflammation, cancer	Pre-clinical
Mineralocorticoid receptor modulators	Congestive heart failure, hypertension	Research

We do not provide forward-looking estimates of costs and time to complete our ongoing research and development projects, as such estimates would involve a high degree of uncertainty. Uncertainties include, but are not limited to, our ability to predict the outcome of complex research, our ability to predict the results of clinical studies, regulatory requirements placed upon us by regulatory authorities such as the FDA and EMEA, our ability to predict the decisions of our collaborative partners, our ability to fund research and development programs, competition from other entities of which we may become aware in future periods, predictions of market potential from products that may be derived from our research and development efforts, and our ability to recruit and retain personnel or third-party research organizations with the necessary knowledge and skills to perform certain research. Refer to the "Risks and Uncertainties" section for additional discussion of the uncertainties surrounding our research and development initiatives.

Selling, General and Administrative Expenses

Selling, general and administrative expenses were $41.7 million for 2002 compared to $34.4 million for 2001 and $34.1 million for 2000. The increase in 2002 compared to the prior years is due to higher advertising and promotion expenses in connection with the launch of AVINZA® and costs associated with approximately 25 additional sales representatives hired in the second quarter of 2002 to target general pain centers not served by our existing oncology and dermatology sales forces. The impact from the launch of AVINZA® is partially offset by lower Targretin® related expenses in 2002 compared to 2001 when significant advertising and promotion expenses were incurred in connection with the commencement of post-approval trials and post-launch promotions for Targretin® capsules.

Selling, general and administrative expenses are expected to increase in 2003 as a result of increased selling and marketing expenses on AVINZA® which will be promoted for an entire year and by a significantly larger sales force as a result of our co-promotion arrangement with Organon. Under the co-promotion agreement, we and Organon will share equally all costs for AVINZA® advertising and promotion, medical affairs and clinical trials.

Other Expenses, Net

Other expenses, net were $8.4 million for 2002 compared to $19.9 million for 2001 and $13.4 million for 2000. The decrease in other expense for 2002 is primarily due to lower interest expenses as a result of the conversion of all outstanding zero coupon convertible senior notes owed to Elan in the fourth quarter of 2001 and the first quarter of 2002 and the early redemption of $50.0 million in face value of convertible subordinated debentures in June 2002. In addition, we recognized $2.0 million of debt conversion expenses in 2002 upon the conversion of the Elan convertible securities compared to $5.0 million in 2001, and recorded a one time charge in 2001 of $2.5 million related to a payment subsequently made in 2002 to one of our licensors in connection with the amendment of an existing license agreement. The decrease in the net expense was partially offset by $1.8 million of accelerated accretion to face value in 2002 in connection with the early redemption of the convertible subordinated debentures, lower interest income earned on our investments due to declining interest rates and lower average investment balances during the year, and the accrual of interest on the $155.3 million of 6% convertible subordinated notes that we issued in November 2002.

The increase in other expense, net in 2001 compared to 2000 is due to higher debt conversion expense recognized in 2001 in connection with the Elan note conversion and the charge recorded in 2001 for the clarification and amendment of an existing license agreement.

Interest expense is expected to increase in 2003 due to interest expense on the 6% convertible subordinated notes issued in November 2002.

Net Operating Losses

At December 31, 2002, we had consolidated federal and combined California income tax net operating loss carryforwards of approximately $510.0 million and $80.0 million, respectively. The difference between the federal and California tax loss carryforwards is primarily attributable to the capitalization of research and development expenses for California income tax purposes and the 60% limitation on California loss carryforwards. The federal tax loss and California tax loss carryforwards began expiring in 2002 and 1998, respectively. At December 31, 2002, we also had consolidated federal and combined California research tax credit carryforwards of approximately $24.0 million and $11.0 million, respectively, which will begin to expire in 2003 unless utilized.

Liquidity and Capital Resources

We have financed our operations through private and public offerings of our equity securities, collaborative research and development and other revenues, issuance of convertible notes, product sales, capital and operating lease transactions, equipment financing arrangements, and investment income.

Working capital was $53.2 million at December 31, 2002 compared to $21.8 million at December 31, 2001. Cash, cash equivalents, short-term investments, and restricted investments totaled $74.9 million at December 31, 2002 compared to $40.1 million at December 31, 2001. Of the cash on hand at December 31, 2002, we subsequently used $20.0 million in February 2003 to repurchase approximately 2.2 million shares of Ligand stock held by an affiliate of Elan. We primarily invest our cash in United States government and investment grade corporate debt securities.

Operating cash flow in 2002 compared to the prior year periods benefited from increased product sales and $16.4 million of cash received in connection with the sale to Royalty Pharma AG of rights and options to future royalties from certain collaborative partners' net sales of three selective estrogen receptor modulator (SERM) products and a 1% royalty interest in sales of Targretin® capsules. The increase in 2002 revenue was offset by higher operating expenses and $6.8 million in negative working capital changes attributed to an increase in other current assets of $5.0 million and a decrease in deferred revenue of $5.2 million partially offset by a decrease in accounts receivable of $2.4 million and an increase in accounts payable and accrued liabilities of $2.0 million. Working capital changes in 2001 had a neutral impact on net operating cash flows. Working capital changes in 2000 reflect an increase in deferred revenue resulting from the implementation of SAB 101 partially offset by an increase in accounts receivable and a decrease in accounts payable and accrued liabilities.

We expect operating cash flows to benefit in 2003 from increased product sales driven by AVINZA®, which was launched in June 2002 and from our co-promotion arrangement with Organon. Operating cash will be negatively impacted, however, by higher development expenses to fund clinical trials of our existing products in new indications including Phase III registration trials for Targretin® capsules in non-small cell lung cancer, and higher selling and marketing expenses on AVINZA®. Additionally, we are required to pay interest of approximately $9.3 million in 2003 on the $155.3 million in 6% convertible subordinated notes issued in November 2002.

Investing activities used cash of $105.2 million in 2002 and $4.2 million in 2001 and provided cash of $12.5 million in 2000. The use of cash in 2002 includes $100.0 million paid to Elan to restructure the AVINZA® license and supply agreement and $1.3 million in related transaction fees. Other investing activity in 2002 includes a $5.0 million payment to X-Ceptor Therapeutics, Inc. (X-Ceptor) and capital expenditures of $3.2 million for the purchase of lab and computer equipment, partially offset by net proceeds of $4.1 million from the sale of short-term investments. The payment to X-Ceptor was pursuant to a 1999 investment agreement where we maintained the right to acquire all of the outstanding stock of X-Ceptor not held by Ligand at June 30, 2002, or to extend the purchase right for 12 months by providing additional funding of $5.0 million. In April 2002, we elected to extend the purchase right and payment was subsequently made in July 2002. If we exercise the option to acquire the outstanding stock of X-Ceptor, we will be required to pay to the other shareholders of X-Ceptor approximately $77.0 million in cash, shares of Ligand stock or a combination thereof.

The use of cash in 2001 reflects the net purchase of short-term investments of $2.5 million and capital expenditures of $2.0 million. Investing activities for 2000 reflects $9.7 million received from the sale of the assets of Marathon Biopharmaceuticals and $2.9 million net proceeds from the sale of short-term investments.

Financing activities provided cash of $152.0 million in 2002 compared to $35.6 million in 2001 and $12.0 million in 2000. Cash received in 2002 includes net proceeds of $150.1 million from the issuance of 6% convertible subordinated notes in November 2002, net proceeds of $65.9 million through a private placement of 4,252,500 shares of our common stock, and $3.8 million from the exercise of employee stock options and employee stock purchases. This was partially offset by the $50.0 million early redemption of convertible subordinated debentures in June 2002. The convertible subordinated notes issued in November 2002 pay interest at a semi-annual rate of 6% and mature on November 16, 2007. Holders may convert the notes into shares of our common stock at any time prior to maturity at a conversion rate of 161.9905 shares per $1,000 principal amount of notes. Of the net proceeds, $18.0 million was invested in U.S. government securities and placed with a trustee to pay the first four scheduled interest payments.

Cash provided from financing activities in 2001 includes $22.4 million from a private placement of our common stock, $10.0 million received in connection with the issuance of zero coupon convertible senior notes to Elan and $6.2 million upon the exercise of employee stock options, partially offset by net repayments of $2.0 million on equipment financing arrangements. Net cash received in 2000 includes $14.2 million from the exercise of stock options and warrants partially offset by net payments on equipment financing obligations of $2.7 million.

In November 2002, we agreed to repurchase approximately 2.2 million shares of our stock held by an affiliate of Elan for $20.0 million. The shares were subsequently repurchased and retired in February 2003.

Certain of our property and equipment is pledged as collateral under various equipment financing arrangements. As of December 31, 2002, $6.2 million was outstanding under such arrangements with $2.1 million classified as current. Our equipment financing arrangements have terms of three to five years with interest ranging from 4.75% to 10.66%.

We lease our office and research facilities under operating lease arrangements with varying terms through July 2015. Our corporate headquarters is leased from a limited liability company (the "LLC") in which we hold a 1% ownership interest. The lease agreement provides for increases in annual rent of 4% and terminates in 2014. We also have the right, but not the obligation, to purchase either the LLC or the leased premises from the LLC at a purchase price equal to the outstanding debt on the property plus a calculated return on the investment made by the LLC's other shareholder.

In accordance with existing accounting standards, the lease is treated as an operating lease for financial reporting purposes. In January 2003, the FASB issued FASB Interpretation No. 46 ("FIN 46"), *Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51*. FIN 46 requires the consolidation of certain variable interest entities by the primary beneficiary of the entity if the equity investment at risk is not sufficient to permit the entity to finance its activities without additional subordinated financial support from other parties or if the equity investors lack the characteristics of a controlling financial interest. For variable interest entities created prior to February 1, 2003, the consolidation requirements of FIN 46 must be applied in our third quarter of 2003. We are in the process of determining the effect, if any, that the adoption of FIN 46 will have on our operations and financial position. If we were required to consolidate the LLC, however, our consolidated balance sheet as of December 31, 2002 would reflect additional property and equipment of $13.2 million and additional debt of $12.7 million. The impact of such treatment on our 2002, 2001 and 2000 operating results would not be significant.

As of December 31, 2002, future minimum payments due under our contractual lease obligations are as follows (in thousands):

		Payments Due by Period			
	Total	1 year	2-3 years	4-5 years	After 5 years
Capital lease obligations	$ 6,808	$2,452	$ 3,742	$ 614	$ —
Operating leases	38,510	3,031	6,236	6,243	23,000
Total contractual lease obligations	$45,318	$5,483	$ 9,978	$ 6,857	$ 23,000

We believe our available cash, cash equivalents, short-term investments and existing sources of funding will be sufficient to satisfy our anticipated operating and capital requirements through at least the next 12 months. Our future operating and capital requirements will depend on many factors, including: the effectiveness of our commercial activities; the pace of scientific progress in our research and development programs; the magnitude of these programs; the scope and results of preclinical testing and clinical trials; the time and costs involved in obtaining regulatory approvals; the costs involved in preparing, filing, prosecuting, maintaining and enforcing patent claims; competing technological and market developments; the ability to establish additional collaborations or changes in existing collaborations; the efforts of our collaborators; and the cost of production.

Critical Accounting Policies

Certain of our policies require the application of management judgement in making estimates and assumptions that affect the amounts reported in the consolidated financial statements and disclosures made in the accompanying notes. Those estimates and assumptions are based on historical experience and various other factors deemed to be applicable and reasonable under the circumstances. The use of judgement in determining such estimates and assumptions is by nature, subject to a degree of uncertainty. Accordingly, actual results could differ from the estimates made. Our critical accounting policies are as follows:

Revenue Recognition and Accounts Receivable

We recognize revenue upon product shipment, net of allowances for returns, rebates, discounts and chargebacks. Revenue associated with the launch of retail products sold with promotional terms that are more favorable to the customer than our standard terms (for example, to facilitate broad retail pharmacy distribution of the product) are deferred. The amount of deferred revenue recognized in subsequent periods is determined based on an estimate, using available market information, of the level of product at wholesalers that will sell through to retail outlets.

Our policy for returns allows customers, primarily wholesale distributors, to return the product three months prior to and six months after expiration. The level of actual returns can be influenced by a number of factors including the dating of product when shipped to the customer, the amount of product subsequently shipped by the wholesale distributor to their customers, pricing adjustments, and competing products. In recording adjustments to sales for estimated returns, we consider each of these factors as well as historical return patterns of our products, independent reports of the level of our product in the distribution channel, and industry trends. Actual product returns may differ from our estimates.

We provide rebates and chargebacks to our wholesaler distributors who sell to customers that have a purchasing contract with us, members of group purchasing organizations who purchase our product from our wholesalers and state agencies that administer certain government sponsored health programs. Such rebates and chargebacks are generally determined based on the volume of purchases or by reference to a specific price for a product. We accrue for these liabilities when we record the product sale. The underlying accrual rates and related reserves are regularly reviewed and adjusted, if necessary, based on changes in historical trends, significant new contracts or amendments to existing contracts.

We record allowances for doubtful accounts for estimated losses resulting from our customers' inability to pay amounts owed. If the financial condition of one or more of our customers were to deteriorate, we may be required to record additional allowances or write-off all or a portion of the amount due us.

We recognize collaborative research and development and other revenues as services are performed consistent with the performance requirements of the contract. Non-refundable contract fees for which no further performance obligation exists and where we have no continuing involvement are recognized upon the earlier of when payment is received or collection is assured. Revenue from non-refundable contract fees where we have continuing involvement through research and development collaborations or other contractual obligations is recognized ratably over the development period or the period for which we continue to have a performance obligation. Revenue from performance milestones is recognized upon the achievement of the milestones as specified in the respective agreement provided payment is proportionate to the effort expended. Payments received in advance of performance or delivery are recorded as deferred revenue and subsequently recognized over the period of performance or upon delivery.

Inventories

Our inventories are stated at the lower of cost or market value. Cost is determined using the first-in, first-out method. We record reserves for estimated obsolescence to account for unsaleable products including products that are nearing or have reached expiration, and slow-moving inventory.

Impairment of Long-Lived Assets

We review long-lived assets, including acquired technology and product rights and property and equipment, whenever events or circumstances indicate that the carrying amount of the assets may not be fully recoverable. We measure the recoverability of assets to be held and used by comparing the carrying amount of an asset to the future undiscounted net cash flows expected to be generated by the asset. If an asset is considered to be impaired, the impairment to be recognized is measured as the amount by which the carrying amount of the asset exceeds its fair value. Fair value of our long-lived assets are determined using the expected cash flows discounted at a rate commensurate with the risk involved. We believe that the future cash flows to be received from our long-lived assets will exceed the assets' carrying value, and accordingly have not recorded any impairment losses through December 31, 2002.

Stock-Based Compensation

We grant stock options to our employees at an exercise price equal to the fair value of the shares at the date of grant and account for these stock option grants in accordance with APB Opinion No. 25, *Accounting for Stock Issued to Employees* ("APB 25") and related interpretations. Under APB 25, when stock options are issued with an exercise price equal to the market price of the underlying stock on the date of grant, no compensation expense is recognized in the statement of operations. Refer to Note 2 of the notes to consolidated financial statements for pro-forma disclosures of the impact on our financial statements of accounting for stock options under the fair-value requirements of SFAS No. 123, Accounting for Stock-based Compensation.

New Accounting Pronouncements

In July 2001, the Financial Accounting Standards Board ("FASB") issued SFAS No. 141, *Business Combinations,* which requires the use of the purchase method of accounting for all business combinations initiated after June 30, 2001 and eliminates the pooling-of-interests method. The adoption of SFAS No. 141 did not have a material effect on our results of operations or financial position.

In July 2001, the FASB issued SFAS No. 142, *Goodwill and Other Intangible Assets,* which requires that goodwill and other intangible assets with indefinite lives no longer be amortized, but instead tested for impairment at least annually. In addition, the standard includes provisions for the reclassification of certain existing intangibles as goodwill and reassessment of the useful lives of existing recognized intangibles. SFAS No. 142 is effective for fiscal years beginning after December 31, 2001. The adoption of SFAS No. 142 effective January 1, 2002 did not have a material effect on our results of operations or financial position.

In October 2001, the FASB issued SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived* Assets, which establishes one accounting model to be used for long-lived assets to be disposed of by sale and broadens the presentation of discontinued operations to include more disposal transactions. SFAS No. 144 supercedes SFAS No. 121, *Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of,* and the accounting and reporting provisions of APB No. 30. SFAS No. 144 is effective for fiscal years beginning after December 15, 2001. The adoption of SFAS No. 144 effective January 1, 2002 did not have a material effect on our results of operations or financial position.

In November 2002, the FASB issued FASB Interpretation No. 45 ("FIN 45"), *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others*. FIN 45 requires that a liability be recorded in the guarantor's balance sheet upon issuance of a guarantee. In addition, FIN 45 requires certain disclosures about each of the entity's guarantees. We will apply the recognition provisions of FIN 45 prospectively to guarantees issued after December 31, 2002. The disclosure provisions of FIN 45 are effective for annual and interim periods that end after December 15, 2002.

In December 2002, the FASB issued SFAS No. 148, *Accounting for Stock-Based Compensation, Transition and Disclosure*. SFAS No. 148 provides alternative methods of transition for those entities that elect to voluntarily adopt the fair value accounting provisions of SFAS 123, *Accounting for Stock-Based Compensation*. SFAS No. 148 also requires more prominent disclosures of the pro forma effect of using the fair value method of accounting for stock-based employee compensation as well as pro forma disclosure of the effect in interim financial statements. The transition and annual disclosure provisions of SFAS No. 148 are effective for fiscal years ending after December 15, 2002. The interim disclosure requirements are effective for the first interim period ending after December 15, 2002. We have not elected to adopt the fair value accounting provisions of SFAS No. 123 and therefore the adoption of SFAS No. 148 did not have a material effect on our results of operations or financial position.

In January 2003, the FASB issued FASB Interpretation No. 46 ("FIN 46"), *Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51*. FIN 46 requires the consolidation of certain variable interest entities by the primary beneficiary of the entity if the equity investment at risk is not sufficient to permit the entity to finance its activities without additional subordinated financial support from other parties or if the equity investors lack the characteristics of a controlling financial interest. FIN 46 is effective for variable interest entities created or acquired after January 31, 2003. For variable interest entities created or acquired prior to February 1, 2003, the provisions of FIN 46 must be applied in the first interim or annual period beginning after June 15, 2003. We are in the process of determining the effect that the adoption of FIN 46 will have on our results of operations and financial position.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

At December 31, 2002 and 2001, our investment portfolio included fixed-income securities of $12.8 million and $15.5 million, respectively. These securities are subject to interest rate risk and will decline in value if interest rates increase. However, due to the short duration of our investment portfolio, an immediate 10% change in interest rates would have no material impact on our financial condition, results of operations or cash flows. Declines in interest rates over time will, however, reduce our interest income while increases in interest rates over time will increase our interest expense.

We do not have a significant level of transactions denominated in currencies other than U.S. dollars and as a result we have very limited foreign currency exchange rate risk. The effect of an immediate 10% change in foreign exchange rates would have no material impact on our financial condition, results of operations or cash flows.

Item 8. Consolidated Financial Statements and Supplementary Data

INDEX TO FINANCIAL STATEMENTS

INDEPENDENT AUDITORS' REPORT

The Board of Directors and Stockholders
Ligand Pharmaceuticals Incorporated

We have audited the accompanying consolidated balance sheets of Ligand Pharmaceuticals Incorporated and subsidiaries as of December 31, 2002 and 2001, and the related consolidated statements of operations, stockholders' equity (deficit), and cash flows for each of the three years in the period ended December 31, 2002. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Ligand Pharmaceuticals Incorporated and subsidiaries as of December 31, 2002 and 2001, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2002, in conformity with accounting principles generally accepted in the United States of America.

As discussed in Note 2 to the consolidated financial statements, in 2000 the Company changed its method of revenue recognition to comply with the provisions of Staff Accounting Bulletin No. 101, *Revenue Recognition in Financial Statements,* issued by the Securities and Exchange Commission.

DELOITTE & TOUCHE LLP
San Diego, California
February 25, 2003

LIGAND PHARMACEUTICALS INCORPORATED

CONSOLIDATED BALANCE SHEETS
(in thousands, except share data)

ASSETS

	December 31, 2002	December 31, 2001
Current assets:		
Cash and cash equivalents	$ 42,423	$ 20,741
Short-term investments; $8,998 restricted at December 31, 2002	21,825	16,947
Accounts receivable, net	7,356	9,798
Inventories	4,841	3,756
Other current assets	7,308	2,332
Total current assets	83,753	53,574
Restricted investments	10,646	2,370
Property and equipment, net	9,672	9,690
Acquired technology and product rights, net	148,546	41,879
Other assets	17,992	9,960
	$ 270,609	$ 117,473

LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)

Current liabilities:		
Accounts payable	$ 11,979	$ 5,385
Accrued liabilities	11,786	12,245
Current portion of deferred revenue	4,683	8,729
Current portion of equipment financing obligations	2,087	2,867
Current portion of long-term debt	—	2,500
Total current liabilities	30,535	31,726
Long-term debt	155,250	133,404
Long-term portion of deferred revenue	3,014	4,164
Long-term portion of equipment financing obligations	4,095	3,354
Other long-term liabilites	3,700	2,700
Total liabilities	196,594	175,348
Commitments and contingencies (Notes 5, 7, 9 and 10)		
Stockholders' equity (deficit):		
Convertible preferred stock, $0.001 par value; 5,000,000 shares authorized; none issued	—	—
Common stock, $0.001 par value; 130,000,000 shares authorized, 71,522,156 shares and 60,164,840 shares issued at December 31, 2002 and 2001, respectively	72	60
Additional paid-in capital	693,213	529,374
Deferred warrant expense	—	(692)
Accumulated other comprehensive income (loss)	(43)	14
Accumulated deficit	(618,316)	(585,720)
	74,926	(56,964)
Treasury stock, at cost; 73,842 shares	(911)	(911)
Total stockholders' equity (deficit)	74,015	(57,875)

	$ 270,609	$ 117,473

See accompanying notes.

CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share data)

	Year ended December 31,		
	2002	**2001**	**2000**
Revenues:			
Product sales	$ 54,522	$ 45,623	$ 22,910
Collaborative research and development and other revenues	42,118	30,718	25,200
Total revenues	96,640	76,341	48,110
Operating costs and expenses:			
Cost of products sold	20,306	13,947	8,591
Research and development	58,807	51,104	51,287
Selling, general and administrative	41,678	34,427	34,114
Total operating costs and expenses	120,791	99,478	93,992
Loss from operations	(24,151)	(23,137)	(45,882)
Other income (expense):			
Interest income	1,086	2,106	2,574
Interest expense	(6,295)	(13,601)	(13,119)
Debt conversion expense	(2,015)	(5,043)	(2,025)
Other, net	(1,221)	(3,320)	(825)
Total other expense, net	(8,445)	(19,858)	(13,395)
Loss before cumulative effect of a change in accounting principle	(32,596)	(42,995)	(59,277)
Cumulative effect on prior years (to December 31, 1999) of changing method of revenue recognition	—	—	(13,099)
Net loss	$ (32,596)	$ (42,995)	$ (72,376)
Basic and diluted per share amounts:			
Loss before cumulative effect of a change in accounting principle	$ (0.47)	$ (0.72)	$ (1.06)
Cumulative effect on prior years (to December 31, 1999) of changing method of revenue recognition	—	—	(0.24)
Net loss	$ (0.47)	$ (0.72)	$ (1.30)
Weighted average number of common shares	69,118,976	59,413,270	55,664,921
Pro forma amounts assuming the changed method of recognizing revenue is applied retroactively (Note 2):			
Net loss			$ (59,277)
Basic and diluted net loss per share			$ (1.06)

See accompanying notes.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)
(in thousands, except share data)

	Common stock		Additional paid-in capital	Deferred warrant expense	Accumulated other comprehensive income (loss)	Accumulated deficit	Treasury stock		Total stockholders' equity (deficit)	Comprehensive income (loss)
	Shares	Amount					Shares	Amount		
Balance at January 1, 2000	53,018,248	$ 53	$ 448,784	$ (3,460)	$ (607)	$ (470,349)	(1,114)	$ (11)	$ (25,590)	$ (74,844)
Issuance of common stock	3,805,468	4	41,294	—	—	—	—	—	41,298	
Unrealized gains on available-for-sale securities	—	—	—	—	182	—	—	—	182	$ 182
Reclassification adjustment on sale of investment security	—	—	—	—	550	—	—	—	550	550
Foreign currency translation adjustments	—	—	—	—	(79)	—	—	—	(79)	(79)
Stock-based compensation	—	—	406	—	—	—	—	—	406	
Amortization of deferred warrant expense	—	—	—	1,384	—	—	—	—	1,384	
Stock received for milestone payment	—	—	—	—	—	—	(72,728)	(900)	(900)	
Net loss	—	—	—	—	—	(72,376)	—	—	(72,376)	(72,376)
Balance at December 31, 2000	56,823,716	57	490,484	(2,076)	46	(542,725)	(73,842)	(911)	(55,125)	$ (71,723)
Issuance of common stock	3,341,124	3	38,677	—	—	—	—	—	38,680	
Unrealized gains on available-for-sale securities	—	—	—	—	29	—	—	—	29	$ 29
Foreign currency translation adjustments	—	—	—	—	(61)	—	—	—	(61)	(61)
Stock-based compensation	—	—	213	—	—	—	—	—	213	
Amortization of deferred warrant expense	—	—	—	1,384	—	—	—	—	1,384	
Net loss	—	—	—	—	—	(42,995)	—	—	(42,995)	(42,995)
Balance at December 31, 2001	60,164,840	60	529,374	(692)	14	(585,720)	(73,842)	(911)	(57,875)	$ (43,027)
Issuance of common stock	11,357,316	12	163,839	—	—	—	—	—	163,851	
Unrealized losses on available-for-sale securities	—	—	—	—	(63)	—	—	—	(63)	$ (63)
Foreign currency translation adjustments	—	—	—	—	6	—	—	—	6	6
Amortization of deferred warrant expense	—	—	—	692	—	—	—	—	692	
Net loss	—	—	—	—	—	(32,596)	—	—	(32,596)	(32,596)
Balance at December 31, 2002	71,522,156	$ 72	$ 693,213	$ —	$ (43)	$ (618,316)	(73,842)	$ (911)	$ 74,015	$ (32,653)

See accompanying notes.

LIGAND PHARMACEUTICALS INCORPORATED

CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year ended December 31,		
	2002	**2001**	**2000**
Operating activities			
Net loss	$ (32,596)	$ (42,995)	$ (72,376)
Adjustments to reconcile net loss to net cash used in operating activities:			
Amortization of acquired technology and license rights	4,042	3,317	3,317
Depreciation and amortization of property and equipment	3,191	3,256	3,928
Amortization of debt discount and issuance costs	3,239	8,988	8,212
Debt conversion expense	2,015	5,043	2,025
Equity in loss of affiliate	1,183	930	1,868
Other	627	1,597	70
Changes in operating assets and liabilities net of effects from sale of manufacturing assets in 2000:			
Accounts receivable	2,442	(6,974)	(1,389)
Inventories	(1,085)	1,895	81
Other current assets	(4,976)	178	(173)
Accounts payable and accrued liabilities	2,002	6,128	(1,912)
Deferred revenue	(5,196)	(1,269)	11,134
Net cash used in operating activities	(25,112)	(19,906)	(45,215)
Investing activities			
Purchases of short-term investments	(13,934)	(18,263)	(11,974)
Proceeds from sale of short-term investments	18,054	15,784	14,908
Purchases of property and equipment	(3,161)	(1,974)	(1,085)
Payment for Avinza® royalty rights	(101,304)	—	—
Payment to extend X-Ceptor purchase right	(5,000)	—	—
Net proceeds from sale of manufacturing assets	—	—	9,676
Other, net	100	281	986
Net cash (used in) provided by investing activities	(105,245)	(4,172)	12,511
Financing activities			
Principal payments on equipment financing obligations	(2,923)	(3,597)	(4,188)
Proceeds from equipment financing arrangements	2,884	1,552	1,442
(Increase) decrease in restricted investments	(17,274)	(936)	577
Repayment of long-term debt	(52,500)	—	—
Net proceeds from issuance of convertible notes	150,092	10,000	—
Net proceeds from issuance of common stock and warrants	70,760	28,576	14,194
Increase in other long-term liabilities	1,000	—	—
Net cash provided by financing activities	152,039	35,595	12,025
Net increase (decrease) in cash and cash equivalents	21,682	11,517	(20,679)
Cash and cash equivalents at beginning of year	20,741	9,224	29,903
Cash and cash equivalents at end of year	$ 42,423	$ 20,741	$ 9,224
Supplemental disclosure of cash flow information			
Interest paid	$ 4,118	$ 4,595	$ 4,824
Supplemental schedule of non-cash investing and financing activities			
Conversion of zero coupon convertible senior notes to common stock	$ 86,135	$ —	$ 21,022
Issuance of common stock and notes for acquired technology and license rights	5,000	5,000	4,000
Accrual of obligations for acquired technology and product rights	4,133	—	5,000
Issuance of common stock for debt conversion incentive	2,015	5,043	2,025

See accompanying notes.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. The Company and its Business

Ligand Pharmaceuticals Incorporated, a Delaware corporation (the "Company" or "Ligand"), discovers, develops and markets new drugs that address critical unmet medical needs of patients in the areas of cancer, pain, men's and women's health or hormone related health issues, skin diseases, osteoporosis, and metabolic, cardiovascular and inflammatory diseases. Ligand's drug discovery and development programs are based on proprietary gene transcription technology, primarily related to Intracellular Receptors and Signal Transducers and Activators of Transcription. The financial statements include its direct wholly owned subsidiaries, Ligand Pharmaceuticals International, Inc., Glycomed Incorporated ("Glycomed"), Ligand Pharmaceuticals (Canada) Incorporated, and Seragen, Inc. ("Seragen").

The Company markets five products in the United States: AVINZA®, for the relief of chronic, moderate to severe pain; ONTAK®, for the treatment of patients with persistent or recurrent cutaneous T-cell lymphoma ("CTCL"); Targretin® capsules and Targretin® gel for the treatment of CTCL in patients who are refractory to at least one prior systemic therapy; and Panretin® gel, for the treatment of Kaposi's sarcoma in AIDS patients. Targretin® capsules and Panretin® gel are also marketed in Europe and the Company has a marketing authorization application ("MAA") under review in Europe for ONZAR™ (ONTAK® in the U.S.).

The Company's other potential products are in various stages of development. Potential products that appear to be promising at early stages of development may not reach the market for a number of reasons. A significant portion of the Company's revenues to date have been derived from research and development agreements with major pharmaceutical collaborators. Prior to generating revenues from these products, the Company or its collaborators must complete the development of the products in the human health care market. No assurance can be given that: (1) product development efforts will be successful, (2) required regulatory approvals for any indication will be obtained, (3) any products, if introduced, will be capable of being produced in commercial quantities at reasonable costs or, (4) patient and physician acceptance of these products will be achieved. There can be no assurance that Ligand will ever achieve or sustain profitability.

The Company faces risks common to companies whose products are in various stages of development. These risks include, among others, the Company's need for additional financing to complete its research and development programs and commercialize its technologies. The Company expects to incur substantial additional research and development expenses, including continued increases in personnel and costs related to preclinical testing and clinical trials, and sales and marketing expenses related to product sales.

The Company believes that patents and other proprietary rights are important to its business. The Company's policy is to file patent applications to protect technology, inventions and improvements to its inventions that are considered important to the development of its business. The patent positions of pharmaceutical and biotechnology firms, including the Company, are uncertain and involve complex legal and technical questions for which important legal principles are largely unresolved.

2. Significant Accounting Policies

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. Intercompany accounts and transactions have been eliminated in consolidation.

Use of Estimates

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

Cash, Cash Equivalents and Short-term Investments

Cash and cash equivalents consist of cash and highly liquid securities with original maturities at the date of acquisition of three months or less. Non-restricted investments with an original maturity of more than three months are considered short-term investments and have been classified by management as available-for-sale. Such investments are carried at fair value, with unrealized gains and losses included as a separate component of stockholders' equity (deficit).

Restricted Investments

Restricted investments consist of U.S. government securities required to be held with a trustee to pay the first four semi-annual interest payments due on the 6% convertible subordinated notes issued in November 2002 and certificates of deposit held with a financial institution as collateral under equipment financing and third-party service provider arrangements. Restricted investments with an original maturity of more than three months have been classified by management as held-to-maturity and are accounted for at amortized cost.

Concentrations of Credit Risk

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist primarily of investments and trade accounts receivable.

The Company invests its excess cash principally in United States government debt securities, investment grade corporate debt securities and certificates of deposit. The Company has established guidelines relative to diversification and maturities that maintain safety and liquidity. These guidelines are periodically reviewed and modified to take advantage of trends in yields and interest rates. The Company has not experienced any significant losses on its cash equivalents, short-term investments or restricted investments.

Trade accounts receivable represent the Company's most significant credit risk. The Company extends credit on an uncollateralized basis primarily to wholesale drug distributors throughout the United States. Prior to entering into sales agreements with new customers, and on an ongoing basis for existing customers, the Company performs detailed credit evaluations. To date, the Company has not experienced significant losses on customer accounts.

For 2002, there were three wholesale distributors that individually represented 10% or more of the Company's product sales and in the aggregate represented approximately 92% of product sales. As of December 31, 2002, gross amounts due from these distributors totaled $11.4 million.

Inventories

Inventories are stated at the lower of cost or market value. Cost is determined using the first-in-first-out method. Inventories consist of the following (in thousands):

	December 31,	
	2002	**2001**
Raw materials	$ 65	$ 143
Work-in-process	2,914	2,729
Finished goods	1,862	884
	$ 4,841	$ 3,756

Property and Equipment

Property and equipment is stated at cost and consists of the following (in thousands):

	December 31,	
	2002	2001
Land	$ 2,649	$ 2,649
Equipment and leasehold improvements	38,941	36,582
Less accumulated depreciation and amortization	(31,918)	(29,541)
	$ 9,672	$ 9,690

Depreciation of equipment is computed using the straight-line method over the estimated useful lives of the assets which range from three to fifteen years. Assets acquired pursuant to capital lease arrangements and leasehold improvements are amortized using the straight-line method over their estimated useful lives or their related lease term, whichever is shorter.

Acquired Technology and Product Rights

Acquired technology and product rights represent payments related to the Company's acquisition of ONTAK® (see Note 7) and license and royalty rights for AVINZA® (see Note 5). Acquired technology and product rights are amortized on a straight-line basis over 15 years, the period estimated to be benefited, and consist of the following (in thousands):

	December 31,	
	2002	2001
AVINZA®	$ 114,437	$ 4,000
ONTAK®	45,312	45,312
Less accumulated amortization	(11,203)	(7,433)
	$ 148,546	$ 41,879

Amortization of acquired technology and product rights for the years ended December 31, 2002, 2001 and 2000 was $3.8 million, $3.0 million and $3.0 million, respectively. Estimated annual amortization for each of the years in the period from 2003 to 2007 is $10.7 million.

Impairment of Long-Lived Assets

The Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to future undiscounted net cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured as the amount by which the carrying amount of the assets exceeds the fair value of the assets. Fair value for the Company's long-lived assets is determined using the expected cash flows discounted at a rate commensurate with the risk involved. The Company believes the future cash flows to be received from its long-lived assets will exceed the assets' carrying value, and accordingly has not recognized any impairment losses through December 31, 2002. Effective January 1, 2002, the Company adopted SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets* , which supercedes SFAS No. 121. The adoption of SFAS No. 144 did not have an impact on the Company's financial statements.

Fair Value of Financial Instruments

The carrying amount of cash, cash equivalents, short-term investments, receivables, restricted investments, accounts payable and accrued liabilities are considered to be representative of their respective fair values due to the short-term nature of those instruments. As of December 31, 2002, the carrying amount of long-term debt and equipment financing obligations approximate fair value due to their stated interest rate approximating a market rate. Estimated fair value amounts have been determined using available market information and current rates offered to the Company for similar instruments.

Revenue Recognition

The Company generates revenue from product sales, collaborative research and development arrangements, and other activities such as distribution agreements, royalties, sales of technology rights, and contract manufacturing services. The Company's collaborative arrangements and distribution agreements may include multiple elements within a single contract. Each element of the contract is separately negotiated. Payments received may include non-refundable fees at the inception of the contract for technology rights under collaborative arrangements or product rights under distribution agreements, fully burdened funding for services performed during the research phase of collaborative arrangements, milestone payments for specific achievements designated in the collaborative or distribution agreements, royalties on sales of products resulting from collaborative arrangements, and payments for the supply of products under distribution agreements.

Revenues from product sales are recognized upon shipment, net of allowances for returns, rebates, discounts and chargebacks. The Company is obligated to accept from customers the return of pharmaceuticals that have reached their expiration date. Revenue associated with the launch of retail products sold with promotional terms that are more favorable to the customer than the Company's standard terms (for example, to facilitate broad retail pharmacy distribution of the product) are deferred. The amount of deferred revenue recognized in subsequent periods is determined based on an estimate, using available market information, of the level of product at wholesalers that will sell through to retail outlets.

Collaborative research and development and other revenues are recognized as services are performed consistent with the performance requirements of the contract. Non-refundable contract fees for which no further performance obligation exists and where the Company has no continuing involvement are recognized upon the earlier of when payment is received or collection is assured. Revenue from non-refundable contract fees where Ligand has continuing involvement through research and development collaborations or other contractual obligations is recognized ratably over the development period or the period for which Ligand continues to have a performance obligation. Revenue from performance milestones is recognized upon the achievement of the milestones as specified in the respective agreement provided payment is proportionate to the effort expended. Payments received in advance of performance or delivery are recorded as deferred revenue and subsequently recognized over the period of performance or upon delivery.

The composition of product sales by product is as follows (in thousands):

	Year ended December 31,		
	2002	**2001**	**2000**
ONTAK®	$ 26,642	$ 24,298	$ 13,203
Targretin® capsules	12,188	14,571	6,672
AVINZA®	12,174	—	—
Other	3,518	6,754	3,035
	$ 54,522	$ 45,623	$ 22,910

The composition of collaborative research and development and other revenues is as follows (in thousands):

	Year ended December 31,		
	2002	**2001**	**2000**
Collaborative research and development	$ 23,328	$ 25,725	$ 23,135
Royalty sale	18,275	—	—
Distribution agreements	311	4,787	922
Other	204	206	1,143
	$ 42,118	$ 30,718	$ 25,200

For the year ended December 31, 2002, revenues from sales to and agreements with five customers each accounted for more than 10% of total revenues and in the aggregate, represented more than 85% of total revenues. For the years ended December 31, 2001 and 2000, there were three customers that individually accounted for 10% or more of total revenues and in the aggregate represented 39% and 51% of total revenues, respectively.

Cumulative Effect of Accounting Change

In December 1999, the Securities and Exchange Commission issued Staff Accounting Bulletin ("SAB") No. 101, *Revenue Recognition in Financial Statements*. SAB No. 101 provides guidance in applying accounting principles generally accepted in the United States to revenue recognition in financial statements, including the recognition of non-refundable up-front fees and milestone payments received in conjunction with contractual arrangements that have multiple performance elements and require continuing involvement. SAB No. 101 requires that such fees be recognized as products are delivered or services are performed that represent the culmination of a separate earnings process.

The Company received non-refundable up-front fees of $4.3 million in 2000, $2.3 million in 1999, and $18.8 million in 1997. The Company initially recognized these payments as revenue upon receipt, as the fees were non-refundable and the Company had transferred technology or product rights at contract inception or incurred costs in excess of the up-front fees prior to initiation of each arrangement. However, under the provisions of SAB No. 101, non-refundable up-front fees must be deferred upon receipt and recognized as products are delivered or services are performed during the term of the arrangement. The Company implemented SAB No. 101 in the fourth quarter of 2000 as a change in accounting principle by deferring and recognizing these up-front payments over the term designated in the arrangement. The cumulative effect of this change to December 31, 1999, which was recorded in 2000, was $13.1 million or $0.24 per share. The effect on 2000 increased revenue and reduced loss before cumulative effect of a change in accounting principle by $1.3 million or $0.02 per share.

Costs and Expenses

Cost of products sold includes manufacturing costs, amortization of acquired technology, and royalty expenses associated with the Company's commercial products. Research and development costs are expensed as incurred. Research and development expenses were $58.8 million, $51.1 million and $51.3 million in 2002, 2001 and 2000 respectively, of which approximately 75%, 70% and 68% were sponsored by Ligand, and the remainder of which was funded pursuant to collaborative research and development arrangements.

Loss Per Share

Net loss per share is computed using the weighted average number of common shares outstanding. Basic and diluted net loss per share amounts are equivalent for the periods presented as the inclusion of potential common shares in the number of shares used for the diluted computation would be anti-dilutive. Potential common shares, the shares that would be issued upon the conversion of convertible notes and the exercise of outstanding warrants and stock options, were 31.9 million, 14.8 million and 14.7 million at December 31, 2002, 2001 and 2000, respectively.

Accounting for Stock-Based Compensation

The Company accounts for stock-based compensation in accordance with Accounting Principles Board Opinion ("APB") No. 25, *Accounting for Stock Issued to Employees*, and FASB Interpretation No. 44, *Accounting for Certain Transactions Involving Stock Compensation.*

Pro forma information regarding net loss and loss per share is required by SFAS No. 123*, Accounting for Stock-based Compensation*, and has been determined as if the Company had accounted for its employee stock options under the fair value method of that Statement. The estimated weighted average fair value at grant date for the options granted during 2002, 2001 and 2000 was $7.92, $7.48 and $8.32 per option, respectively. The fair value for these options was estimated at the dates of grant using the Black-Scholes option valuation model with the following weighted-average assumptions for 2002, 2001 and 2000:

	2002	2001	2000
Risk free interest rates	2.80%	4.30%	4.75%
Dividend yields	—	—	—
Volatility	77%	70%	75%
Weighted average expected life	5 years	5 years	5 years

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

For purposes of pro forma disclosures, the estimated fair value of the options is amortized to expense over the options' vesting period. The Company's pro forma information is as follows (in thousands, except for net loss per share information):

	Year ended December 31,		
	2002	2001	2000
Net loss as reported	$ (32,596)	$ (42,995)	$ (72,376)
Net loss pro forma	(39,030)	(48,566)	(78,714)
Net loss per share as reported	(0.47)	(0.72)	(1.30)
Net loss per share pro forma	(0.56)	(0.82)	(1.41)

Foreign Currency Translation

Gains and losses resulting from foreign currency translation are accumulated as a separate component of stockholders' equity (deficit) as accumulated other comprehensive income (loss). Gains and losses resulting from foreign currency transactions are included in the consolidated statements of operations.

Segment Reporting

The Company currently operates in a single operating segment. The Company generates revenue from various sources that result primarily from its underlying research and development activities. In addition, financial results are prepared and reviewed by management as a single operating segment. The Company continually evaluates the benefits of operating in distinct segments and will report accordingly when such distinction is made.

Recent Accounting Pronouncements

In July 2001, the Financial Accounting Standards Board ("FASB") issued SFAS No. 141, *Business Combinations,* which requires the use of the purchase method of accounting for all business combinations initiated after June 30, 2001 and eliminates the pooling-of-interests method. The adoption of SFAS No. 141 did not have a material effect on the Company's results of operations or financial position.

In July 2001, the FASB issued SFAS No. 142, *Goodwill and Other Intangible Assets,* which requires that goodwill and other intangible assets with indefinite lives no longer be amortized, but instead tested for impairment at least annually. In addition, the standard includes provisions for the reclassification of certain existing intangibles as goodwill and reassessment of the useful lives of existing recognized intangibles. SFAS No. 142 is effective for fiscal years beginning after December 31, 2001. The adoption of SFAS No. 142 effective January 1, 2002 did not have a material effect on the Company's results of operations or financial position.

In October 2001, the FASB issued SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived* Assets, which establishes one accounting model to be used for long-lived assets to be disposed of by sale and broadens the presentation of discontinued operations to include more disposal transactions. SFAS No. 144 supercedes SFAS No. 121, *Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of,* and the accounting and reporting provisions of APB No. 30. SFAS No. 144 is effective for fiscal years beginning after December 15, 2001. The adoption of SFAS No. 144 effective January 1, 2002 did not have a material effect on the Company's results of operations or financial position.

In November 2002, the FASB issued FASB Interpretation No. 45 ("FIN 45"), *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others*. FIN 45 requires that a liability be recorded in the guarantor's balance sheet upon issuance of a guarantee. In addition, FIN 45 requires certain disclosures about each of the entity's guarantees. Ligand will apply the recognition provisions of FIN 45 prospectively to guarantees issued after December 31, 2002. The disclosure provisions of FIN 45 are effective for annual and interim periods that end after December 15, 2002.

In December 2002, the FASB issued SFAS No. 148, *Accounting for Stock-Based Compensation, Transition and Disclosure*. SFAS No. 148 provides alternative methods of transition for those entities that elect to voluntarily adopt the fair value accounting provisions of SFAS 123, *Accounting for Stock-Based Compensation*. SFAS No. 148 also requires more prominent disclosures of the pro forma effect of using the fair value method of accounting for stock-based employee compensation as well as pro forma disclosure of the effect in interim financial statements. The transition and annual disclosure provisions of SFAS No. 148 are effective for fiscal years ending after December 15, 2002. The interim disclosure requirements are effective for the first interim period ending after December 15, 2002. Ligand has not elected to adopt the fair value accounting provisions of SFAS No. 123 and therefore the adoption of SFAS No. 148 did not have a material effect on the Company's results of operations or financial position.

In January 2003, the FASB issued FASB Interpretation No. 46 ("FIN 46"), *Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51*. FIN 46 requires the consolidation of certain variable interest entities by the primary beneficiary of the entity if the equity investment at risk is not sufficient to permit the entity to finance its activities without additional subordinated financial support from other parties or if the equity investors lack the characteristics of a controlling financial interest. FIN 46 is effective for variable interest entities created or acquired after January 31, 2003. For variable interest entities created or acquired prior to February 1, 2003, the provisions of FIN 46 must be applied in the first interim or annual period beginning after June 15, 2003. Ligand is in the process of determining the effect that the adoption of FIN 46 will have on its results of operations and financial position.

Reclassifications

Certain reclassifications have been made to amounts included in the prior years' financial statements to conform to the presentation for the year ended December 31, 2002.

3. Investments

The following table summarizes the various investment categories at December 31, 2002 and 2001 (in thousands):

	Cost	Gross unrealized gains	Gross unrealized losses	Estimated fair value
December 31, 2002				
U.S. government securities	$ 4,547	$ 25	$ (2)	$ 4,570
Corporate obligations	8,202	55	—	8,257
	12,749	80	(2)	12,827
U.S. government securities - restricted	18,014	—	—	18,014
Certificates of deposit - restricted	1,630	—	—	1,630
	$ 32,393	$ 80	$ (2)	$ 32,471
December 31, 2001				
U.S. government securities	$ 2,295	$ 30	$ —	$ 2,325
Corporate obligations	13,039	125	(1)	13,163
Certificates of deposit	1,459	—	—	1,459
	16,793	155	(1)	16,947
Certificates of deposit - restricted	2,370	—	—	2,370
	$ 19,163	$ 155	$ (1)	$ 19,317

There were no material realized gains or losses on sales of available-for-sale securities for the years ended December 31, 2002 and 2001. Net realized gains for the year ended December 31, 2000 were $426,000.

The amortized cost and estimated fair value of investments at December 31, 2002, by contractual maturity, are shown below (in thousands). Expected maturities will differ from contractual maturities because the issuers of the securities may have the right to prepay obligations without prepayment penalties.

	December 31, 2002	
	Cost	Estimated fair value
Due in one year or less	$ 11,462	$ 11,464
Due after one year through three years	20,931	21,007
	$ 32,393	$ 32,471

4. Other Balance Sheet Details

Accounts receivable consist of the following (in thousands):

	December 31,	
	2002	2001
Trade accounts receivable	$ 12,582	$ 13,239
Less allowances	(5,226)	(3,441)
	$ 7,356	$ 9,798

Other assets consist of the following (in thousands):

	December 31,	
	2002	2001
Debt issue costs, net	$ 5,073	$ —
Payment to extend X-Ceptor purchase right (Note 13)	5,000	—
Prepaid royalty buyout, net	3,128	3,400
Deferred rent	2,966	3,204
Equity investment in X-Ceptor	1,265	2,448
Other	560	908
	$ 17,992	$ 9,960

Accrued liabilities consist of the following (in thousands):

	December 31,	
	2002	2001
AVINZA® royalty rights	$ 4,133	$ —
Royalties	2,505	2,736
Compensation	2,338	2,786
Interest	880	1,942
Payment to licensor	—	2,500
Other	1,930	2,281
	$ 11,786	$ 12,245

5. Strategic Alliance with Elan Corporation

The Company and Elan Corporation, plc ("Elan") are parties to a number of agreements that provided financing to the Company and a license to Elan's product AVINZA®. Significant provisions are as follows:

Financing Arrangement

In 1998, Elan purchased approximately $20 million of the Company's common stock and $40 million in issue price of zero coupon convertible senior notes, due 2008 with an 8% per annum yield to maturity (the "Notes"), convertible into the Company's common stock at $14 per share. In 1999, the Company issued $40 million of Notes to Elan, convertible at $14 per share, and $20 million of Notes, convertible at $9.15 per share. In December 1999, Elan converted Notes of $20 million plus accrued interest into 2,244,460 shares of the Company's common stock. The Company provided Elan a $2.2 million conversion incentive through the issuance of an additional 188,572 shares of the Company's common stock. In March 2000, Elan converted an additional $20 million in Notes plus accrued interest into 1,501,543 shares of the Company's common stock. The Company provided Elan a $2 million conversion incentive through the issuance of 98,580 shares of the Company's common stock. On December 29, 2000, the Company issued the final $10 million of Notes to Elan provided for under the terms of the agreement, convertible at $14.16 per share.

In December 2001, Elan agreed to convert Notes of $50 million plus accrued interest of $11.8 million into 4,406,010 shares of Ligand common stock. The conversion occurred in February 2002 subsequent to regulatory approval. In connection with the conversion, Ligand provided Elan with a $5.0 million conversion incentive through the issuance in December 2001 of 274,843 shares of the Company's common stock.

In March 2002, Elan agreed to convert the remaining $20.0 million in issue price zero coupon convertible senior notes and $4.7 million of accrued interest into 1,766,916 shares of Ligand common stock. In connection with the conversion, Ligand provided Elan with a $2.0 million conversion incentive through the issuance of 102,151 shares of common stock.

The financing arrangement with Elan contains certain rights of first refusal upon the subsequent issuance of securities. In accordance with such rights and as a result of other equity issuances by the Company, the Company sold 52,712 shares of common stock and 91,406 warrants to Elan in 1999 for $839,000 and 416,667 shares of common stock in 2001 for $5 million. Elan subsequently exercised the warrants in connection with the March 2002 conversion of zero coupon convertible senior notes. As of December 31, 2002, Elan owns 20.2% of Ligand's issued and outstanding common shares.

License Agreement

In 1998, Elan also agreed to exclusively license to the Company in the United States and Canada its proprietary product AVINZA®, a form of morphine for chronic, moderate-to-severe pain. For the rights to AVINZA® the Company paid Elan $5 million through the issuance of 429,185 shares of the Company's common stock and $10 million from the issuance of Notes. In December 1999, the Company paid Elan $5 million through the issuance of 498,443 shares of the Company's common stock related to Elan completing patient enrollment for AVINZA® phase III clinical trials. In June 2000, as a result of Elan's submission of the AVINZA® NDA, the Company made a $4 million payment through the issuance of 367,183 shares of the Company's common stock. The FDA approved AVINZA® in March 2002. The approval triggered an additional $5.0 million milestone due Elan that was settled through the issuance of 302,554 shares of common stock.

In November 2002, the Company and Elan agreed to amend the terms of the AVINZA® license and supply agreement. Under the terms of the amendment, Ligand paid Elan $100.0 million in return for a reduction in Elan's product supply price on sales of AVINZA® by Ligand, rights to sublicense and obtain a co-promotion partner in its territories, and rights to qualify, and purchase AVINZA® from a second manufacturing source. Elan's adjusted royalty and supply price of AVINZA® is approximately 10% of the product's net sales, compared to approximately 30-35% in the prior agreement. In addition, Elan agreed to forego its option to co-promote AVINZA® in the United States and Canada. The amount paid to Elan and related transaction costs were capitalized as acquired product rights.

Repurchase of Elan Shares

In November 2002, the Company also agreed to purchase approximately 2.2 million Ligand shares held by an affiliate of Elan for $9.00 a share. The difference between the $9.00 purchase price and the public price of Ligand common shares at the time the agreement was signed, approximately $4.1 million, was treated as an additional component of the price paid for the reduced royalty rate. The shares were subsequently purchased and retired in February 2003. Following the retirement of these shares, Elan owns 17.7% of Ligand's issued and outstanding common shares.

Distribution Agreement

In February 2001, the Company and Elan entered into a distribution agreement providing for the distribution of certain of the Company's products in various European and other international territories for a term of ten years. During 2001, the Company received a $1.5 million up-front fee at contract inception, and $4.5 million in milestone payments upon the subsequent submission of a European Union ("EU") application for Marketing Authorization Approval ("MAA") for Targretin® gel, the grant of an EU MAA for Targretin® capsules and the submission of an EU MAA for ONZAR™ (ONTAK® in the U.S.). The Company may receive additional payments as products are submitted and approved in the territories.

6. AVINZA® Approval and Product Launch

In March 2002, the FDA approved AVINZA® for the relief of chronic, moderate to severe pain. In connection with the subsequent launch of AVINZA® in June 2002, the Company shipped $11.5 million of product to wholesaler customers. The product was sold under certain promotional launch programs that provided customers with discounts off wholesale price and 90-day payment terms instead of the Company's standard 30-day terms. The promotions were implemented to ensure the availability of a sufficient retail supply of AVINZA® in those territories where Ligand sales representatives were initially promoting the product. Of the amount shipped, $4.1 million was recognized as revenue based on the Company's policy of deferring recognition of revenue associated with promotional product terms for a new product launch requiring broad retail pharmacy distribution.

Through December 31, 2002, $14.6 million of AVINZA® has been shipped to wholesaler customers. Of the amount shipped, net revenue of $12.2 million was recognized and $750,000 was deferred in accordance with the Company's revenue recognition policy. The amount of deferred revenue to be recognized in subsequent periods will be determined based on an estimate, using available market information, of the level of product at wholesalers that will sell through to pharmacies.

The total amount paid to Elan for 2002 AVINZA® purchases and royalties was $5.4 million.

7. Seragen

Merger

In 1998, the Company completed a merger with Seragen. Under the terms of the merger agreement, Ligand paid merger consideration of $31.7 million at closing and $34.1 million in 1999 subsequent to final FDA approval of ONTAK®. Pending resolution of final contingencies and in accordance with the terms of the merger agreement, the Company has withheld $2.7 million from payments made to certain Seragen stakeholders.

In connection with the Seragen merger, the Company acquired substantially all the assets of Marathon Biopharmaceuticals, LLC ("Marathon"), which provided manufacturing services to Seragen, for $8.0 million. In 2000, Ligand sold the contract manufacturing assets of Marathon for approximately $10.2 million. In connection with the sale, Seragen entered into a three-year supply and development agreement with the acquirer for the manufacture of ONTAK® and the performance of certain development work for Seragen's next-generation ONTAK® product. Purchases under the agreement amounted to $1.8 million, $2.1 million and $2.6 million in 2002, 2001 and 2000, respectively.

Arrangement With Lilly

In conjunction with the Seragen merger, Eli Lilly and Company ("Lilly") assigned to Ligand certain rights and obligations under its agreements with Seragen, including its sales and marketing rights to ONTAK®. The agreement provides for milestone payments of $5.0 million to Lilly upon FDA approval of ONTAK® and upon cumulative net sales of ONTAK® reaching $20.0 million, royalties to Lilly on sales of ONTAK®, and payments by Lilly to Ligand as reimbursement for certain ONTAK® clinical and other costs incurred by the Company. In 1999, Ligand issued to Lilly 434,546 shares of the Company's common stock as payment of the $5.0 million milestone for approval of ONTAK®. In 2000, cumulative net sales of ONTAK® reached $20.0 million. The Company issued 412,504 shares of its common stock to Lilly in 2001 as payment for this $5.0 million milestone. Revenues recognized for reimbursement of clinical and other costs for the years ended December 31, 2001 and 2000 were $206,000 and $1.1 million, respectively. There were no such revenues for 2002.

8. Long-term Debt

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

	December 31,	
	2002	**2001**
6% Convertible Subordinated Notes	$ 155,250	$ —
Zero coupon convertible senior notes	—	86,078
Convertible Subordinated Debentures	—	47,326
Convertible note	—	2,500
	155,250	135,904
Less current portion	—	(2,500)
Total long-term debt	$ 155,250	$ 133,404

6% Convertible Subordinated Notes

In November 2002, the Company completed a private offering of Convertible Subordinated Notes in the aggregate principal amount of $155.3 million, receiving net proceeds of $150.1 million. The notes pay interest semi-annually at a rate of 6% and mature on November 16, 2007. Holders may convert the notes into shares of common stock at any time prior to maturity at a conversion rate of 161.9905 shares per $1,000 principal amount of notes. Of the net proceeds, $18.0 million was invested in U.S. government securities and placed with a trustee to pay the first four scheduled interest payments. On or after November 22, 2005, the Company has the option to redeem the notes, in whole or in part, at specified redemption prices ranging from 102.4% to 101.2% of the outstanding principal amount plus accrued and unpaid interest. Upon a change in control, holders of the notes can require the Company to repurchase the notes.

Zero Coupon Convertible Senior Notes

In February 2002, pursuant to an agreement reached in December 2001, the Company converted $50.0 million in issue price of zero coupon convertible senior notes and $11.8 million of accrued interest owed to Elan into 4,406,010 shares of common stock.

In March 2002, Elan agreed to convert the remaining outstanding $20.0 million in issue price zero coupon convertible senior notes and $4.7 million of accrued interest into 1,766,916 shares of Ligand common stock. In connection with the conversion, Ligand provided Elan with a $2.0 million conversion incentive through the issuance of 102,151 shares of common stock.

Convertible Subordinated Debentures

In June 2002, the Company redeemed $50.0 million in face value of 7.5% convertible subordinated debentures due January 2003. The remaining $1.8 million of accretion to face value at the time of redemption was charged to interest expense.

Convertible Note

The $2.5 million convertible note, issued in connection with the Company's collaborative arrangement with SmithKline Beecham Corporation, was repaid in October 2002.

9. Royalty Agreements

The Company has royalty obligations under various technology license agreements. During 2002, royalties to individual licensors were accrued ranging from 0.5% to 20% of net sales. Royalty expense for the years ended December 31, 2002, 2001 and 2000 was $8.8 million, $7.8 million and $3.5 million, respectively.

In March 2002, Ligand entered into an agreement with Royalty Pharma AG ("Royalty Pharma"), to sell a portion of the Company's rights to future royalties from certain collaborative partners' net sales of three selective estrogen receptor modulator (SERM) products now in Phase III clinical development. The agreement provided for the initial sale of rights to 0.25% of such product net sales for $6.0 million and options to acquire up to an additional 1.00% of net sales for $50.0 million. The $6.0 million was recognized as revenue in the first quarter of 2002. In July and December of 2002, the agreement was amended to replace the existing options with new options providing for the rights to acquire an additional 1.3125% of net sales for $63.8 million. Royalty Pharma exercised each of the three available 2002 options, as amended, acquiring rights to 0.4375% of net sales for $12.3 million. The Company recognizes revenue for options under the agreement when the option is exercised.

In December 2002, Ligand also entered into an agreement to sell Royalty Pharma a 1% interest in net sales of Targretin® capsules for $1.0 million starting in January 2003. The $1.0 million is being accounted for as a financing arrangement in accordance with Emerging Issues Task Force ("EITF") Issue No. 88-18, Sales of Future Revenues.

In September 1999, the Company and Seragen entered into a sublicense agreement with Hoffmann-La Roche Inc. ("Roche"), with respect to Seragen's rights under a family of patents called the "Strom Patents." The Strom Patents, licensed by Seragen from Beth Israel Deaconess Medical Center ("Beth Israel"), cover the use of antibodies that target the interleukin-2 receptor to treat transplant rejection and autoimmune diseases. In consideration for the sublicense, Roche paid Seragen a $2.5 million royalty based on sales occurring before the date of the agreement, plus Roche will pay royalties on subsequent sales of licensed products. Seragen will also receive milestone payments in the event Roche receives U.S. regulatory approval of licensed products. A non-exclusive license was previously issued by Seragen to Novartis requiring similar royalty payments. Beth Israel receives approximately 35% of the total royalty and milestone payments made related to the Strom Patents.

In December 1999, the Company and Seragen entered into an agreement with Pharmaceutical Partners LLC ("Pharma") whereby Pharma purchased Seragen's royalty stream to be received under the Roche and Novartis royalty agreements described above. Pharma paid $3.25 million in December 1999 and will pay an additional $3.25 million should sales exceed a predetermined amount in any of years 2002 through 2004. Seragen retains the patents and the right to receive the future milestone payments from Roche described above.

10. Commitments and Contingencies

Equipment Financing

The Company has entered into capital lease and equipment note payable agreements that require monthly payments through August 2006 including interest ranging from 4.75% to 10.66%. The carrying value of equipment under these agreements at December 31, 2002 and 2001 was $7.9 million and $13.1 million, respectively. At December 31, 2002 and 2001, related accumulated amortization was $4.1 million and $7.5 million, respectively. The underlying equipment is used as collateral under the equipment notes payable.

Certain of the equipment financing agreements contain provisions that require the Company to fund standby letters of credit equal to the balance financed under the arrangement in the event unrestricted cash levels fall below specified amounts.

Property Leases

The Company leases its corporate headquarters from a limited liability company (the "LLC") in which Ligand holds a 1% ownership interest. The lease agreement provides for increases in annual rent of 4% and terminates in 2014. Ligand also has an option to either purchase the LLC or the leased premises from the LLC at a purchase price equal to the outstanding debt on the property plus a calculated return on the investment made by the LLC's other shareholder.

In accordance with existing accounting standards, the lease is treated as an operating lease for financial reporting purposes. In January 2003, the FASB issued FASB Interpretation No. 46 ("FIN 46"), *Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51*. FIN 46 requires the consolidation of certain variable interest entities by the primary beneficiary of the entity if the equity investment at risk is not sufficient to permit the entity to finance its activities without additional subordinated financial support from other parties or if the equity investors lack the characteristics of a controlling financial interest. For variable interest entities created prior to February 1, 2003, the consolidation requirements of FIN 46 must be applied in the Company's third quarter of 2003. Ligand is in the process of determining the effect, if any, that the adoption of FIN 46 will have on its operations and financial position. If Ligand was required to consolidate the LLC, however, the Company's consolidated balance sheet as of December 31, 2002 would reflect additional property and equipment of $13.2 million and additional debt of $12.7 million. The impact of such treatment on the Company's 2002, 2001 and 2000 operating results would not be significant.

The Company leases its other office and research facilities under operating lease arrangements with varying terms through July 2015. The agreements provide for increases in annual rents based on changes in the Consumer Price Index or fixed percentage increases ranging from 3% to 7%.

Total rent expense under all office leases for 2002, 2001 and 2000 was $3.3 million, $3.4 million and $3.4 million, respectively.

At December 31, 2002 annual minimum payments due under the Company's office and equipment lease obligations are as follows (in thousands):

	Obligations under capital leases and equipment notes payable	Operating leases
2003	$ 2,452	$ 3,031
2004	2,361	3,088
2005	1,381	3,148
2006	614	3,189
2007	—	3,054
Thereafter	—	23,000
Total minimum lease payments	6,808	$ 38,510
Less amounts representing interest	(626)	
Present value of minimum lease payments	6,182	
Less current portion	(2,087)	
	$ 4,095	

Litigation

The Company is subject to various lawsuits and claims with respect to matters arising out of the normal course of business. Due to the uncertainty of the ultimate outcome of these matters, the impact on future financial results is not subject to reasonable estimates.

11. Stockholders' Equity (Deficit)

Stock Issuance

In April 2002, the Company raised net proceeds of $65.9 million in a private placement of 4,252,500 shares of its common stock.

Warrants

At December 31, 2002, there were outstanding warrants to purchase 1,100,000 shares of the Company's common stock. The warrants have exercise prices ranging from $10 to $20 per share and expire at various dates through October 6, 2006.

Treasury Stock

In 2000, under the terms of a previously established agreement with a collaborative research and development partner, the Company received 72,728 shares of its common stock as payment by the partner of a $900,000 development milestone. The stock had previously been sold to the partner at the inception of the collaborative arrangement. The stock was placed in treasury, which totaled 73,842 shares at December 31, 2002.

Stock Plans

In May 2002, the Company's stockholders approved the 2002 Stock Option/Stock Issuance Plan (the "2002 Plan") which is the successor to the Company's 1992 Stock Option/Stock Issuance Plan (the "1992 Plan"). The 2002 Plan provides for the issuance of options to purchase 1,305,000 shares of the Company's common stock including options for approximately 550,000 shares of common stock that remained available for issuance under the 1992 Plan. At the time the 2002 Plan became effective, there were approximately 6,855,000 shares reserved for issuance including shares that had been reserved for and were subject to outstanding options under the 1992 Plan. The options granted generally have 10-year terms and vest over four years of continued employment. The Company's employee stock purchase plan also provides for the sale of up to 540,000 shares of the Company's common stock.

Following is a summary of the Company's stock option plan activity and related information:

	Shares	Weighted average exercise price
Balance at January 1, 2000	5,305,459	$ 10.58
Granted	1,156,481	12.90
Exercised	(511,872)	9.25
Canceled	(285,519)	11.63
Balance at December 31, 2000	5,664,549	11.11
Granted	1,010,299	12.14
Exercised	(573,531)	10.11
Canceled	(702,951)	12.22
Balance at December 31, 2001	5,398,366	11.27
Granted	1,345,072	12.34
Exercised	(346,187)	9.20
Canceled	(737,006)	11.34
Balance at December 31, 2002	5,660,245	$ 11.64

Following is a further breakdown of the options outstanding as of December 31, 2002:

	Options outstanding			Options exercisable	
Range of exercise prices	Options outstanding	Weighted average remaining life in years	Weighted average exercise price	Number exercisable	Weighted average exercise price
$ 4.58 - $ 9.10.....	1,238,965	5.99	$ 7.33	653,901	$ 7.61
9.21 - 10.75.....	1,144,467	6.22	10.05	894,854	9.95
11.06 - 12.13.....	1,149,046	5.45	11.75	996,927	11.77
12.50 - 15.24.....	1,317,920	6.68	13.92	877,469	13.61
16.06 - 16.95.....	809,847	8.28	16.60	297,568	16.42
	5,660,245	6.42	$ 11.64	3,720,719	$ 11.41

At December 31, 2002, 975,685 shares were available under the plans for future grants of stock options or sale of stock.

Shareholder Rights Plan

The Company has a preferred shareholder rights plan (the “Shareholder Rights Plan”), which provides for a dividend distribution of one preferred share purchase right (a “Right”) on each outstanding share of the Company’s common stock. Each Right entitles stockholders to buy 1/1000th of a share of Ligand Series A Participating Preferred Stock at an exercise price of $100, subject to adjustment. The Rights become exercisable following the tenth day after a person or group announces an acquisition of 10% or more of the common stock, or announces commencement of a tender offer, the consummation of which would result in ownership by the person or group of 10% or more of the common stock. The Company will be entitled to redeem the Rights at $0.01 per Right at any time on or before the earlier of the tenth day following acquisition by a person or group of 10% or more of the common stock and September 13, 2006.

The Shareholder Rights Plan excludes Elan and its affiliates as an acquiring person to the extent of their ownership on or before November 9, 2005 of up to 25% of the Company’s common stock on a fully diluted basis or thereafter to the extent their ownership exceeds 20% on November 9, 2005. However, shares acquired pursuant to the arrangements with Elan described in Note 5 are not counted in such determination unless additional shares of the Company’s common stock have been acquired by Elan outside of such arrangements.

12. Collaborative Research and Development Agreements

The Company is party to various research and development collaborations with large pharmaceutical companies including TAP Pharmaceutical Products Inc., Organon Company, Pfizer, Inc., Eli Lilly and Company, GlaxoSmithKline, Wyeth (formerly American Home Products), and Abbott Laboratories. These arrangements generally provide for the license of certain technologies and a collaborative research period ranging from one to five years. Drugs resulting from these collaborations are then developed, manufactured and marketed by the corporate partners. The arrangements may provide for the Company to receive revenue from the transfer of technology rights at contract inception, collaborative research revenue during the research phase, milestone revenue for compounds moving through clinical development, and royalty revenue from the sale of drugs developed through the collaborative efforts.

The following are details regarding significant collaborative arrangements that were in the research phase during the years ended December 31, 2002, 2001 and 2000.

TAP

In June 2001, the Company entered into a research and development collaboration with TAP Pharmaceutical Products Inc. (“TAP”) to focus on the discovery and development of selective androgen receptor modulators (“SARMs”). SARMs contribute to the prevention and treatment of certain diseases, including hypogonadism, male and female sexual dysfunction, male and female osteoporosis, frailty, and male hormone replacement therapy. The initial research term concludes in June 2004. TAP may extend the term for up to three additional years.

Collaborative research revenues recognized under the agreement for the years ended December 31, 2002 and 2001 were $6.3 million and $4.3 million, respectively.

Bristol-Myers Squibb

In May 2000, the Company entered into a research and development collaboration with Bristol-Myers Squibb to focus on the discovery, design and development of orally active compounds that selectively modulate the mineralocorticoid receptor. In June 2001, Bristol-Myers Squibb terminated this collaboration. Collaborative research revenues recognized under the agreement for the years ended December 31, 2001 and 2000 were $3.7 million and $2.0 million, respectively.

Organon

In February 2000, the Company entered into a research and development collaboration with Organon to focus on small molecule compounds with potential effects for the treatment and prevention of gynecological diseases mediated through the progesterone receptor. The objective of the collaboration is the discovery of new non-steroidal compounds that are tissue-selective in nature and may have fewer side effects. Such compounds may provide utility in hormone replacement therapy, oral contraception, reproductive diseases, and other hormone-related disorders. The research phase was completed in February 2002. Collaborative research revenues recognized under the agreement for the years ended December 31, 2002, 2001 and 2000 were $330,000, $3.1 million and $2.7 million, respectively.

Pfizer

In September 1999, Ligand entered into a research and development collaboration with the Parke-Davis Pharmaceutical Research Division of Warner-Lambert Company (now part of Pfizer, Inc.) to discover, characterize, design and develop small molecule compounds with beneficial effects for the treatment and prevention of diseases mediated through the estrogen receptor. Some of the diseases affected by drugs that act upon the estrogen receptor are osteoporosis, cardiovascular disease, breast cancer, and mood and cognitive disorders. In 2000, Pfizer informed the Company that it would not extend the collaboration. Collaborative research revenues recognized under the agreement for the year ended December 31, 2000 were $2.5 million.

Eli Lilly & Company

In November 1997, the Company entered into a research and development collaboration with Lilly for the discovery and development of products based on Ligand's Intracellular Receptor technology. Collaborative research revenues including achieved milestones recognized under the agreement for the years ended December 31, 2002, 2001 and 2000 were $14.1 million, $13.7 million and $13.7 million, respectively. The initial research term concluded in November 2002. Lilly, however, extended the term by one year and maintains the right to extend the term for two additional years. The Company also had the option to obtain selected rights to one Lilly specialty pharmaceutical product. In connection with the August 1998 acquisition of Seragen, Ligand obtained from Lilly its rights to ONTAK® and entered into an agreement where Lilly is to fund certain clinical and other regulatory costs incurred by Ligand as mandated by the FDA in the approval of ONTAK® (see Note 7).

GlaxoSmithKline

In February 1995, the Company entered into a research and development collaboration with SmithKline Beecham Corporation (now GlaxoSmithKline) to discover and characterize small molecule drugs to control hematopoiesis for the treatment of a variety of blood cell deficiencies. The research phase was completed in February 2001. Collaborative research revenues including achieved milestones recognized under the agreement for the years ended December 31, 2002, 2001 and 2000 were $2.0 million, $52,000 and $820,000, respectively. In April 1998, SmithKline Beecham and the Company initiated a new collaboration to develop small molecule drugs for the treatment or prevention of obesity. The research phase was completed in May 2000. Collaborative research revenues recognized under that agreement for the year ended December 31, 2000 was $240,000.

13. X-Ceptor Therapeutics, Inc.

In June 1999, Ligand became a minority equity investor in a new private corporation, X-Ceptor Therapeutics, Inc. ("X-Ceptor"), whose mission is to conduct research in and identify therapeutic products from the field of orphan nuclear receptors. Ligand invested $6.0 million in X-Ceptor through the acquisition of convertible preferred stock and owns approximately 17% of X-Ceptor's outstanding capital stock.

Ligand maintained the right to acquire all, but not less than all, of the outstanding X-Ceptor stock at June 30, 2002 or upon the cash balance of X-Ceptor falling below a pre-determined amount, or to extend that right by 12 months by providing additional funding of $5.0 million. In April 2002, Ligand informed X-Ceptor that it was extending its purchase right. The $5.0 million subsequently paid to X-Ceptor will be carried as an asset until the Company decides to either exercise its purchase right or allow the option to expire unexercised. That decision must be made prior to June 30, 2003. If the purchase right is exercised, the $5.0 million option will be treated as a component of the purchase price; otherwise it will be charged to earnings in the period the decision not to exercise is made. The purchase price, payable pro-rata based on total cumulative non-Ligand funding, is up to $77.1 million at June 30, 2003. The purchase price may be paid in cash or shares of Ligand common stock, or any combination of the two, at Ligand's sole discretion.

Ligand granted to X-Ceptor an exclusive license to use the Ligand orphan nuclear receptors technology that is not currently committed to other partnership programs and a nonexclusive license to use Ligand's enabling proprietary process technology as it relates to drug discovery using orphan nuclear receptors. Ligand has not performed any research and development activities on behalf of X-Ceptor.

Ligand also issued warrants to X-Ceptor investors, founders and certain employees to purchase 950,000 shares of Ligand common stock with an exercise price of $10 per share and expiration date of October 6, 2006. The warrants were recorded at their fair value of $4.20 per warrant or $3.9 million as deferred warrant expense within stockholders' deficit and were amortized to operating expense through June 2002. Amortization for the years ended December 31, 2002, 2001 and 2000 was $692,000, $1.4 million and $1.4 million, respectively.

Ligand is accounting for its investment in X-Ceptor using the equity method of accounting. Ligand's interest in X-Ceptor losses for the years ended December 31, 2002, 2001 and 2000 was $1.1 million, $804,000 and $1.7 million, respectively, which are included in other income (expense) in the consolidated statements of operations. Included in the losses recognized is the amortization of the $1.7 million excess of the Company's investment in X-Ceptor over Ligand's equity in the net assets acquired.

14. Income Taxes

At December 31, 2002, the Company had consolidated federal and combined California income tax net operating loss carryforwards of approximately $510.0 million and $80.0 million, respectively. The difference between the federal and California tax loss carryforwards is primarily attributable to the capitalization of research and development expenses for California income tax purposes and the 60% limitation on California loss carryforwards. The federal tax loss carryforwards began expiring in 2002. The California tax loss carryforwards began expiring in 1998. At December 31, 2002, the Company also had consolidated federal and combined California research tax credit carryforwards of approximately $24.0 million and $11.0 million, respectively, which will begin expiring in 2003 unless utilized.

Pursuant to Internal Revenue Code Sections 382 and 383, use of a portion of net operating loss and credit carryforwards will be limited because of cumulative changes in ownership of more than 50% that occurred within three periods during 1989, 1992 and 1996. In addition, use of Glycomed's and Seragen's preacquisition tax net operating and credit carryforwards will also be limited because the acquisitions by the Company represent changes in ownership of more than 50%. Such tax net operating loss and credit carryforwards have been reduced, including the related deferred tax assets.

Significant components of the Company's deferred tax assets and liabilities as of December 31, 2002 and 2001 are shown below. A valuation allowance has been recognized to fully offset the net deferred tax assets as of December 31, 2002 and 2001 as realization of such assets is uncertain.

	December 31,	
	2002	2001
	(in thousands)	
Deferred tax liabilities:		
Purchased intangible assets	10,725	11,656
Acquired subordinated debt	$ —	$ 1,065
Total deferred tax liabilities	10,725	12,721
Deferred tax assets:		
Net operating loss carryforwards	178,005	168,761
Research and development credits	31,170	28,174
Capitalized research and development	10,632	8,893
Fixed assets and intangibles	7,661	8,533
Accrued expenses	4,560	3,565
Deferred revenue	3,066	5,136
Other, net	255	870
Total deferred tax assets	235,349	223,932
Net deferred tax assets	224,624	211,211
Valuation allowance for deferred tax assets	(224,624)	(211,211)
	$ —	$ —

As of December 31, 2002, approximately $4.3 million of the valuation allowance for deferred tax assets related to benefits of stock option deductions which, when recognized, will be allocated directly to paid-in capital.

15. Subsequent Events

In February 2003, Ligand and Organon Pharmaceuticals USA Inc. ("Organon") announced that they had entered into an agreement for the co-promotion of AVINZA®. Under the terms of the agreement, Organon committed to a specified minimum number of primary and secondary product calls delivered to certain high prescribing physicians and hospitals starting in April 2003. In exchange, Ligand will pay Organon a percentage of AVINZA® net sales based on the following schedule:

Annual Net Sales of AVINZA®	% of Incremental Net Sales Paid to Organon by Ligand
$0-35 million (2003 only)	0% (2003 only)
$0-150 million	30%
$150-300 million	40%
$300-425 million	50%
>$425 million	45%

Additionally, Ligand and Organon agreed to equally share all costs for AVINZA® advertising and promotion, medical affairs and clinical trials. Each company will also be responsible for its own sales force costs and other expenses. The initial term of the co-promotion agreement is ten years. Organon has the option any time prior to the end of year five to extend the agreement to 2017 by making a $75.0 million payment to Ligand.

16. Summary of Unaudited Quarterly Financial Information

The following is a summary of the unaudited quarterly results of operations for the years ended December 31, 2002 and 2001 (in thousands, except per share amounts).

	Quarter Ended			
	March 31	June 30	September 30	December 31
2002				
Total revenues	$ 24,886	$ 19,166	$ 25,266	$ 27,322
Cost of products sold	4,460	4,681	5,646	5,519
Research and development costs	13,115	13,681	15,641	16,370
Total operating costs and expenses	27,233	28,641	32,053	32,864
Net loss	(6,575)	(12,246)	(7,047)	(6,728)
Basic and diluted net loss per share	$ (0.10)	$ (0.17)	$ (0.10)	$ (0.09)
Weighted average number of common shares	63,123	70,413	71,358	71,410
2001				
Total revenues	$ 17,035	$ 17,489	$ 19,174	$ 22,643
Cost of products sold	2,839	3,077	3,645	4,386
Research and development costs	12,405	13,191	12,882	12,626
Total operating costs and expenses	25,401	25,154	23,733	25,190
Net loss	(11,581)	(10,615)	(7,744)	(13,055)
Basic and diluted net loss per share	$ (0.20)	$ (0.18)	$ (0.13)	$ (0.22)
Weighted average number of common shares	58,854	59,380	59,581	59,747

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

Not applicable.

PART III

Item 10. Directors and Executive Officers of the Registrant

The sections labeled “Election of Directors”, “Executive Officers” and “Section 16(a) Beneficial Ownership Reporting Compliance” appearing in the Company’s Proxy Statement to be delivered to stockholders in connection with the 2003 Annual Meeting of Stockholders (the “Proxy Statement”) are incorporated herein by reference.

Item 11. Executive Compensation

The section labeled “Executive Compensation and Other Information” appearing in the Proxy Statement is incorporated herein by reference.

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

Security Ownership of Certain Beneficial Owners and Management

The section labeled "Stock Ownership" appearing in the Proxy Statement is incorporated herein by reference.

Securities Authorized for Issuance under Equity Compensation Plans

We have two compensation plans approved by stockholders under which our equity securities are authorized for issuance to employees or directors in exchange for goods or services: The 2002 Stock Option/Stock Issuance Plan (effective May 16, 2002) which is the successor plan to the 1992 Stock Option/Stock Issuance Plan; and The 2002 Employee Stock Purchase Plan (effective May 16, 2002) which is the successor plan to the 1992 Employee Stock Purchase Plan.

The following table summarizes information about our equity compensation plans at December 31, 2002:

Plan category	(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights	(b) Weighted-average exercise price of outstanding options, warrants and rights	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders	5,660,245	$ 11.64	975,685
Equity compensation plans not approved by security holders	—	—	—
	5,660,245	$ 11.64	975,685

Item 13. Certain Relationships and Related Transactions

The sections labeled “Executive Compensation and Other Information” and “Certain Relationships and Related Transactions” appearing in the Proxy Statement are incorporated herein by reference.

Item 14. Controls and Procedures

(a) *Evaluation of disclosure controls and procedures.* An evaluation was performed under the supervision and with the participation of the Company's management, including the Chief Executive Officer (CEO) and Chief Financial Officer (CFO), of the effectiveness of the design and operation of the Company's disclosure controls and procedures within 90 days before the filing date of this Form 10-K. Based on their evaluation, the Company's principal executive officer and principal financial officer have concluded that the Company's disclosure controls and procedures (as defined in Rules 13a-14(c) and 15d-14(c) under the Securities Exchange Act of 1934 (the "Exchange Act")) are effective to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms.

(b) *Changes in internal controls.* There have been no significant changes in the Company's internal controls or in other factors that could significantly affect internal controls subsequent to their evaluation. There were no significant deficiencies or material weaknesses, and therefore there were no corrective actions taken.

PART IV

Item 15. Exhibits, Financial Statement Schedules, and Reports on Form 8-K

(a) The following documents are included as part of this Annual Report on Form 10-K.

Index to Financial Statements
Independent Auditors' Report
Consolidated Balance Sheets
Consolidated Statements of Operations
Consolidated Statements of Stockholders' Equity (Deficit)
Consolidated Statements of Cash Flows
Notes to Consolidated Financial Statements

(b) Reports on Form 8-K.

We filed the following reports on Form 8-K during the fourth quarter of 2002.

Date of Filing	Description	
November 13, 2002	Item 5, Other Events Item 7, Exhibits	— Ligand Reports Financial Results for Third Quarter 2002: Total Revenues increase 32%, Per Share Loss Decreases 23% — Ligand Restructures Avinza License and Supply Agreement — Ligand Announces Plans for $135 Million Convertible Debt Offering
November 21, 2002	Item 5, Other Events Item 7, Exhibits	— Ligand Announces Pricing of $135 Million of Convertible Subordinated Notes
November 25, 2002	Item 5, Other Events Item 7, Exhibits	— Ligand Earns $2.1 Million Milestone Payment as Lilly IND for LY674 Clears FDA
December 2, 2002	Item 5, Other Events Item 7, Exhibits	— Ligand Announces Exercise of Overallotment Option for Convertible Subordinated Notes

(c) Exhibits

Exhibit Number	Description
2.1 (1)	Agreement and Plan of Reorganization dated May 11, 1998, by and among the Company, Knight Acquisition Corp. and Seragen, Inc. (Filed as Exhibit 2.1).
2.2 (1)	Option and Asset Purchase Agreement, dated May 11, 1998, by and among the Company, Marathon Biopharmaceuticals, LLC, 520 Commonwealth Avenue Real Estate Corp. and 660 Corporation. (Filed as Exhibit 10.3).

Exhibit Number	Description
2.3 (19)	Asset Purchase Agreement among CoPharma, Inc., Marathon Biopharmaceuticals, Inc., Seragen, Inc. and the Company dated January 7, 2000. (The schedules referenced in this agreement have not been included because they are either disclosed in such agreement or do not contain information which is material to an investment decision (with certain confidential portions omitted). The Company agrees to furnish a copy of such schedules to the Commission upon request.)
2.4 (3)	Agreement of Merger, dated February 7, 1995 by and among the Company, LG Acquisition Corp. and Glycomed Incorporated (other Exhibits omitted, but will be filed by the Company with the Commission upon request). (Filed as Exhibit 2.1).
2.5 (1)	Form of Certificate of Merger for acquisition of Seragen, Inc. (Filed as Exhibit 2.2).
3.1 (1)	Amended and Restated Certificate of Incorporation of the Company. (Filed as Exhibit 3.2).
3.2 (1)	Bylaws of the Company, as amended. (Filed as Exhibit 3.3).
3.3 (2)	Amended Certificate of Designation of Rights, Preferences and Privileges of Series A Participating Preferred Stock of the Company.
3.5 (31)	Certificate of Amendment of the Amended and Restated Certificate of Incorporation of the Company dated June 14, 2000.
4.1 (4)	Specimen stock certificate for shares of Common Stock of the Company.
4.2 (16)	Preferred Shares Rights Agreement, dated as of September 13, 1996, by and between the Company and Wells Fargo Bank, N.A. (Filed as Exhibit 10.1).
4.3 (13)	Amendment to Preferred Shares Rights Agreement, dated as of November 9, 1998, between the Company and ChaseMellon Shareholder Services, L.L.C., as Rights Agent. (Filed as Exhibit 99.1).
4.4 (17)	Second Amendment to the Preferred Shares Rights Agreement, dated as of December 23, 1998, between the Company and ChaseMellon Shareholder Services, L.L.C., as Rights Agent (Filed as Exhibit 1).
4.5 (22)	Indenture, dated as of December 23, 1992 by and between Glycomed Incorporated and Chemical Trust Company of California. (Filed as Exhibit 4.3).
4.6 (3)	First Supplement Indenture, dated as of May 18, 1995 by and among the Company, Glycomed Incorporated and Chemical Trust Company of California. (Filed as Exhibit 10.133).
4.7 (37)	Fourth Amendment to the Preferred Shares Rights Agreement and Certification of Compliance with Section 27 Thereof, dated as of October 3, 2002, between the Company and Mellon Investor Services LLC, as Rights Agent.
4.8 (38)	Registration Rights Agreement dated November 26, 2002 between Ligand Pharmaceuticals Incorporated and UBS Warburg LLC. (Filed as Exhibit 4.2).
4.9 (38)	Indenture dated November 26, 2002, between Ligand Pharmaceuticals Incorporated and J.P. Morgan Trust Company, National Association, as trustee, with respect to the 6% convertible subordinated notes due 2007. (Filed as Exhibit 4.3).
4.10 (38)	Form of 6% Convertible Subordinated Note due 2007. (Filed as Exhibit 4.4).
4.11 (38)	Pledge Agreement dated November 26, 2002, between Ligand Pharmaceuticals Incorporated and J.P. Morgan Trust Company, National Association. (Filed as Exhibit 4.5).

Exhibit Number	Description
4.12 (38)	Control Agreement dated November 26, 2002, among Ligand Pharmaceuticals Incorporated, J.P. Morgan Trust Company, National Association and JP Morgan Chase Bank. (Filed as Exhibit 4.6).
10.2 (4)	Form of Stock Option Agreement.
10.3 (4)	Form of Stock Issuance Agreement.
10.12 (4)	1992 Employee Stock Purchase Plan.
10.13 (4)	Form of Stock Purchase Agreement.
10.29 (4)	Consulting Agreement, dated October 20, 1988, between the Company and Dr. Ronald M. Evans, as amended by Amendment to Consulting Agreement, dated August 1, 1991, and Second Amendment to Consulting Agreement, dated March 6, 1992.
10.30 (4)	Form of Proprietary Information and Inventions Agreement.
10.31 (4)	Agreement, dated March 9, 1992, between the Company and Baylor College of Medicine (with certain confidential portions omitted).
10.33 (4)	License Agreement, dated November 14, 1991, between the Company and Rockefeller University (with certain confidential portions omitted).
10.34 (4)	License Agreement and Bailment, dated July 22, 1991, between the Company and the Regents of the University of California (with certain confidential portions omitted).
10.35 (4)	Agreement, dated May 1, 1991, between the Company and Pfizer Inc (with certain confidential portions omitted).
10.36 (4)	License Agreement, dated July 3, 1990, between the Company and the Brigham and Woman's Hospital, Inc. (with certain confidential portions omitted).
10.38 (4)	License Agreement, dated January 5, 1990, between the Company and the University of North Carolina at Chapel Hill (with certain confidential portions omitted).
10.41 (4)	License Agreement, dated October 1, 1989, between the Company and Institute Pasteur (with certain confidential portions omitted).
10.42 (4)	Sublicense Agreement, dated September 13, 1989, between the Company and AndroBio Corporation (with certain confidential portions omitted).
10.43 (4)	License Agreement, dated June 23, 1989, between the Company and La Jolla Cancer Research Foundation (with certain confidential portions omitted).
10.44 (4)	License Agreement, dated October 20, 1988, between the Company and the Salk Institute for Biological Studies, as amended by Amendment to License Agreement dated September 15, 1989, Second Amendment to License Agreement, dated December 1, 1989 and Third Amendment to License Agreement dated October 20, 1990 (with certain confidential portions omitted).
10.46 (4)	Form of Indemnification Agreement between the Company and each of its directors.
10.47 (4)	Form of Indemnification Agreement between the Company and each of its officers.
10.50 (4)	Consulting Agreement, dated October 1, 1991, between the Company and Dr. Bert W. O'Malley.
10.58 (4)	Stock Purchase Agreement, dated September 9, 1992, between the Company and Glaxo, Inc.
10.59 (4)	Research and Development Agreement, dated September 9, 1992, between the Company and Glaxo, Inc. (with certain confidential portions omitted).
10.60 (4)	Stock Transfer Agreement, dated September 30, 1992, between the Company and the Rockefeller University.

Exhibit Number	Description
10.61 (4)	Stock Transfer Agreement, dated September 30, 1992, between the Company and New York University.
10.62 (4)	License Agreement, dated September 30, 1992, between the Company and the Rockefeller University (with certain confidential portions omitted).
10.63 (4)	Professional Services Agreement, dated September 30, 1992, between the Company and Dr. James E. Darnell.
10.67 (4)	Letter Agreement, dated September 11, 1992, between the Company and Mr. Paul Maier.
10.69 (5)	Form of Automatic Grant Option Agreement.
10.73 (21)	Supplementary Agreement, dated October 1, 1993, between the Company and Pfizer, Inc. to Agreement, dated May 1, 1991.
10.78 (23)	Research, Development and License Agreement, dated July 6, 1994, between the Company and Abbott Laboratories (with certain confidential portions omitted). (Filed as Exhibit 10.75).
10.82 (23)	Research, Development and License Agreement, dated September 2, 1994, between the Company and American Home Products Corporation, as represented by its Wyeth-Ayerst Research Division (with certain confidential portions omitted). (Filed as Exhibit 10.77).
10.83 (23)	Option Agreement, dated September 2, 1994, between the Company and American Home Products Corporation, as represented by its Wyeth-Ayerst Research Division (with certain confidential portions omitted). (Filed as Exhibit 10.80).
10.84 (23)	Distribution and Marketing Agreement, dated September 16, 1994, between the Company and Cetus Oncology Corporation, a wholly owned subsidiary of the Chiron Corporation (with certain confidential portions omitted). (Filed as Exhibit 10.82).
10.93 (6)	Indemnity Agreement, dated June 3, 1995, between the Company, Allergan, Inc. and Allergan Ligand Retinoid Therapeutics, Inc.
10.94 (6)	Tax Allocation Agreement, dated June 3, 1995, between the Company, Allergan, Inc. and Allergan Ligand Retinoid Therapeutics, Inc.
10.97 (6)	Research, Development and License Agreement, dated December 29, 1994, between SmithKline Beecham Corporation and the Company (with certain confidential portions omitted).
10.98 (6)	Stock and Note Purchase Agreement, dated February 2, 1995, between SmithKline Beecham Corporation, S.R. One, Limited and the Company (with certain confidential portions omitted).
10.140 (28)	Promissory Notes, General Security Agreements and a Credit Terms and Conditions letter dated March 31, 1995, between the Company and Imperial Bank (Filed as Exhibit 10.101).
10.146 (24)	Amendment to Research and Development Agreement, dated January 16, 1996, between the Company and American Home Products Corporation, as amended.
10.148 (24)	Lease, dated July 6, 1994, between the Company and Chevron/Nexus partnership, First Amendment to lease dated July 6, 1994.
10.149 (25)	Successor Employment Agreement, signed May 1, 1996, between the Company and David E. Robinson.
10.150 (7)	Master Lease Agreement, signed May 30, 1996, between the Company and USL Capital Corporation.

Exhibit Number	Description
10.151 (25)	Settlement Agreement and Mutual Release of all Claims, signed April 20, 1996, between the Company and Pfizer, Inc. (with certain confidential portions omitted).
10.152 (25)	Letter Amendment to Abbott Agreement, dated March 14, 1996, between the Company and Abbott Laboratories (with certain confidential portions omitted).
10.153 (26)	Letter Agreement, dated August 8, 1996, between the Company and Dr. Andres Negro-Vilar.
10.155 (7)	Letter Agreement, dated November 4, 1996, between the Company and William Pettit.
10.157 (7)	Master Lease Agreement, signed February 13, 1997, between the Company and Lease Management Services.
10.158 (7)	Lease, dated March 7, 1997, between the Company and Nexus Equity VI LLC.
10.161 (29)	Settlement Agreement, License and Mutual General Release between Ligand Pharmaceuticals and SRI/LJCRF, dated August 23, 1995 (with certain confidential portions omitted).
10.163 (30)	Extension of Master Lease Agreement between Lease Management Services and Ligand Pharmaceuticals dated July 29, 1997.
10.164 (27)	Third Amendment to Agreement, dated September 2, 1997, between the Company and American Home Products Corporation.
10.165 (8)	Amended and Restated Technology Cross License Agreement, dated September 24, 1997, among the Company, Allergan, Inc. and Allergan Ligand Retinoid Therapeutics, Inc.
10.167 (8)	Development and License Agreement, dated November 25, 1997, between the Company and Eli Lilly and Company (with certain confidential portions omitted).
10.168 (8)	Collaboration Agreement, dated November 25, 1997, among the Company, Eli Lilly and Company, and Allergan Ligand Retinoid Therapeutics, Inc. (with certain confidential portions omitted).
10.169 (8)	Option and Wholesale Purchase Agreement, dated November 25, 1997, between the Company and Eli Lilly and Company (with certain confidential portions omitted).
10.170 (8)	Stock Purchase Agreement, dated November 25, 1997, between the Company and Eli Lilly and Company.
10.171 (8)	First Amendment to Option and Wholesale Purchase Agreement dated February 23, 1998, between the Company and Eli Lilly and Company (with certain confidential portions omitted).
10.172 (8)	Second Amendment to Option and Wholesale Purchase Agreement, dated March 16, 1998, between the Company and Eli Lilly and Company (with certain confidential portions omitted).
10.174 (9)	Leptin Research, Development and License Agreement, dated March 17, 1998, between the Company and SmithKline Beecham, plc (with certain confidential portions omitted).
10.175 (9)	Stock and Warrant Purchase Agreement, dated March 17, 1998, among the Company, SmithKline Beecham, plc. and SmithKline Beecham Corporation (with certain confidential portions omitted).
10.176 (10)	Secured Promissory Note, dated March 7, 1997, in the face amount of $3,650,000, payable to the Company by Nexus Equity VI LLC. (Filed as Exhibit 10.1).
10.177 (10)	Amended memorandum of Lease effective March 7, 1997, between the Company and Nexus Equity VI LLC. (Filed as Exhibit 10.2).

Exhibit Number	Description
10.178 (10)	First Amendment to Lease, dated March 7, 1997, between the Company and Nexus Equity VI LLC. (Filed as Exhibit 10.3).
10.179 (10)	First Amendment to Secured Promissory Note, date March 7, 1997, payable to the Nexus Equity VI LLC. (Filed as Exhibit 10.4).
10.184 (11)	Letter agreement, dated May 11, 1998, by and among the Company, Eli Lilly and Company and Seragen, Inc. (Filed as Exhibit 99.6).
10.185 (1)	Amendment No. 3 to Option and Wholesale Purchase Agreement, dated May 11, 1998, by and between Eli Lilly and Company and the Company. (Filed as Exhibit 10.6).
10.186 (1)	Agreement, dated May 11, 1998, by and among Eli Lilly and Company, the Company and Seragen, Inc. (Filed as Exhibit 10.7).
10.188 (11)	Settlement Agreement, dated May 1, 1998, by and among Seragen, Inc., Seragen Biopharmaceuticals Ltd./Seragen Biopharmaceutique Ltee, Sofinov Societe Financiere D'Innovation Inc., Societe Innovatech Du Grand Montreal, MDS Health Ventures Inc., Canadian Medical Discoveries Fund Inc., Royal Bank Capital Corporation and Health Care and Biotechnology Venture Fund (Filed as Exhibit 99.2).
10.189 (11)	Accord and Satisfaction Agreement, dated May 11, 1998, by and among Seragen, Inc., Seragen Technology, Inc., Trustees of Boston University, Seragen LLC, Marathon Biopharmaceuticals, LLC, United States Surgical Corporation, Leon C. Hirsch, Turi Josefsen, Gerald S.J. and Loretta P. Cassidy, Reed R. Prior, Jean C. Nichols, Elizabeth C. Chen, Robert W. Crane, Shoreline Pacific Institutional Finance, Lehman Brothers Inc., 520 Commonwealth Avenue Real Estate Corp. and 660 Corporation (Filed as Exhibit 99.4).
10.191 (10)	Letter of Agreement dated September 28, 1998 among the Company, Elan Corporation, plc and Elan International Services, Ltd. (with certain confidential portions omitted), (Filed as Exhibit 10.5).
10.192 (10)	Stock Purchase Agreement dated September 30, 1998 between the Company and Elan International Services, Ltd. (with certain confidential portions omitted), (Filed as Exhibit 10.6).
10.196 (12)	Zero Coupon Convertible Senior Note Due 2008 dated November 9, 1998 between the Company and Elan International Services, Ltd., No. R-2.
10.198 (14)	Stock Purchase Agreement by and between the Company and Warner-Lambert Company dated September 1, 1999 (with certain confidential portions omitted). (Filed as Exhibit 10.2).
10.200 (14)	Nonexclusive Sublicense Agreement, effective September 8, 1999, by and among Seragen, Inc., Hoffmann-La Roche Inc. and F. Hoffmann-La Roche Ltd. (with certain confidential portions omitted). (Filed as Exhibit 10.4).
10.201 (14)	Amendment to Development, Licence and Supply Agreement between the Company and Elan Corporation, plc dated August 20, 1999 (with certain confidential portions omitted). (Filed as Exhibit 10.5).
10.202 (14)	Ligand Purchase Option (to acquire outstanding capital stock of X-Ceptor Therapeutics, Inc.), contained in Schedule I to the Certificate of Incorporation of X-Ceptor Therapeutics, Inc., as amended. (Filed as Exhibit 10.6).
10.203 (14)	License Agreement effective June 30, 1999 by and between the Company and X-Ceptor Therapeutics, Inc. (with certain confidential portions omitted). (Filed as Exhibit 10.7).
10.206 (14)	Stock Purchase Agreement dated September 30, 1999 by and between the Company and Elan International Services, Ltd. (with certain confidential portions omitted). (Filed as Exhibit 10.13).

Exhibit Number	Description
10.209 (14)	Series X Warrant dated August 4, 1999 between the Company and Elan International Services, Ltd. (Filed as Exhibit 10.15).
10.210 (15)	Securities Purchase Agreement dated November 6, 1998 among Elan Corporation, plc, Elan International Services, Ltd. and the Company (Filed as Exhibit 1). (Filed as Exhibit 10.8).
10.211 (15)	Development, Licence and Supply Agreement dated November 6, 1998 between Elan Corporation, plc and the Company (Filed as Exhibit 2). (Filed as Exhibit 10.9).
10.212 (15)	Letter Agreement dated August 13, 1999 among the Company, Elan International Services, Ltd. and Elan Corporation, plc (Filed as Exhibit 3). (Filed as Exhibit 10.12).
10.213 (18)	Incentive Agreement dated December 31, 1999 among the Company, Elan International Services, Ltd. and Monksland Holdings, BV. (The schedules referenced in this agreement have not been included because they are either disclosed in such agreement or do not contain information which is material to an investment decision. The Company agrees to furnish a copy of such schedules to the Commission upon request.)
10.216 (18)	Amendment to Ligand Purchase Option (to acquire outstanding capital stock of X-Ceptor Therapeutics, Inc.), contained in Schedule I to the Certificate of Incorporation of X-Ceptor Therapeutics, Inc., as amended October 1, 1999.
10.217 (18)	Amended and Restated Series X Warrant dated November 22, 1999 between the Company and Elan International Services, Ltd.
10.218 (18)	Royalty Stream Purchase Agreement dated as of December 31, 1999 among Seragen, Inc., the Company, Pharmaceutical Partners, L.L.C., Bioventure Investments, Kft, and Pharmaceutical Royalties, LLC. (with certain confidential portions omitted).
10.219 (19)	Supply and Development Agreement among Ligand Pharmaceuticals Incorporated, Seragen, Inc. and CoPharma, Inc. dated January 7, 2000 (with certain confidential portions omitted).
10.220 (19)	Research, Development and License Agreement by and between Organon Company and Ligand Pharmaceuticals Incorporated dated February 11, 2000 (with certain confidential portions omitted).
10.222 (19)	Incentive Agreement dated March 1, 2000 among Ligand Pharmaceuticals Incorporated, Elan International Services, Ltd. and Monksland Holdings, BV. (The schedules referenced in this agreement have not been included because they are either disclosed in such agreement or do not contain information which is material to an investment decision. The Company agrees to furnish a copy of such schedules to the Commission upon request.)
10.224 (20)	Research, Development and License Agreement by and between Bristol Myers Squibb Company and Ligand Pharmaceuticals Incorporated dated May 19, 2000 (with certain confidential portions omitted).
10.225 (31)	Zero Coupon Convertible Senior Note Due 2008 dated December 29, 2000 between Ligand Pharmaceuticals Incorporated and Monksland Holdings, BV, No. R-5.
10.227 (31)	Letter Agreement, dated August 23, 1999, between the Company and Eric S. Groves.
10.229 (31)	Letter Agreement, dated January 17, 2000, between the Company and Thomas H. Silberg.
10.230 (31)	Amended and Restated Registration Rights Agreement, dated as of June 29, 2000 among the Company and certain of its investors.
10.231 (2)	Marketing and Distribution Agreement with Ferrer Internacional S.A. to market and distribute Ligand Pharmaceuticals Incorporated products in Spain, Portugal and Greece. (Filed as Exhibit 10.3).

Exhibit Number	Description
10.232 (2)	Marketing and Distribution Agreement with Ferrer Internacional S.A. to market and distribute Ligand Pharmaceuticals Incorporated products in Central and South America. (Filed as Exhibit 10.4).
10.233 (32)	Second Amendment to the Research, Development and License Agreement, dated as of September 2, 1994, between the Company and American Home Products Corporation (with certain confidential portions omitted).
10.234 (32)	Fourth Amendment to the Research, Development and License Agreement, dated as of September 2, 1994, between the Company and American Home Products Corporation (with certain confidential portions omitted).
10.235 (32)	Distributorship Agreement, dated February 29, 2001, between the Company and Elan Pharma International Limited (with certain confidential portions omitted).
10.236 (32)	Second Amendment to the Development, Licence and Supply Agreement dated November 9, 1998, between the Company and Elan Corporation, plc.
10.237 (33)	Form of Stock Purchase Agreement dated as of January 5, 2001, between the investors listed on Exhibit A and the Company.
10.238 (33)	Letter Agreement, dated May 17, 2001, between the Company and Gian Aliprandi.
10.239 (33)	Research, Development and License Agreement by and between the Company and TAP Pharmaceutical Products Inc. dated June 22, 2001 (with certain confidential portions omitted).
10.240 (34)	Letter Agreement, dated December 13, 2001, between the Company and Warner R. Broaddus, Esq.
10.241 (34)	Incentive Agreement dated December 20, 2001 among the Company, Elan International Services, Ltd. and Monksland Holdings, BV.
10.242 (34)	First Addendum to Amended and Restated Registration Rights Agreement dated June 29, 2000, effective as of December 20, 2001.
10.243 (35)	Incentive Agreement dated March 28, 2002 among the Company, Elan International Services, Ltd. and Monksland Holdings, BV.
10.244 (35)	Second Addendum to Amended and Restated Registration Rights Agreement dated June 29, 2000, effective as of March 28, 2002.
10.245 (35)	Purchase Agreement, dated March 6, 2002, between the Company and Pharmaceutical Royalties International (Cayman) Ltd.
10.246 (36)	Amended and Restated License Agreement Between The Salk Institute for Biological Studies and the Company (with certain confidential portions omitted).
10.247 (37)	Amendment Number 1 to Purchase Agreement, dated July 29, 2002, between the Company and Pharmaceutical Royalties International (Cayman) Ltd.
10.248 (39)	2002 Stock Incentive Plan. (Filed as Exhibit 99.1).
10.249 (39)	2002 Employee Stock Purchase Plan. (Filed as Exhibit 99.11)
10.250	Amended and Restated License and Supply Agreement, dated December 6, 2002, between the Company, Elan Corporation, plc and Elan Management Limited (with certain confidential portions omitted).
10.251	Securities Purchase Agreement, dated November 12, 2002, between the Company, Elan International Services, Ltd. and Elan Corporation PLC.
10.252	Amendment Number 1 to Amended and Restated Registration Rights Agreement, dated November 12, 2002, between the Company and Elan Corporation plc and Elan International Services, Ltd.

Exhibit Number	Description
10.253	Second Amendment to Purchase Agreement, dated December 19, 2002, between the Company and Pharmaceuticals Royalties International (Cayman) Ltd.
10.254	Amendment Number 3 to Purchase Agreement, dated December 30, 2002, between the Company and Pharmaceuticals Royalties International (Cayman) Ltd. (with certain confidential portions omitted).
10.255	Purchase Agreement, dated December 30, 2002, between the Company and Pharmaceuticals Royalties International (Cayman) Ltd. (with certain confidential portions omitted).
21.1	Subsidiaries of Registrant.
23.1	Consent of Deloitte & Touche LLP.
24.1	Power of Attorney (See Page 83).
99.1	Certification by Principal Executive Officer, Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley act of 2002.
99.2	Certification by Principal Financial Officer, Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley act of 2002.

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(1) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Company's Registration Statement on Form S-4 (No. 333-58823) filed on July 9, 1998.

(2) This exhibit was previously filed as part of and is hereby incorporated by reference to same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended March 31, 1999.

(3) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Registration Statement on Form S-4 (No. 33-90160) filed on March 9, 1995, as amended.

(4) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Registration Statement on Form S-1 (No. 33-47257) filed on April 16, 1992 as amended.

(5) This exhibit was previously filed as part of, and is hereby incorporated by reference to Exhibit 99.1 filed with the Company's Form S-8 (No. 33-85366), filed on October 17, 1994.

(6) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Registration Statement on Form S-1/S-3 (No. 33-87598 and 33-87600) filed on December 20, 1994, as amended.

(7) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Annual Report on Form 10-K for the period ended December 31, 1996.

(8) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Annual Report on Form 10-K for the period ended December 31, 1997.

(9) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended March 31, 1998.

(10) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended September 30, 1998.

(11) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Current Report on Form 8-K of Seragen, Inc. filed on May 15, 1998.

(12) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Annual Report on Form 10-K for the period ended December 31, 1998.

(13) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Registration Statement on Form 8-A/A Amendment No. 1 (No. 0-20720) filed on November 10, 1998.

(14) This exhibit was previously filed as part of and is hereby incorporated by reference to the numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended September 30, 1999.

(15) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Schedule 13D of Elan Corporation, plc, filed on January 6, 1999, as amended.

(16) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Company's Registration Statement on Form S-3 (No. 333-12603) filed on September 25, 1996, as amended.

(17) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Registration Statement on Form 8-A/A Amendment No. 2 (No. 0-20720) filed on December 24, 1998.

(18) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Annual Report on Form 10-K for the period ended December 31, 1999.

(19) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2000.

(20) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2000.

(21) This exhibit was previously filed as part of, and are hereby incorporated by reference to the same numbered exhibit filed with the Company's Annual Report on Form 10-K for the year ended December 31, 1993.

(22) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Registration Statement on Form S-3 of Glycomed Incorporated (Reg. No. 33-55042) filed on November 25, 1992, as amended.

(23) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended September 30, 1994.

(24) This exhibit was previously filed, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Annual Report on Form 10-K for the year ended December 31, 1995.

(25) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly report on Form 10-Q for the period ended June 30, 1996.

(26) This exhibit was previously filed as part of, and is hereby incorporated by reference at the same numbered exhibit filed with the Company's Quarterly report on Form 10-Q for the period ended September 30, 1996.

(27) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended September 30, 1997.

(28) This exhibit was previously filed as part of, and are hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly report on Form 10-Q for the period ended September 30, 1995.

(29) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended March 31, 1997.

(30) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended June 30, 1997.

(31) This exhibit was previously filed as part of, and are hereby incorporated by reference to the same numbered exhibit filed with the Company’s Annual Report on Form 10-K for the year ended December 31, 2000.

(32) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company’s Quarterly Report on Form 10-Q for the period ended March 31, 2001.

(33) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company’s Quarterly Report on Form 10-Q for the period ended June 30, 2001.

(34) This exhibit was previously filed as part of, and are hereby incorporated by reference to the same numbered exhibit filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2001.

(35) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2002.

(36) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2002.

(37) This exhibit was previously filed as part of, and is hereby incorporated by reference to the same numbered exhibit filed with the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2002.

(38) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Company's Registration Statement on Form S-3 (No. 333-102483) filed on January 13, 2003, as amended.

(39) This exhibit was previously filed as part of, and is hereby incorporated by reference to the numbered exhibit filed with the Company's Form S-8 (No. 333-91414) filed on June 28, 2002.

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.

LIGAND PHARMACEUTICALS INCORPORATED

Date: March 21, 2003

By: /s/ DAVID E. ROBINSON
David E. Robinson
President and Chief Executive Officer

POWER OF ATTORNEY

Know all men by these presents, that each person whose signature appears below constitutes and appoints David E. Robinson or Paul V. Maier, his or her attorney-in-fact, with power of substitution in any and all capacities, to sign any amendments to this Annual Report on Form 10-K, and to file the same with exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that the attorney-in-fact or his or her substitute or substitutes may do or cause to be done by virtue hereof.

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

Signature	Title	Date
/s/ DAVID E.ROBINSON David E. Robinson	Chairman of the Board, President, Chief Executive Officer and Director (Principal Executive Officer)	March 21, 2003
/s/ PAUL V. MAIER Paul V. Maier	Senior Vice President, Chief Financial Officer (Principal Financial and Accounting Officer)	March 21, 2003
/s/ HENRY F. BLISSENBACH Henry F. Blissenbach	Director	March 21, 2003
/s/ ALEXANDER D. CROSS Alexander D. Cross	Director	March 20, 2003
/s/ JOHN GROOM John Groom	Director	March 21, 2003
/s/ IRVING S. JOHNSON Irving S. Johnson	Director	March 20, 2003
/s/ JOHN W. KOZARICH Irving S. Johnson	Director	March 20, 2003
/s/ CARL C. PECK Carl C. Peck	Director	March 20, 2003
/s/ MICHAEL A. ROCCA Michael A. Rocca	Director	March 21, 2003

CHIEF EXECUTIVE OFFICER CERTIFICATION

I, David E. Robinson, Chairman, President and Chief Executive Officer, certify that:

1. I have reviewed this annual report on Form 10-K of Ligand Pharmaceuticals Incorporated;

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3. Based on my knowledge, the consolidated financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and we have:

a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and

c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of the registrant's board of directors:

a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls;

6. The registrant's other certifying officer and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: March 21, 2003

/S/DAVID E. ROBINSON
David E. Robinson
Chairman, President and Chief Executive Officer

CHIEF FINANCIAL OFFICER CERTIFICATION

I, Paul V. Maier, Senior Vice President, Chief Financial Officer, certify that:

1. I have reviewed this annual report on Form 10-K of Ligand Pharmaceuticals Incorporated;

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3. Based on my knowledge, the consolidated financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and we have:

a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and

c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of the registrant's board of directors:

a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls;

6. The registrant's other certifying officer and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: March 21, 2003

/S/PAUL V. MAIER
Paul V. Maier
Senior Vice President, Chief Financial Officer

EXHIBIT 10.250

EXECUTION COPY

Dated December 6, 2002

ELAN CORPORATION, PLC

ELAN MANAGEMENT LIMITED

AND

LIGAND PHARMACEUTICALS INCORPORATED

AMENDED AND RESTATED
LICENCE AND SUPPLY AGREEMENT

CONTENTS

<TABLE>
<CAPTION>

THIS AGREEMENT is made on December 6, 2002.

BETWEEN:

(1) ELAN CORPORATION, PLC, a company incorporated in Ireland having its registered office at Lincoln House, Lincoln Place, Dublin 2, Ireland ("ELAN")

(2) ELAN MANAGEMENT LIMITED, a company incorporated in Ireland having its registered office at Lincoln House, Lincoln Place, Dublin 2, Ireland ("EML") and

(3) LIGAND PHARMACEUTICALS INCORPORATED, a company organised under the laws of Delaware, with offices at 10275 Science Center Drive, San Diego, California 92121, United States of America ("LIGAND").

RECITALS:

A. ELAN and LIGAND previously entered into that certain Development, Licence and Supply Agreement dated November 9, 1998, as amended pursuant to that certain Amendment Agreement dated August 20, 1999, that certain Second Amendment Agreement dated February 28, 2001 and that certain Closing Agreement dated November 8, 2002 (collectively, the "Prior Agreement").

B. ELAN and LIGAND desire to amend and restate their relationship set forth in the Prior Agreement as more fully set forth in this Agreement effective as of the AMENDMENT DATE.

C. ELAN is beneficially entitled to the use of various patents, including the ELAN PATENTS, which have been granted or are pending under the International Convention in relation to the development and production of drug specific dosage forms for pharmaceutical products and processes.

D. LIGAND is desirous of entering into a licensing agreement with ELAN by virtue of which it will be free to have manufactured in accordance with the terms of this Agreement and to market the PRODUCT in the TERRITORY without infringing any of the ELAN INTELLECTUAL PROPERTY rights held by ELAN.

E. ELAN is willing to waive its rights to co-promote the PRODUCT in the TERRITORY, ELAN is prepared to continue its licence of the ELAN PATENTS in the TERRITORY to LIGAND and ELAN is prepared to continue its supply of the PRODUCT to LIGAND.

F. ELAN, EML and LIGAND are desirous of entering into an agreement to give effect to the arrangements described above.

G. EML is a subsidiary of, and provides services to, ELAN and it has been agreed that, in order to discharge certain trading balances between the companies, EML is to be beneficially entitled to *** of the patent royalty payable by LIGAND under this Agreement.

***Portions of this page have been omitted pursuant to a request for Confidential Treatment and filed separately with the Commission

NOW IT IS HEREBY AGREED AS FOLLOWS:

CLAUSE 1 - PRELIMINARY

1.1 DEFINITIONS: In this Agreement unless the context otherwise requires:

1.1.1 AFFILIATE shall mean any corporation or entity controlling or controlled or under common control with ELAN or LIGAND, as the case may be. For the purposes of this Agreement, "control" shall mean the direct or indirect ownership of more than 50% of the issued voting shares or other voting rights of the subject entity to elect directors, or if not meeting the preceding criteria, any entity owned or controlled by or owning or controlling at the maximum control or ownership right permitted in the country where such entity exists.

1.1.1A AMENDMENT DATE shall mean the date appearing at the top of page 3.

1.1.1B AMENDMENT EXECUTION DATE shall mean 12 November 2002.

1.1.1C ATTORNEY shall mean an independent patent litigation attorney selected by ELAN and LIGAND, or if agreement on such selection is not made within fourteen (14) days of the dispute arising, appointed by the American Arbitration Association.

1.1.1D AVERAGE PRICE shall mean in respect of a particular strength in a particular period A / B where:

"A" is NSP from that strength in that period, recalculated so that the deductions permitted in paragraphs (a) and (b) of the definition of NSP are limited to *** of the aggregate gross IN MARKET proceeds billed in that period; and

"B" is the number of units of that strength of the PRODUCT comprising such NSP.

1.1.2 cGMP and cGLP shall mean respectively current Good Manufacturing Practice and current Good Laboratory Practice as defined in the FFDCA.

1.1.3 CFR shall mean the US Code of Federal Regulations 21, as amended from time to time.

1.1.4 [Intentionally Omitted]

1.1.5 CMC SECTION shall mean the chemistry, manufacturing, and controls section of the NDA in the USA as defined in CFR Section 314.50 (1), as may be amended from time to time, and/or its equivalent in foreign NDAs.

***Portions of this page have been omitted pursuant to a request for Confidential Treatment and filed separately with the Commission

1.1.6 COMPOUND shall mean the active drug substance morphine and its salts.

1.1.7 [Intentionally Omitted]

1.1.8 DMF shall mean ELAN's Drug Master File, as defined in the CFR Section 314.420 and/or its equivalent in the other countries of the TERRITORY, which DMF contains the CMC SECTION.

1.1.9 EFFECTIVE DATE shall mean September 30, 1998.

1.1.10 ELAN shall mean Elan Corporation, plc and any of its AFFILIATES.

1.1.11 ELAN IMPROVEMENTS shall mean any improvement or enhancement to the ELAN PATENTS that is created, conceived or invented during the INITIAL PERIOD which (i) would infringe a valid claim of the ELAN PATENTS, (ii) ELAN is free to license and (iii) are not subject to contractual obligations with any third party.

1.1.12 ELAN INTELLECTUAL PROPERTY shall mean the ELAN PATENTS and/or the

ELAN KNOW-HOW and shall include the improvements made by LIGAND as referred to in CLAUSE 3.1.3 to the extent such improvements relate to the PRODUCT.

1.1.13 ELAN KNOW-HOW shall mean all knowledge, information, trade secrets, data and expertise relating to the PRODUCT and which is not generally known to the public, owned or licensed by ELAN as of the EFFECTIVE DATE, or developed by ELAN whether before or during the INITIAL PERIOD relating to the PRODUCT, and which ELAN is free to license and which is not subject to contractual obligations with any third party, whether or not covered by any patent, copyright, design patent, trademark, trade secret or other industrial or any intellectual property rights.

In the event that ELAN acquires or merges with a third party entity, ELAN KNOW-HOW shall not include any know-how to the extent that such know-how relates to a product containing the COMPOUND which has been approved for marketing or is in development by the said third party entity. For the avoidance of doubt, the occurrence of any such acquisition or merger shall not affect the licence of the ELAN KNOW-HOW granted to LIGAND hereunder.

For the avoidance of doubt, ELAN KNOW-HOW shall exclude any know-how owned, licensed or controlled by AFFILIATES or subsidiaries of Elan Corporation, plc, including, but not limited to, ***(collectively, the "EXCLUDED KNOW-HOW").

For the avoidance of doubt, ELAN KNOW-HOW shall include any know-how

***Portions of this page have been omitted pursuant to a request for Confidential Treatment and filed separately with the Commission

relating to the PRODUCT owned, licensed or controlled as of the EFFECTIVE DATE by ***, if any.

1.1.14 ELAN PATENTS shall mean all patents and patent applications listed in SCHEDULE 1. ELAN PATENTS shall also include all continuations, continuations-in-part, divisionals, ELAN IMPROVEMENTS, and any patents issuing thereon, and re-issues or re-examinations of such patents and extensions of any patents licenced hereunder. Extensions of patents shall include extensions under the U.S. Patent Term Restoration Act.

For the avoidance of doubt, ELAN PATENTS shall exclude any patents owned, licenced or controlled as of the EFFECTIVE DATE by AFFILIATES or subsidiaries of Elan Corporation, plc, including, but not limited to, ***(the "EXCLUDED PATENTS").

In the event that ELAN acquires or merges with a third party entity, ELAN PATENTS shall not include any patent rights of such third party entity to the extent that such patent rights relate to a product containing the COMPOUND which has been approved for marketing or is in development by the said third party entity. For the avoidance of doubt, the occurrence of any such acquisition or merger shall not affect the licence of the ELAN PATENTS granted to LIGAND hereunder.

For the avoidance of doubt, ELAN PATENTS shall include any patents relating to the PRODUCT owned, licensed or controlled as of the EFFECTIVE DATE by ***, if any.

1.1.15 [Intentionally Omitted]

1.1.16 ENFORCEMENT PROCEEDINGS shall mean the proceedings referred to in CLAUSE 3.3.2.

1.1.17 [Intentionally Omitted]

1.1.18 EX WORKS shall have the meaning as such term is defined in the ICC Incoterms, 1990, International Rules for the Interpretation of Trade

Terms, ICC Publication No. 460.

1.1.19 FDA shall mean the United States Food and Drug Administration or any other successor agency whose approval is necessary to market the PRODUCT in the United States of America and/or its foreign equivalents in any other country of the TERRITORY.

1.1.20 FFDCA shall mean the US Federal Food, Drug and Cosmetic Act, and the regulations promulgated thereunder, as may be amended from time to time.

1.1.21 [Intentionally Omitted]

***Portions of this page have been omitted pursuant to a request for Confidential Treatment and filed separately with the Commission

1.1.22 FULLY ALLOCATED COST shall mean, with respect to a party, the fully allocated actual cost which is the sum total of all production related costs for the PRODUCT including direct labour, direct materials and supplies, variable labour, reasonable overhead and allocable administration, quality control, quality assurance and other costs; such costs to be calculated in accordance with a party's standard accounting principles.

1.1.23 INITIAL PERIOD shall mean the initial period of this Agreement, as more fully described in CLAUSE 12.1.

1.1.24 IN MARKET shall mean the sale of the PRODUCT by LIGAND or a permitted sub-licensee, as the case may be, to an unaffiliated third party including but not limited to a wholesaler, chain store, managed care organisation, hospital, pharmacy or governmental agency and shall exclude the transfer of the PRODUCT between LIGAND, its AFFILIATES and permitted sub-licensees.

1.1.25 [Intentionally Omitted]

1.1.26 LIGAND shall mean Ligand Pharmaceuticals Incorporated and any of its AFFILIATES.

1.1.27 NDA shall mean the New Drug Application filed by ELAN numbered 21,260 and any supplements or amendments thereto which LIGAND may file for the PRODUCT in the United States of America and its foreign equivalent in Canada.

1.1.28 NDA APPROVAL shall mean the final approval to market the PRODUCT in the United States of America and/or its foreign equivalent in Canada.

1.1.29 NSP shall mean in the case of PRODUCT sold by LIGAND or by a permitted sub-licensee of LIGAND, that sum determined by deducting from the aggregate gross IN MARKET proceeds billed for the PRODUCT by LIGAND in accordance with LIGAND's standard accounting principles and GAAP, expenses incurred by LIGAND under CLAUSE 3.2.1 if, as a result thereof, a patent is granted to ELAN and a further deduction to cover the following:

(a) customs duties or other taxes (excluding income or corporation tax), directly related to the sale of the PRODUCT which are paid by LIGAND;

(b) a discount from the gross IN MARKET proceeds to cover such normal costs as are incurred by LIGAND in respect of transport, shipping insurance, returns, rebates, allowances for bad debt actually taken, and discounts directly related to the sale of the PRODUCT.

1.1.30 PRODUCT shall mean the 30mg, 60mg, 90mg and 120mg finished dosage

strengths of the once-daily oral dosage microparticulate formulation developed by ELAN containing the COMPOUND as its primary active ingredient, and such other dosage strengths as would be covered by claims included in the ELAN PATENTS.

1.1.31 [Intentionally Omitted]

1.1.32 [Intentionally Omitted]

1.1.33 SPECIFICATIONS shall mean the specifications for the PRODUCT, as approved by FDA and effective as of the AMENDMENT DATE and contained in the NDA in the USA. The SPECIFICATIONS may hereafter be amended as agreed by the parties or as may otherwise be requested or mandated by the regulatory authorities in the TERRITORY, most specifically the FDA.

1.1.34 STATEMENT shall have the meaning given in CLAUSE 11.1.

1.1.35 TERRITORY shall mean the United States of America and its territories and Canada.

1.1.36 $ shall mean United States Dollars.

1.1.37 US or USA shall mean the United States of America.

1.2 INTERPRETATION: In this Agreement:

1.2.1 the singular includes the plural and vice versa, the masculine includes the feminine and vice versa and references to natural persons include corporate bodies, partnerships and vice versa.

1.2.2 any reference to a Clause or Schedule, unless otherwise specifically provided, shall be respectively to a Clause or Schedule of this Agreement.

1.2.3 the headings of this Agreement are for ease of reference only and shall not affect its construction or interpretation.

CLAUSE 2 - THE LICENCE

2.1 LICENCE TO LIGAND:

2.1.1 Subject to the terms of this Agreement, ELAN hereby grants to LIGAND and LIGAND hereby accepts for the INITIAL PERIOD an exclusive licence (even as to ELAN) of the ELAN INTELLECTUAL PROPERTY to import, use, offer for sale and sell the PRODUCT in the TERRITORY; provided that LIGAND shall grant back to ELAN a non exclusive royalty-free license to make and use the PRODUCT in the TERRITORY so as to enable ELAN to perform its obligations pursuant to this Agreement, and for the avoidance of doubt to conduct further research, development and manufacturing within the TERRITORY with regard to ELAN's commercialisation of the PRODUCT outside the TERRITORY. For the further avoidance of doubt, ELAN shall have no rights to import, offer for sale or sell the PRODUCT in the TERRITORY during the term of this Agreement.

2.1.2 LIGAND shall be entitled to grant sub-licences to import, use, offer for sale and sell the PRODUCT in any country of the TERRITORY to parties other than ELAN subject to the prior written consent of ELAN, which shall not be unreasonably conditioned, withheld or delayed.

Any sub-licence granted hereunder shall be consistent in its terms and conditions with the terms of this Agreement insofar as they are applicable, but excluding the right to grant a sub-licence or a

production licence, and shall survive termination of this licence granted to LIGAND hereunder to the extent set forth in CLAUSE 13.2.

For the avoidance of doubt, LIGAND shall ensure that ELAN shall have the same rights of audit and inspection vis-a-vis a sub-licensee as ELAN has vis-a-vis LIGAND pursuant to this Agreement.

LIGAND shall be liable to ELAN for all acts and omissions of any sub-licensee as though such acts and omissions were by LIGAND.

LIGAND shall undertake to protect the confidentiality of ELAN's formulation, engineering and manufacturing processes for the PRODUCT in its dealings with permitted sub-licensees and shall not disclose any information from the CMC SECTION to any third party, including without limitation a permitted sub-licensee, without the prior written consent of ELAN (except as provided in CLAUSE 9.15 or as permitted under CLAUSE 16.1.2).

2.1.3 ELAN covenants that neither ELAN nor any of its AFFILIATES will prosecute any suit against LIGAND regarding any EXCLUDED KNOW-HOW and EXCLUDED PATENTS by reason of LIGAND exercising its rights under this Agreement. ELAN warrants that (i) between the EFFECTIVE DATE and the AMENDMENT DATE it did not incorporate any EXCLUDED KNOW-HOW or EXCLUDED PATENTS into the PRODUCT, and (ii) the manufacture of the PRODUCT does not require the use of any EXCLUDED KNOW-HOW or EXCLUDED PATENTS. In addition, ELAN covenants that during the INITIAL PERIOD it shall not enter into any agreement restricting its ability to license in connection with the PRODUCT, or imposing third-party contractual obligations, on ELAN IMPROVEMENTS, without the prior written consent of LIGAND, which shall not be unreasonably conditioned, withheld or delayed.

2.2 [Intentionally Omitted]

CLAUSE 3 - INTELLECTUAL PROPERTY

3.1 OWNERSHIP OF ELAN INTELLECTUAL PROPERTY:

3.1.1 ELAN shall remain the sole owner of the ELAN INTELLECTUAL PROPERTY.

3.1.2 ELAN shall be entitled to use the ELAN INTELLECTUAL PROPERTY, and all technical, clinical and other data, generated by ELAN and/or by LIGAND pursuant to this Agreement in connection with:

(a) ELAN's commercial arrangements otherwise than in relation to the PRODUCT; and

(b) the commercialisation of the PRODUCT in any countries outside of the TERRITORY or those which cease to be part of the TERRITORY; and in the TERRITORY following termination of this Agreement.

LIGAND shall supply to ELAN for such purposes copies of such technical, clinical and other data generated by LIGAND.

3.1.3 In consideration for the licences granted by ELAN pursuant to this Agreement, any improvements relating to the ELAN INTELLECTUAL PROPERTY, including improvements relating to the formulation, process or manufacturing of the PRODUCT, made solely by LIGAND, its officers, servants, agents, and pursuant to the conduct of clinical trials conducted by or on behalf of LIGAND, its officers, servants, agents, during the INITIAL PERIOD shall be assigned by LIGAND to ELAN and shall form part of the ELAN INTELLECTUAL PROPERTY licenced to LIGAND pursuant to CLAUSE 2.1.

3.2 FILING AND MAINTENANCE OF PATENTS:

3.2.1 In the TERRITORY, LIGAND will be entitled but not obliged, at its own expense, to file and prosecute ELAN PATENTS, to determine the patent filing strategy in relation to same at its sole discretion and upon grant of any letters patent of the ELAN PATENTS, to maintain such letters patent in force.

3.2.2 Should LIGAND elect not to file or not to continue the maintenance or prosecution of any case under the ELAN PATENTS in the TERRITORY, it shall notify ELAN of such decision. Upon ELAN's request and at ELAN's expense, LIGAND shall return control of the ELAN PATENT(S) that were the subject of the election to ELAN in a timely manner to allow ELAN to continue with the prosecution or maintenance of the ELAN PATENTS in the TERRITORY. Any case under the ELAN PATENTS in the TERRITORY that LIGAND chooses not to continue to maintain or prosecute will be removed from the license by ELAN to LIGAND under CLAUSE 2.1.

3.3 ENFORCEMENT:

3.3.1 LIGAND and ELAN shall promptly inform the other in writing of any alleged infringement or unauthorised use of which it shall become aware by a third party of any intellectual property within the ELAN INTELLECTUAL PROPERTY and provide such other with any available evidence of infringement or unauthorized use.

3.3.2 In the TERRITORY, LIGAND, at its option, shall be entitled to institute enforcement proceedings ("ENFORCEMENT PROCEEDINGS") in respect of any infringement or unauthorised use of the ELAN INTELLECTUAL PROPERTY. ELAN agrees to provide all reasonable co-operation and assistance to LIGAND in relation to any such ENFORCEMENT PROCEEDINGS (and agrees to be named as a party if legally required) at LIGAND's expense. Any reasonable fees and costs borne by ELAN shall be reimbursed by LIGAND. LIGAND shall be entitled to deduct its reasonable expenses in relation to such ENFORCEMENT PROCEEDINGS (including reasonable attorney's fees and expenses) from any recovery and any remaining amount shall be distributed pro rata among the parties in which LIGAND shall receive *** of any remaining recovery and ELAN shall receive *** of any remaining recovery. ELAN and LIGAND each recognise that it is in both parties interest to enforce ELAN INTELLECTUAL PROPERTY to the full extent provided by law, and neither party shall, except as required by law, knowingly make any admission to jeopardise, compromise or otherwise limit the scope of such ELAN INTELLECTUAL PROPERTY.

3.3.3 In the event that LIGAND does not want to institute, or to continue already instituted, ENFORCEMENT PROCEEDINGS in the TERRITORY, then ELAN, using attorneys of ELAN's choosing reasonably acceptable to LIGAND, can enforce such rights at its own expense. In such event, ELAN must keep LIGAND fully and timely informed of the action so as to enable LIGAND to provide input which ELAN shall reasonably consider. LIGAND agrees to provide all reasonable co-operation and assistance to ELAN in relation to any such ENFORCEMENT PROCEEDINGS at ELAN's expense and agrees to be named as a party in any ENFORCEMENT PROCEEDINGS. Any reasonable fees and costs borne by LIGAND shall be reimbursed by ELAN. In the event that ELAN enforces ELAN INTELLECTUAL PROPERTY in accordance with this paragraph, ELAN shall be entitled deduct its reasonable expenses in relation to such ENFORCEMENT PROCEEDINGS (including reasonable attorney's fees and expenses and reimbursements to LIGAND) from any recovery and any remaining amount shall be distributed pro rata among the parties in which LIGAND shall receive *** of any remaining recovery and ELAN shall receive *** of any remaining recovery.

3.4 DEFENCE:

3.4.1 LIGAND and ELAN shall promptly inform the other in writing of a claim or proceeding brought against either party by a third party alleging that the sale, manufacture, offer for sale or use of the PRODUCT infringes the patent rights of such a third party in the TERRITORY.

The parties shall meet to discuss in what manner such claim or proceeding should be defended. Such discussion shall include, among other things, cessation of the manufacture and/or sale of the PRODUCT and modification of the PRODUCT to avoid unauthorised use.

3.4.2 [Intentionally Omitted]

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3.4.3. LIGAND shall defend such action at its expense including the reasonable expenses of ELAN (not including ELAN's attorney fees) incurred in cooperating with LIGAND in such defence. LIGAND shall indemnify and hold harmless ELAN against, and shall be obligated to pay, any award of damages to the third party under this CLAUSE 3.4, except that LIGAND shall not be obligated to indemnify ELAN against the multiple damages element of an award against ELAN for wilful infringement as a result of ELAN's

omission or commission of an act without LIGAND's consent (which shall be deemed given in the event that ELAN seeks confirmation in writing pursuant to the notice provisions set forth in CLAUSE 16.12 as to whether it shouldproceed with an act or omission contemplated by this Agreement and LIGAND does not object within 7 (seven) business days of receipt of such request for confirmation), except as required by the terms of this Agreement (the "Multiple Damages Element") that would yield a ruling of wilful infringement (or, in the U.S., as otherwise provided in 35 U.S.C. ss. 284) or for any award of attorney fees (or, in the U.S., as otherwise provided in 35 U.S.C. ss. 285) to the third party against ELAN arising from such wilful infringement. LIGAND must keep ELAN fully and timely informed of each action (whether or not including a Multiple Damages Element), including offers of settlement made to or by LIGAND, so as to enable ELAN to provide input which LIGAND shall reasonably consider. LIGAND shall have the right to settle any claim against LIGAND based on such patent without ELAN's approval. LIGAND shall have the right to settle a claim against ELAN, (a) without ELAN's written approval, where such settlement contains no admission of liability on behalf of ELAN or (b) with ELAN's reasonable written approval, where such settlement contains any terms which are not wholly performed by LIGAND. Such determination of reasonableness shall be determined by the ATTORNEY.

3.4.4 [Intentionally Omitted]

3.4.5 ELAN shall have no liability to LIGAND whatsoever or howsoever arising for any losses incurred by LIGAND as a result of having to cease selling the PRODUCT or having to defer the launch of selling the PRODUCT, whether as a result of a court order or otherwise.

3.5 LIGAND agrees to pursue protection and use of the trademark AVINZA(TM) ("the MARK") only in the TERRITORY. After the AMENDMENT DATE, neither party shall be entitled to use the MARK outside of the TERRITORY; provided however LIGAND may use the MARK outside of the TERRITORY without the consent of ELAN if it has otherwise acquired rights to market the PRODUCT outside of the TERRITORY.

CLAUSE 4 - LIGAND COMPETING PRODUCTS

4.1 LIGAND undertakes *** in the TERRITORY during the INITIAL PERIOD and for *** thereafter.

CLAUSE 5 - ADDITIONAL DEVELOPMENT OF THE PRODUCT

5.1 In the event that LIGAND wishes to have further dosage strengths developed

pursuant to this Agreement (the "ADDITIONAL DEVELOPMENT"), the parties shall negotiate in good faith as to the additional costs to be paid to ELAN for such ADDITIONAL DEVELOPMENT and the terms of such development work. The parties agree that their present intention is that the terms shall so far as reasonably practicable be consistent with the development terms of the Prior Agreement and the financial and other terms of this Agreement, with such amendments as may be reasonably appropriate.

5.2 Additionally in the event that LIGAND wishes to have developed a product incorporating ELAN IMPROVEMENTS (other than the PRODUCT or further dosage strengths), the parties shall negotiate in good faith as to the additional development fees, additional licence fees, milestones, royalties and manufacturing costs associated with such a product, but so that royalties and manufacturing costs shall be comparable to those relating to the PRODUCT in the Prior Agreement.

CLAUSE 6 - PROJECT TEAM AND PROJECT MANAGEMENT

Unless otherwise agreed by the parties, representatives of the parties (the "PROJECT TEAM") shall meet at least semi-annually throughout the term of this Agreement. The PROJECT TEAM shall meet at locations alternately designated by the parties, or if agreed by telephonic or videoconference. Meetings shall be co-chaired by the chief representatives of the parties. At and between meetings of the PROJECT TEAM, each party shall keep the other fully and regularly informed as to its progress with its respective obligations and regulatory matters pertaining to the use of regulatory and clinical information in relation to the PRODUCT inside and outside the TERRITORY. To the extent that LIGAND is permitted to do so, LIGAND shall also keep ELAN generally informed at such meetings as to LIGAND's commercial progress with the PRODUCT, including performance against competitors and future objectives for the PRODUCT consistent with the forecasts provided in CLAUSE 9.8.

7.1 CLAUSE 7 - REGISTRATION OF THE PRODUCT

7.1.1 Prior to the AMENDMENT DATE, ELAN has been responsible for the compilation, preparation, submission and prosecution to approval of the NDA for the PRODUCT in each country of the TERRITORY.

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7.1.2 Effective as of AMENDMENT DATE and upon the terms of this Agreement, ELAN hereby sells, assigns, transfers and conveys to LIGAND, free and clear of all liens, encumbrances, pledge, security interest or other restriction or limitation of any kind, all of ELAN's right, title and interest in, to and under the following PRODUCT NDA registrations in the TERRITORY and shall formally transfer such ownership to LIGAND as soon as reasonably practicable after the AMENDMENT DATE, allowing opportunity to ELAN to file the DMF. To that end, ELAN will also provide LIGAND with copies of documentation, to the extent that ELAN has not already done so prior to the AMENDMENT DATE, to include:

(a) The NDA and any and all supplements, amendments and annual reports thereto and all clinical data, tables, listings and databases (as electronic SAS data sets) that are a part thereof, including grant of access to third party data managers for correspondence and documentation relating to the databases as well as changes, error corrections and other modifications to the databases (including hard or soft-coded changes); and

(b) Product registration data consisting of the following (including electronic copies where no hard copies exist) which are in ELAN's possession or control: regulatory correspondence files relating to the PRODUCT in the TERRITORY, other than the NDAs, including, but not limited to minutes of meetings and correspondence with the FDA, the investigational new drug applications and amendments, excluding or making appropriate redactions from any correspondence to the extent that it is specifically related to the CMC section.

Such materials delivered shall, to the extent previously considered confidential, be considered confidential information of LIGAND subject to the provisions of CLAUSE 16.1; provided to the extent that such materials delivered contain confidential or proprietary information of ELAN, they shall also be considered confidential information of ELAN, subject to the provisions of CLAUSE 16.1, which ELAN may use solely in satisfaction of its obligations under this Agreement or as permitted hereunder in connection with its activities outside the TERRITORY.

For the avoidance of doubt, LIGAND shall thereafter be solely responsible for any legal or regulatory obligations pertaining to the ownership, filing and/or maintenance of the NDA including without limitation any tracking obligations, periodic reports to regulatory agencies, post market commitments, and commercialization commitments (in the form of a Risk Management Program).

LIGAND shall allow ELAN full access upon reasonable request to any of the above documents and shall notify ELAN forthwith of any and all amendments and supplements to the above. ELAN shall be entitled to make and retain copies of the same, and to use such information solely (i) to permit ELAN to meet its obligations under this AGREEMENT, (ii) to permit ELAN to file and maintain the CMC SECTION in the DMF and (iii) to support the registration, marketing and/or manufacture of the PRODUCT for sale outside the TERRITORY.

LIGAND and ELAN shall each allow the other full access to tclinical trial data related to the PRODUCT and each shall be permitted to use such data solely: (i) to permit such party to exercise its rights or meet its obligations under this AGREEMENT, or (ii) with respect to ELAN, to (A) permit it to file and maintain the CMC SECTION in the DMF and (B) support the registration, marketing and/or manufacture of the PRODUCT for sale outside the TERRITORY.

7.2

7.2.1 Following the AMENDMENT DATE, each party shall cooperate fully with the other and provide such information as may reasonably be requested in preparing and promptly filing all notices, applications, submissions, reports and other instruments and documents that are necessary, proper or advisable under applicable laws to consummate and make effective the transactions contemplated by this Agreement and to comply with applicable laws.

7.2.2 Following the AMENDMENT DATE, LIGAND shall cooperate fully with and take all actions reasonably requested by ELAN to permit ELAN, its AFFILIATES and licensees to obtain and maintain all consents, approvals, registrations, certificates, permits, licenses or other approvals of applicable governmental or regulatory authorities required to export the PRODUCT from the TERRITORY and to import, market, promote, sell and distribute the PRODUCT in any and all jurisdictions outside the TERRITORY ("Marketing Authorizations"). Without limiting the generality of the foregoing, LIGAND shall (i) provide to ELAN or its AFFILIATES for submission to applicable governmental or regulatory authorities, or provide to such applicable governmental or regulatory authorities through a right or reference or otherwise, all data, study results, technical information, or other information owned or controlled by LIGAND and its AFFILIATES and necessary to obtain or maintain the Marketing Authorizations, and (ii) not, without prior written notice to ELAN (in no event less than thirty days) and opportunity to comment, make any change or modification to the NDA or the SPECIFICATIONS that would cause the exportation of the PRODUCT from the TERRITORY or the importation, marketing, promotion, selling and distribution of the PRODUCT in any jurisdiction outside the TERRITORY unlawful. LIGAND shall instruct its employees, counsel and financial advisors to provide such cooperation to ELAN, it being understood that ELAN shall reimburse LIGAND promptly for reasonable and necessary expenses incurred by LIGAND in complying with any such request by or on behalf of ELAN.

7.2.3 Solely with respect to the PRODUCT, (a) LIGAND hereby grants reference rights under all regulatory approvals, including, without limitation, any DMF for the PRODUCT, to ELAN and its licensees, (b) ELAN hereby grants reference rights under any DMF for the PRODUCT, to LIGAND and its permitted sublicensees and (c) each party agrees to execute or cause its AFFILIATES, sublicensees or agents to execute any necessary authorization letters as may be reasonably required. Each party (the "Requesting Party") shall reimburse the other promptly for reasonable and necessary expenses incurred by such other party in complying with any such request by or on behalf of the Requesting Party.

7.2.4 ELAN shall not, without the prior written consent of LIGAND, make any material change in the product specifications relating to the CMC SECTION as of the AMENDMENT DATE. In any event, LIGAND shall be provided reasonable prior notice of any such proposed change.

7.3 All costs associated with maintaining the NDA APPROVAL (other than maintaining ELAN's manufacturer's licence(s) and the DMF, the costs of which shall be borne by ELAN) in each country of the TERRITORY including any post approval studies required by the FDA in respect of the PRODUCT shall be paid by LIGAND; PROVIDED, HOWEVER, if LIGAND requests any change to SPECIFICATIONS or the form in which the PRODUCT is supplied as at October 2002, or such a change is mandated by the FDA or other legal or regulatory authority in the TERRITORY, LIGAND shall reimburse ELAN for its reasonable expenses associated with required changes to ELAN's manufacturer's licence(s) and the DMF.

7.4 [Intentionally Omitted]

7.5 ELAN shall at its option file additional Drug Master File(s) for the PRODUCT in its own name; provided such additional Drug Master File(s) may only be used in connection with the PRODUCT intended for use or sale outside the TERRITORY and LIGAND shall have identical rights of access and reference set forth in this Agreement with respect to the DMF as to any such additional Drug Master File(s). ELAN shall be responsible for all interaction with FDA, and where applicable other REGULATORY AUTHORITIES, concerning such Drug Master File(s) and the DMF.

7.6 [Intentionally Omitted]

7.7 [Intentionally Omitted]

7.8 [Intentionally Omitted]

CLAUSE 8 - MARKETING AND PROMOTION OF THE PRODUCT

8.1 LIGAND shall control and be responsible for the content and format of any PRODUCT promotional campaign submitted to the FDA.

8.2 [Intentionally Omitted]

8.3 LIGAND shall diligently pursue the commercialisation of the PRODUCT and shall use all commercially reasonable efforts to market and promote the PRODUCT throughout the TERRITORY and in doing so, shall use the same level of effort as with other similar products of similar sales potential which it markets in the TERRITORY. LIGAND covenants that it shall not use the PRODUCT as a "loss leader" in its marketing programs.

8.4 [Intentionally Omitted]

8.5 To the extent permitted by law, promotional or other printed materials which LIGAND proposes at any time to use in relation to the sale of PRODUCT shall, to the extent applicable, include due acknowledgement that the PRODUCT is developed and manufactured by ELAN (or, as permitted pursuant to CLAUSE 16.3, ELAN's assignee or designee). For the purposes of ensuring compliance with this CLAUSE 8 with and applicable laws and regulations

insofar as they affect ELAN, LIGAND shall provide a copy of all such promotional and other printed materials for ELAN's information a reasonable time prior to use of the same.

8.6 [Intentionally Omitted]

8.7 [Intentionally Omitted]

8.8 LIGAND shall mark or have marked all patent number(s) of the ELAN PATENTS on all PRODUCT or otherwise communicate to the trade the existence of the ELAN PATENTS in the countries of the TERRITORY in such a manner as to give constructive or actual notice of infringement under applicable laws.

CLAUSE 9 - SUPPLY OF THE PRODUCT

9.1 Save as otherwise provided in this Agreement, ELAN shall produce and supply to LIGAND its entire requirements of the PRODUCT and LIGAND will purchase the PRODUCT from ELAN in the TERRITORY.

9.2 As a consequence of the restrictions currently imposed upon the importation, use and distribution of the COMPOUND in and into the countries of the TERRITORY, the parties acknowledge the requirement to order the appropriate quantity of COMPOUND in sufficient time to enable the supplier of the COMPOUND to obtain the appropriate aggregate quota from the Drug Enforcement Agency in the U.S.A. or its successor agency, and its equivalent in Canada (where applicable). In this regard, the parties shall negotiate and agree upon a binding forecast for the supply of COMPOUND for the applicable calendar year (or part thereof). In the event that LIGAND does not order sufficient PRODUCT to utilise the quantity of COMPOUND, LIGAND shall ***. LIGAND further acknowledges that unutilised COMPOUND is likely materially to affect future quota allocations of that material, and ELAN's ability to acquire same for future orders.

9.3 The PRODUCT to be supplied to LIGAND by ELAN shall be in one final market pack form for each presentation (with a similar presentation for each of the dosage strengths) complying with the SPECIFICATIONS. LIGAND shall keep ELAN apprised of any proposed revisions in labelling (and their FDA approval status), so as to mutually understand regulatory conformance with respect to labelling. ELAN shall deliver the PRODUCT to LIGAND and/or any party designated by LIGAND in proper packaging so as to permit safe storage and transport. ELAN shall bear all the costs of labelling the PRODUCT so as to appropriately display the LIGAND name provided that LIGAND supplies all the appropriate graphics, designs, logos and related and appropriate artwork.

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9.4 As a consequence of the restrictions currently imposed upon the importation, use and distribution of COMPOUND into the countries of the TERRITORY, the PRODUCT shall be manufactured by ELAN or a nominated sub-contractor in the USA for supply in the USA and Canada, except as otherwise provided herein. In the event that the relevant authorities in Canada prohibit the importation of the PRODUCT from the USA, the parties shall review alternative arrangements which can be put in place having regard to such expenditure as is justified and the commercial opportunities available in the country or countries concerned. In the event that ELAN appoints a third party manufacturer, such appointment shall be subject to the secrecy provisions of CLAUSE 16.1 and ELAN shall be solely responsible and liable to LIGAND for the performance of the said manufacturer. ELAN shall ensure that the said manufacturer's facility is approved by and complies in all material respects with the requirements of the FDA of the country where the PRODUCT is manufactured and sold and that LIGAND has the customary rights of audit and inspection of such third party manufacturer.

9.5 In each of the calendar years *** through ***, LIGAND shall be obliged to place firm purchase orders with ELAN for not less than *** whole batches of the PRODUCT per year, a "whole batch" being approximately *** *** of bead blend batch for encapsulation and made up of approximately:

***;

***;

***;

***.

9.6 [Intentionally Omitted]

9.7 ELAN shall deliver the PRODUCT to LIGAND within 120 days of the receipt of a firm purchase order properly placed therefor.

9.8 On or before the 23rd day of each calendar month, LIGAND shall provide a rolling 18 month-forecast for the period beginning on the first day of the relevant calendar month. The format of such 18 month-forecasts shall be comprised of a 12 month-forecast together with 2 quarterly forecasts. The first calendar quarter of such 18 month-forecast shall be a binding purchase commitment of LIGAND. In addition to the obligation of LIGAND regarding rolling 18 month-forecasts outlined herein, LIGAND shall provide ELAN with rolling 3 years' forecasts on 1 August of each year of this Agreement.

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9.8A Within thirty (30) days of LIGAND providing ELAN with the rolling 3 years' forecast described in CLAUSE 9.8 above, the parties shall meet to discuss the latest rolling 18-month forecast and any capital expenditures specific to the manufacture of the PRODUCT required to meet any such forecast. In the event that the parties agree that such capital expenditures are required or desirable and such capital expenditures are in excess of ***, the parties shall negotiate a minimum number of batches of PRODUCT which LIGAND shall be obliged to order in calendar years after *** recognising the interest of ELAN in the recoupment of such expenditure. For purposes of determining the amount of such capital expenditures, the parties shall consider only the capital expenditures specific to the manufacture of the PRODUCT expended by ELAN from the AMENDMENT DATE through the date of such meeting and any additional amounts required thereafter to meet any such forecast.

9.9 Subject to the agreement of ELAN, the 12 month forecasts may increase or decrease from one quarter to the next, PROVIDED, HOWEVER, ELAN shall not be obligated to produce an amount of PRODUCT which differs by more than *** in terms of volume of PRODUCT ordered as compared to the preceding quarter. Notwithstanding the foregoing, ELAN will use its reasonable efforts to fulfil LIGAND's requirements in excess of forecasted amounts, but shall not be obliged to meet such requirements if it is not reasonably practicable to do so provided that ELAN shall supply the PRODUCT so ordered but not immediately available as soon thereafter as reasonably practicable.

9.10 Subject to CLAUSE 9.5, the parties shall agree upon a minimum order quantity for the manufacture and supply of each dosage strength the PRODUCT. ELAN shall have the right to refuse to fulfil orders which do not conform with the provisions of this CLAUSE 9.10. Where ELAN in its absolute discretion, fulfils any order which does not conform with the provisions of this CLAUSE 9.10, the fulfillment of such order by ELAN shall not affect ELAN's right to refuse to fulfil any subsequent order which does not conform with the provisions hereof.

9.10A ELAN shall reasonably co-operate with LIGAND, and shall use commercially reasonable efforts in good faith with a view to achieving sufficient quota

of COMPOUND from the Drug Enforcement Agency in the U.S.A. or its successor agency, and/or its equivalent in Canada (where applicable) to meet the forecasted supply of the PRODUCT. Without prejudice to the foregoing obligation, ELAN shall not be obliged to fulfil orders where there is insufficient quota of COMPOUND to do so.

9.11 Save as otherwise agreed between the parties, delivery of consignments of PRODUCT shall be effected by ELAN EX-WORKS the manufacturing facility designated by ELAN. Risk of loss of or damage to any consignment of the PRODUCT shall pass to LIGAND when each such consignment of the PRODUCT is loaded onto the vehicle of LIGAND's agent on which it is to be despatched from the manufacturing facility designated by ELAN. LIGAND shall fully insure or procure the insurance of all consignments of the PRODUCT from the time when risk passes as aforesaid and shall produce the supporting insurance when requested by ELAN.

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9.12 All claims for failure of any delivery of the PRODUCT to conform to the SPECIFICATIONS under CLAUSE 14 shall be made by LIGAND to ELAN in writing within 60 days following delivery except in the case of latent defects. Claims for latent defects, which could not reasonably have been discovered during the routine testing protocol (to be agreed by LIGAND and ELAN), shall be made by LIGAND to ELAN in writing within 30 days of discovery. Failure to make timely claims in the manner prescribed shall constitute acceptance of the delivery.

9.13 PRODUCT which has been delivered and which has been shown within the period designated in CLAUSE 9.12 not to conform to the SPECIFICATIONS where such non-conformity is attributable to negligent acts or omissions of ELAN shall be replaced at ELAN's cost within 90 days of the receipt by ELAN of the failed PRODUCT except where such non-conformity is attributable to negligent acts or omissions of LIGAND.

9.14 In the event of an unresolved dispute as to conformity of the PRODUCT with the SPECIFICATIONS, the parties shall within 30 days appoint an independent first class laboratory to undertake the relevant testing and its findings shall be conclusive and binding upon the parties. All costs relating to this process shall be borne solely by the unsuccessful party. In the event that the parties should fail to agree a mutually acceptable independent laboratory within such 30 day period, the Head of the School of Pharmacy, Trinity College, Dublin, Ireland shall be entrusted with appointing such independent laboratory.

9.15 LIGAND shall have the option, at its sole cost and expense and subject to the terms and conditions of this Agreement, to qualify one or more second-source suppliers for the PRODUCT. Such second-source supplier shall be subject to the approval of ELAN, which shall not be unreasonably withheld or delayed, and subject to reasonable and customary undertakings from such second-source supplier to ELAN to protect ELAN's confidential and proprietary information. In addition, ELAN shall, effective as of the AMENDMENT DATE, and subject to the terms and conditions of this Agreement:

9.15.1 grant to LIGAND a production licence in the applicable country or countries of the TERRITORY so that LIGAND (and its second-source supplier(s)) may manufacture the relevant PRODUCT without infringing any of the ELAN INTELLECTUAL PROPERTY. Any such licence shall apply only in regard to the relevant PRODUCT as well as to the applications of technology derived from the ELAN PATENT RIGHTS related to its use with such PRODUCT;

9.15.2 provide LIGAND (and its second-source supplier(s)) with any technical data incorporated in the ELAN KNOW-HOW, including but not limited to, access to the DMF, to give effect to the provisions of CLAUSE 9.15.1 and ELAN shall promptly provide to LIGAND (and its second-source supplier(s)) the documentation constituting the required material support, more particularly practical performance advice, shop

practice, specifications as to materials to be used and control methods; and

9.15.3 assist LIGAND (and its second source supplier(s)) with the working up and use of the technology and with the training of LIGAND's (and its second-source supplier(s)) personnel to the extent which may reasonably be necessary in relation to the manufacture of the PRODUCT by LIGAND (and its second-source supplier(s)). In this regard, ELAN will receive LIGAND's (and its second source supplier(s)'s) scientific staff in its premises for certain periods, the term of which will be agreed by the parties.

LIGAND shall pay for work conducted by ELAN or its AFFILIATES under CLAUSES 9.15.2 and/or 9.15.3 as agreed upon by the parties.

LIGAND shall be solely responsible for filing all submissions or other correspondence with the applicable governmental or regulatory authorities in connection with any decision to seek approval of a second-source manufacturing facility for the PRODUCT ("Back-Up Facility") as an additional back-up manufacturing facility.

Without prejudice to CLAUSE 9.5, LIGAND shall have the sole right to determine whether to use the Back-Up Facilities; provided that, subject to CLAUSES 9.16 and 10.3.5.2, such Back-Up Facilities may not supply more than (a) *** of LIGAND's and its permitted sublicensee(s)' annual requirements through the period of time ending 31 December 2007 and (b) *** of LIGAND's and its permitted sublicensee(s)' annual requirements thereafter during the term of this Agreement. In the event that LIGAND, and as applicable its permitted sublicensee(s), obtain more than the said amounts from Back-Up Facilities, then LIGAND shall pay to ELAN an additional royalty equivalent to *** of AVERAGE PRICE (calculated by reference to that calendar year) of the additional quantities of PRODUCT taken from such Back-Up Facilities, over and above the maxima referred to in this paragraph. The foregoing shall constitute ELAN's sole remedies in respect of a failure by LIGAND to comply with its limitations on amount obtained from Back-Up Facilities set forth in this CLAUSE 9.15 (but without prejudice to any remedy ELAN may have for any other breach by LIGAND).

9.16 In the event that ELAN fails to deliver to LIGAND a significant portion of an order of PRODUCT for a period exceeding *** from the due delivery date therefor, or there are repeated and serious failures, inability or delays in filling orders, LIGAND may for so long as such conditions exist fulfil all of its unmet requirements from the Back-Up Facilities. Additionally, for so long as such conditions exist, the royalty payable by LIGAND under CLAUSE 10.2 shall be reduced to *** of NSP for such unmet requirements attributable to ELAN's default (and for the avoidance of doubt such failure, inability or delays caused by the supplier of the COMPOUND (other than by reason of ELAN's failure to use commercially reasonable efforts) or due to the applicable governmental imposed quota system for the COMPOUND (other than by reason of ELAN's breach of its obligations in CLAUSE 9.10A) shall not be considered ELAN's default).

The foregoing shall constitute LIGAND's sole remedies in respect of a failure by ELAN to supply the PRODUCT.

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9.16A When ELAN has remedied the cause of its failure to satisfy LIGAND's requirements and is once again able to fulfil its obligations to supply the PRODUCT, LIGAND's entitlement to obtain supplies of the PRODUCT from its Back-Up Facilities shall revert to the level set out in CLAUSE 9.15, and the royalty payable by LIGAND under CLAUSE 10.2 shall revert to *** of NSP.

9.17 In manufacturing the PRODUCT under CLAUSE 9.15, LIGAND shall be responsible for all process and equipment validation required by the FDA and the regulations thereunder and shall take all steps reasonably necessary to pass government inspection by the FDA.

9.18 ***

9.19 ELAN will grant to Elan Pharma Ltd., Elan Holdings, Inc. or any other subsidiaries of ELAN, as necessary or appropriate, a licence of the ELAN PATENTS and ELAN KNOW-HOW and other intellectual property rights necessary for such company or companies to manufacture the PRODUCT in accordance with the terms of this Agreement.

CLAUSE 10 - FINANCIAL PROVISIONS

10.1 LICENCE ROYALTIES:

10.1.1 In consideration of the licence of the ELAN PATENTS granted to LIGAND under this Agreement, LIGAND has previously paid to ELAN an aggregate of ***.

10.1.2. LIGAND shall pay as a patent royalty the non-refundable sums of:

(a) *** *** to ELAN; and

(b) *** *** to EML.

Each such payment shall be effected in U.S. Dollars upon the AMENDMENT DATE. The said patent royalty shall not be subject to future performance obligations, shall not be applicable against any future services provided by ELAN and/or EML to LIGAND and is independent and distinct from the other terms of this Agreement.

10.2 ROYALTY ON NSP:

In further consideration of the licence of the ELAN PATENTS granted to LIGAND under this Agreement, LIGAND shall pay to ELAN a royalty equivalent to *** of NSP, in respect of IN MARKET sales in the period from the AMENDMENT DATE to the end of the term of this Agreement. The said royalty shall be payable quarterly upon delivery of the STATEMENT.

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For the avoidance of doubt, subject to CLAUSES 9.15 and 9.16, the said royalty shall apply both to PRODUCT manufactured by ELAN and PRODUCT manufactured by LIGAND or a second-source supplier.

10.3 PRICE OF PRODUCT:

10.3.1 Subject to CLAUSES 10.3.2 and 10.3.3, the unit price of the PRODUCT to be charged by ELAN to LIGAND for commercial sale shall be *** of AVERAGE PRICE per strength, payable in $ as follows:

10.3.1.1 ELAN shall initially invoice PRODUCT supplied at *** of AVERAGE PRICE as shown by the last STATEMENT, and payment shall be made by LIGAND within 30 days of such invoice;

10.3.1.2 Following delivery of the STATEMENT pertaining to a calendar quarter, the unit price of PRODUCT supplied in that calendar quarter shall be readjusted to *** of actual AVERAGE PRICE in that calendar quarter. An adjusting payment shall accordingly be made by LIGAND to ELAN with the STATEMENT, or by ELAN to LIGAND

within 5 (five) business days following delivery of the STATEMENT.

The said price shall apply to PRODUCT supplied EX WORKS ELAN's facility to LIGAND.

10.3.2 In the event that:

10.3.2.1 during the period up to 31 December 2005 ELAN's aggregate cost of ***, in each case used in the PRODUCT increases by reference to such costs as at October 2002 by more than ***; and/or

10.3.2.2 LIGAND fails to meet its minimum order requirements specified in CLAUSE 9.5; and/or

10.3.2.3 at any time, LIGAND requests any change to SPECIFICATIONS or the form in which the PRODUCT is supplied as at October 2002, or such a change is mandated by the FDA or other legal or regulatory authority in the TERRITORY -

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which results in *** , the parties shall negotiate in good faith adjustments to the price of PRODUCT, having regard only to those costs in excess of the *** increase described in CLAUSE 10.3.2.1 and the matters set out in CLAUSES 10.3.2.2 and 10.3.2.3. For the avoidance of doubt, the parties have set forth an example of the calculation described in this CLAUSE 10.3.2 in Schedule 2 attached hereto.

10.3.3 In the event that:

10.3.3.1 LIGAND requests ELAN to supply the PRODUCT in a form or presentation other than the standard final market pack form for the presentation in question as at October 2002; and/or

10.3.3.2 LIGAND requests ELAN to supply promotional samples of the PRODUCT -

the price of such PRODUCT shall be the price of PRODUCT specified in CLAUSE 10.3.1, as adjusted pursuant to CLAUSE 10.3.2 if applicable, plus an additional amount equivalent to the incremental cost after the AMENDMENT DATE to ELAN of supplying such PRODUCT.

10.3.4 In the event that during the period after 31 December 2005 any of the conditions set forth in CLAUSES 10.3.2.1 and/or 10.3.2.3 exist and/or LIGAND fails to place firm orders for at least *** whole batches of the PRODUCT per calendar year (consisting of the various possible multiples as described in CLAUSE 9.5), and ELAN's FULLY ALLOCATED COST of manufacture exceeds *** of the AVERAGE PRICE, the price of PRODUCT shall be adjusted so that it shall equal *** provided that in the event that such *** exceeds the price charged for the PRODUCT by LIGAND's second source supplier(s) (as evidenced to ELAN), the price of PRODUCT shall instead be ***. The parties shall meet to discuss such alterations in price.

10.3.5 In the event that (a) pursuant to CLAUSE 10.3.4, the price of the PRODUCT would be ***, and (b) *** exceeds *** of AVERAGE PRICE, then at ELAN's option:

10.3.5.1 the price of the PRODUCT shall instead be *** of *** ; or

10.3.5.2 LIGAND shall be released from the limitation upon the quantity of PRODUCT which may be supplied by Back-Up Facilities

as set out in CLAUSE 9.15; and the price of any PRODUCT supplied by ELAN to LIGAND thereafter shall be *** .

10.3.6 All prices for the PRODUCT are exclusive of any applicable value added or any other sales tax, for which LIGAND will be additionally liable.

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10.3.7 [Intentionally Omitted]

10.3.8 For the avoidance of doubt the parties agree that if for whatever reason the PRODUCT supplied by ELAN to LIGAND is not sold by LIGAND, payment to ELAN for such PRODUCT shall nonetheless be effected at the price calculated in accordance with CLAUSES 10.3.1 to 10.3.3 inclusive.

10.4 TRANSITIONAL PROVISIONS:

In respect of PRODUCT sold IN MARKET prior to the AMENDMENT DATE (the "TRANSITIONAL PRODUCT"), the Prior Agreement shall apply, with the effect that:

10.4.1 LIGAND shall pay to ELAN the FLOOR PRICE (as defined in the Prior Agreement) of TRANSITIONAL PRODUCT; and

10.4.2 LIGAND shall pay to ELAN the amount specified in CLAUSE 10.3.4 of the Prior Agreement in respect of TRANSITIONAL PRODUCT.

In respect of PRODUCT supplied to LIGAND prior to the AMENDMENT DATE but not sold IN MARKET prior to the AMENDMENT DATE, LIGAND shall pay to ELAN the FLOOR PRICE (as defined in the Prior Agreement) as if the Prior Agreement applied, but the IN MARKET sales of such PRODUCT shall be subject to the royalty provisions of this Agreement and not to CLAUSE 10.3.4 of the Prior Agreement.

10.5 METHOD OF CALCULATION OF FINANCIAL PROVISIONS:

The parties acknowledge and agree that the methods for calculating the royalties and other payments hereunder are for the purposes of the convenience of the parties, are freely chosen and not coerced.

CLAUSE 11 - PAYMENTS, REPORTS AND AUDITS

11.1 LIGAND shall keep true and accurate records of gross sales of the PRODUCT, the items deducted from the gross amount in calculating the NSP, the NSP, the AVERAGE PRICE and the royalties payable to ELAN under CLAUSE 10. LIGAND shall deliver to ELAN a written statement ("the STATEMENT") thereof within *** days following the end of each calendar quarter, (or any part thereof in the first or last calendar quarter of this Agreement) for such calendar quarter. The STATEMENT shall outline on a country-by-country basis, the calculation of the NSP from gross revenues during that calendar quarter, the applicable percentage rate, and a computation of the sums due to ELAN. The parties' financial officers shall agree upon the precise format of the STATEMENT.

11.2 Payments due on NSP of the PRODUCT based on sales amounts in a currency other than US Dollars shall first be calculated in the foreign currency and then converted to US Dollars on the basis of the exchange rate in effect for the purchase of US Dollars with such foreign currency quoted in the Wall Street Journal (or comparable publication if not quoted in the Wall Street Journal) with respect to the sale of currency of the country of origin of such payment for the day prior to the date on which the payment by LIGAND is being made.

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11.3 Any income or other taxes which LIGAND is required by law to pay or withhold on behalf of ELAN or EML, as the case may be, with respect to royalties and any other monies payable to ELAN under this Agreement shall be deducted from the amount of such NSP payments, royalties and other monies due. LIGAND shall furnish ELAN and/or EML with proof of such payments. Any such tax required to be paid or withheld shall be an expense of and borne solely by ELAN and/or EML. LIGAND shall promptly provide ELAN and/or EML with a certificate or other documentary evidence to enable ELAN and/or EML to support a claim for a refund or a foreign tax credit with respect to any such tax so withheld or deducted by LIGAND. The parties will reasonably cooperate in completing and filing documents required under the provisions of any applicable tax treaty or under any other applicable law, in order to enable LIGAND to make such payments to ELAN and/or EML without any deduction or withholding.

11.4 All payments due hereunder shall be made to the designated bank account of ELAN or EML, as the case may be, in accordance with such timely written instructions as ELAN shall from time to time provide.

11.5 LIGAND shall pay interest to ELAN and/or EML at the Prime Rate publicly announced by Morgan Guaranty Trust Company of New York at its principal office on the date (or next to occur business day, if such date is not a business day) on which payment should have been made pursuant to the applicable provisions of this Agreement plus 5% on all late payments more than 10 days past due under this Agreement applicable from the date on which payment should have been made pursuant to the applicable provisions of this Agreement until the date of payment.

11.6 [Intentionally Omitted]

11.7 For the 180 day period following the close of each calendar year of the Agreement, ELAN and LIGAND will, in the event that the other party reasonably requests such access, provide each other's independent certified accountants (reasonably acceptable to the other party) with access, during regular business hours and subject to the confidentiality provisions as contained in this Agreement, to such party's books and records relating to the PRODUCT, solely for the purpose of verifying the accuracy and reasonable composition of the calculations hereunder for the calendar year then ended.

11.7A Additionally LIGAND shall upon request provide ELAN or, at LIGAND's option, an independent third party nominated by ELAN and reasonably acceptable to LIGAND with access, during regular business hours and subject to the confidentiality provisions as contained in this Agreement, to LIGAND's and any second-source manufacturer's books and records relating to the manufacture of the PRODUCT, solely for the purpose of verifying LIGAND's compliance with the maximum amounts of supply from Back-Up Facilities set out in CLAUSE 9.15. Such inspections shall be made not more than once per year unless such an inspection discloses non-compliance and thereafter shall continue until the previously disclosed non-compliance is satisfactorily resolved.

11.8 In the event of a discovery of a discrepancy which exceeds 5% of the amount due or charged by a party for any period, or a failure to comply with the maximum limits on supply from Back-Up Facilities set out in CLAUSE 9.15, the cost of such accountants shall be borne by the audited party; otherwise, such cost shall be borne by the auditing party.

11.9 ELAN shall make (and where relevant shall procure that ELAN's subcontractor, assignee or designee shall make) that portion of its manufacturing, testing or storage facility where PRODUCT is manufactured, tested or stored, including all record and reference samples relating to the PRODUCT available for inspection by LIGAND's duly qualified person or

by the relevant governmental or regulatory authority. The investigation shall be limited to determining whether there is compliance with cGMP and with other requirements of applicable law. Such inspection shall be made not more than once per year, unless based on a for cause requirement.

CLAUSE 12 - DURATION AND TERMINATION

12.1 This Agreement shall be deemed to have come into force on the EFFECTIVE DATE and, subject to the rights of termination outlined in this CLAUSE 12 will expire on a country by country basis:

12.1.1 on the *** date of the launch of the PRODUCT in the country concerned; or

12.1.2 in any country upon the expiration of the life of the last to expire patent included in the ELAN PATENTS in that country;

whichever date is later to occur ("the INITIAL PERIOD").

12.2 [Intentionally Omitted]

12.3 In addition to the rights of termination provided for elsewhere in this Agreement, either party will be entitled forthwith to terminate this Agreement by written notice to the other party if:

12.3.1 subject to CLAUSE 12.3A, that other party commits any material breach of this Agreement, and (A) in the case of a breach capable of cure, fails to cure the same within 60 days after receipt of a written notice giving full particulars of the breach and requiring it to be remedied or (B) in the case of a breach not capable of cure, the non-breaching party has a remedy at law;

12.3.2 that other party goes into liquidation (except for the purposes of amalgamation or reconstruction and in such manner that the company resulting therefrom effectively agrees to be bound by or assume the obligations imposed on that other party under this Agreement);

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12.3.3 an encumbrancer takes possession or a receiver is appointed over any of the property or assets of that other party;

12.3.4 any proceedings are filed or commenced by that other party under bankruptcy, insolvency or debtor relief laws or anything analogous to any of the foregoing under the laws of any jurisdiction occurs in relation to that other party, and such proceeding is not dismissed within ninety (90) days;

12.3A Where the party in breach is LIGAND, ELAN shall not terminate this Agreement unless and until such breach by LIGAND is admitted or determined by a court of competent jurisdiction, provided that LIGAND complies with the following conditions:

12.3A.1 within seven (7) days of ELAN giving notice to LIGAND of ELAN's intention to terminate, LIGAND shall place all monies allegedly owing to ELAN pursuant to the terms of this Agreement (as specified in the notice) in an escrow account with such US attorneys firm as ELAN may nominate ("Escrow Account"), on terms that it shall be released to ELAN upon admission or determination of breach by a court of competent jurisdiction, and other reasonable and customary terms;

12.3A.2 ELAN shall not be obliged to supply PRODUCT unless payment for the same is made in advance; such payment at LIGAND's option being made to the Escrow Account but on terms that it shall be released as soon as such payment would have fallen due, but for this CLAUSE 12.3A; and

12.3A.3 any PRODUCT supplied during such period shall be subject to a

minimum price of ELAN's ***; pursuant thereto, LIGAND shall additionally remit to the Escrow Account the amount specified by ELAN in good faith as the excess of such *** over the supply price set forth in CLAUSE 10.3. For the purposes of clarity, in the event that it is admitted by ELAN or finally determined by a court of competent jurisdiction that LIGAND was not in breach, the monies paid into the Escrow Account pursuant to this Clause 12.3A.3 shall be repaid to LIGAND.

For the avoidance of doubt, ELAN shall be entitled to terminate this Agreement in the event that the foregoing conditions are not complied with.

The foregoing shall be without prejudice to (a) any right ELAN may have to terminate supply pursuant to CLAUSE 9.18, and (b) ELAN's right to terminate this Agreement pursuant to Clauses 12.3.2, 12.3.3 and/or 12.3.4.

12.4 For the purposes of CLAUSE 12.3.1, a breach will be considered capable of remedy if the party in breach can comply with the provision in question in all respects other than as to the time of performance (provided that time of performance is not of the essence).

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12.5 All rights and licenses granted under or pursuant to this Agreement are, and shall otherwise be deemed to be, for purposes of Section 365(n) of the U.S. Bankruptcy Code or other applicable bankruptcy or insolvency laws, licenses of rights to "intellectual property" as defined under Section 101 of the U.S. Bankruptcy Code (or comparable sections). The parties agree that each party that is a licensee of such rights under this Agreement shall retain and may fully exercise its rights and elections under the U.S. Bankruptcy Code or other applicable bankruptcy or insolvency laws. The parties further agree that, in the event of the commencement of a bankruptcy proceeding by or against either party under the U.S. Bankruptcy Code or otherwise, the party which is not a party to such proceeding shall be entitled to a complete duplicate of (or complete access to, as appropriate) any such intellectual property and all embodiments of such intellectual property, and the same, if not already in their possession, shall be delivered to them (i) in the event of any such commencement of a bankruptcy proceeding, upon their written request therefore, unless the party subject to such proceeding (or a trustee on behalf of the subject party) elects to continue to perform all of its obligations under this Agreement, or (ii) if not delivered under (i) above, upon the rejection of this Agreement by or on behalf of the party subject to such proceeding upon written request therefore by the non-subject party.

CLAUSE 13 - CONSEQUENCES OF TERMINATION

13.1 Upon exercise of those rights of termination specified in CLAUSE 12 or elsewhere in this Agreement, this Agreement shall, subject to the provisions of the Agreement which survive the termination of the Agreement automatically terminate forthwith and be of no further legal force or effect.

13.2 Upon termination of the Agreement by either party, the following shall be the consequences relating to the TERRITORY:

13.2.1 any sums that were due from LIGAND to ELAN under the provisions of CLAUSE 10 or otherwise howsoever prior to the exercise of the right to terminate this Agreement as set forth herein shall be paid in full within 30 days of termination of this Agreement and, subject to CLAUSE 13.2.4, ELAN shall not be liable to repay to LIGAND any amount of money paid or payable by LIGAND to ELAN up to the date of the termination of this Agreement;

13.2.2 all confidentiality provisions set out herein shall remain in full force and effect for a period of 7 years from the date of termination

of this Agreement;

13.2.3 all representations and warranties shall insofar are appropriate remain in full force and effect;

13.2.4 the rights of inspection and audit shall continue in force for the period referred to in the relevant provisions of this Agreement;

13.2.5 ELAN shall have no further obligation to supply PRODUCT to LIGAND;

13.2.6 the exclusive licence of the ELAN INTELLECTUAL PROPERTY granted in CLAUSE 2.1 shall continue, and LIGAND shall continue to pay to ELAN a royalty equivalent to *** of NSP; provided that the licence shall not continue in circumstances where this Agreement is terminated by reason of the applicability of CLAUSE 12.3.2, 12.3.3 and/or 12.3.4 to LIGAND; and

13.2.7 In the event of any termination of the exclusive license of the ELAN INTELLECTUAL PROPERTY granted in CLAUSE 2.1, each sub-license granted by LIGAND pursuant to CLAUSE 2.1.2 shall survive termination and continue according to its terms, provided that (a) such sub-license was granted in accordance with all of the terms and conditions of this Agreement, (b) all applicable terms and conditions of this Agreement shall apply to such sub-license and the sub-licensee thereunder as though this Agreement continued in effect, (c) ELAN shall receive all consideration due in connection with such sub-license as if such sub-licensee were LIGAND hereunder, and (d) such sub-licensee agrees with ELAN in writing to be bound by such terms and conditions and to pay such consideration to ELAN.

CLAUSE 14 - WARRANTY AND INDEMNITY

14.1 ELAN represents and warrants as of each of the AMENDMENT EXECUTION DATE and the AMENDMENT DATE that it has all requisite corporate power and authority to execute, deliver and perform its obligations under this Agreement. This Agreement has been duly and validly authorized, executed and delivered by ELAN and constitutes a valid and legally binding agreement of ELAN enforceable against ELAN in accordance with its terms, except that (A) the enforcement thereof may be subject to (i) bankruptcy, insolvency, reorganization, moratorium or other similar laws now or hereafter in effect relating to creditors' rights generally and (ii) general principles of equity and the discretion of the court before which any proceeding therefor may be brought and (B) any rights to indemnity or contribution thereunder may be limited by federal and state securities laws and public policy considerations.

14.2 [Intentionally Omitted]

14.3 ELAN represents and warrants as of each of the AMENDMENT EXECUTION DATE and the AMENDMENT DATE that the execution of this Agreement and the consummation of the transactions contemplated hereby will not breach or in any way conflict with the terms and conditions of any licence, contract, understanding or agreement, whether express, implied, written or oral between ELAN and any third party.

14.4 ELAN represents and warrants as of the AMENDMENT EXECUTION DATE that no consent, approval, authorization or order of any court or governmental agency or body or third party is required for the execution and delivery by ELAN of this Agreement of the consummation by ELAN of the transactions contemplated hereby.

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14.5 ELAN covenants that the PRODUCT supplied by ELAN to LIGAND under this Agreement will conform to:

14.5.1 the SPECIFICATIONS;

14.5.2 all applicable regulations, requirements, statutes, ordinances and practices of the FDA and other governmental authorities in the TERRITORY including the then-cGMP regulations which apply to the manufacture and supply of the PRODUCT.

EXCEPT AS EXPRESSLY STATED IN THIS CLAUSE 14, ALL OTHER WARRANTIES, CONDITIONS AND REPRESENTATIONS, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING A WARRANTY AS TO THE QUALITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF THE PRODUCT ARE HEREBY EXCLUDED AND EXCEPT AS EXPRESSLY STATED IN THIS CLAUSE 14, ELAN SHALL NOT BE LIABLE IN CONTRACT, TORT OR OTHERWISE FOR ANY LOSS, DAMAGE, EXPENSE OR INJURY, ARISING OUT OF OR IN CONNECTION WITH THE PRODUCT OR ANY DEFECT IN THE PRODUCT OR FROM ANY OTHER CAUSE.

14.6 LIGAND represents and warrants as of each of the AMENDMENT EXECUTION DATE and the AMENDMENT DATE that it has all requisite corporate power and authority to execute, deliver and perform its obligations under this Agreement. This Agreement has been duly and validly authorized, executed and delivered by LIGAND and constitutes a valid and legally binding agreement of LIGAND enforceable against LIGAND in accordance with its terms, except that (A) the enforcement thereof may be subject to (i) bankruptcy, insolvency, reorganization, moratorium or other similar laws now or hereafter in effect relating to creditors' rights generally and (ii) general principles of equity and the discretion of the court before which any proceeding therefor may be brought and (B) any rights to indemnity or contribution thereunder may be limited by federal and state securities laws and public policy considerations.

14.7 LIGAND represents and warrants as of each of the AMENDMENT EXECUTION DATE and the AMENDMENT DATE that the execution, delivery and performance by LIGAND of this Agreement and the consummation by LIGAND of the transactions contemplated hereby will not conflict with or constitute or result in a breach of or a default under (or an event which with notice or passage of time or both would constitute a default under) or violation of any of (i) the terms or provisions of any indenture, mortgage, deed of trust, loan agreement, note, lease, license, franchise agreement, permit, certificate, contract or other agreement or instrument to which LIGAND is bound or to which any of its properties or assets is subject, except for any such conflict, breach, default, violation or event which would not, individually or in the aggregate, have a material adverse effect on the business, assets, liabilities (contingent or otherwise, operations, condition (financial or otherwise), solvency, properties, prospects or material agreements of LIGAND (any such event, a "Material Adverse Effect"), (ii) the certificate of incorporation or bylaws of LIGAND or (iii) any statute, judgment, decree, order, rule or regulation applicable to LIGAND or any of its properties or assets, except for any such conflict, breach or violation which would not, individually or in the aggregate, have a Material Adverse Effect.

14.8 LIGAND represents and warrants as of the AMENDMENT EXECUTION DATE that no consent, approval, authorization or order of any court or governmental agency or body or third party is required for the execution and delivery by LIGAND of this Agreement of the consummation by LIGAND of the transactions contemplated hereby.

14.9 LIGAND covenants to ELAN that in the promotion, marketing, transporting, storing, handling, distributing and selling the PRODUCT hereunder:

14.9.1 it will exercise all due skill, care and diligence in conducting such activities; and

14.9.2 it will comply with the provisions of this Agreement, all FDA and

other approvals, all applicable state and local regulatory approvals and all applicable laws, ordinances and regulations.

14.10 [Intentionally Omitted]

14.11 ELAN represents and warrants as of each of the AMENDMENT EXECUTION DATE and the AMENDMENT DATE that it is cognisant in all material respects of all applicable statutes, ordinances and regulations of the TERRITORY with respect to the manufacture of the PRODUCT including, but not limited to the FFDCA, including cGLP and cGMP.

14.12 Each of the parties shall indemnify, defend and hold harmless the other party from all actions, losses, claims, demands, damages, costs and liabilities (including reasonable attorneys' fees) to which the other party is or may become liable insofar as they arise out of any breach by the first party of any of its obligations or warranties under this Agreement or the Prior Agreement (to the extent such breaches occurred prior to the AMENDMENT DATE).

14.13 Additionally, save to the extent that ELAN is obliged to indemnify LIGAND pursuant to CLAUSES 14.12, 14.13A or 14.13C, LIGAND shall indemnify, defend and hold harmless ELAN from all actions, losses, claims, demands, damages, costs and liabilities (including reasonable attorneys' fees) made or brought against ELAN seeking damages for personal injury (including death) and/or for costs of medical treatment, caused by or attributed to the PRODUCT in the TERRITORY.

14.13A ELAN shall indemnify and hold harmless LIGAND, its agents and employees from and against all claims, damages, losses, liabilities and expenses to which LIGAND, its agents, and employees may become subject related to or arising out of ELAN's bad faith, gross negligence or intentional misconduct in connection with the filing or maintenance or failure to file or maintain or prosecute the NDA to the extent such acts or failures to act occurred prior to the AMENDMENT DATE and/or relate to activities outside the TERRITORY.

14.13B LIGAND shall indemnify and hold harmless ELAN, its agents and employees from and against all claims, damages, losses, liabilities and expenses to which ELAN, its agents, and employees may become subject related to or arising out of LIGAND's bad faith, gross negligence or intentional misconduct in connection with the filing or maintenance or failure to file or maintain or prosecute the NDA to the extent such acts or failures to act occurred on or after the AMENDMENT DATE.

14.13C LIGAND shall indemnify, defend and hold harmless ELAN from all actions, losses, claims, demands, damages, costs and liabilities (including reasonable attorneys' fees) made or brought against ELAN arising from the use in the TERRITORY of clinical and regulatory data relating to activities outside the TERRITORY supplied by ELAN, save to the extent that such a claim is attributable to the bad faith, gross negligence or intentional misconduct of ELAN. ELAN shall indemnify, defend and hold harmless LIGAND from all actions, losses, claims, demands, damages, costs and liabilities (including reasonable attorneys' fees) made or brought against LIGAND arising from the use outside the TERRITORY of clinical and regulatory data relating to activities in the TERRITORY supplied by LIGAND, save to the extent that such a claim is attributable to the bad faith, gross negligence or intentional misconduct of LIGAND.

14.13D LIGAND shall indemnify and hold harmless ELAN from and against all claims, damages, losses, liabilities and expenses to which ELAN may become liable arising out of LIGAND's bad faith, gross negligence or intentional misconduct in connection with the activities described in CLAUSE 8 of this Agreement.

14.14 As a condition of obtaining an indemnity hereunder, the party seeking an indemnity shall:

14.14.1 fully and promptly notify the other party of any claim or

proceedings, or threatened claim or proceedings;

14.14.2 permit the indemnifying party to take full control of such claim or proceedings;

14.14.3 assist in the investigation and defence of such claim or proceedings;

14.14.4 not compromise or otherwise settle any such claim or proceedings without the prior written consent of the other party, which consent shall not be unreasonably withheld; and

14.14.5 take all reasonable steps to mitigate any loss or liability in respect of any such claim or proceedings.

14.15 Except in respect of each party's liability to indemnify the other against Claims made by a third party, notwithstanding anything to the contrary in this agreement, Elan and LIGAND shall not be liable to the other by reason of any representation or warranty, condition or other term or any duty of common law, or under the express terms of this agreement, for any consequential, special or incidental or punitive loss or damage (whether for loss of current or future profits, loss of enterprise value or otherwise) and whether occasioned by the negligence of the respective parties, their employees or agents or otherwise, even if advised of the possibility of such damages, except that this limitation shall not apply to damages directly or indirectly arising from personal injury or death caused by the defective design and/or manufacture of the Products.

14.16 Where this Agreement provides for the indemnification of a party to this Agreement or for the limitation of a party's liability, such indemnification and/or limitation (as the case may be) shall also apply for the benefit of such party's AFFILIATES and the employees, officers, directors and agents of any of them, acting in such capacity.

14.17 ELAN and LIGAND shall each (either through purchase of a policy from a nationally recognised third party insurer or through maintenance of a self-insurance program) maintain comprehensive product liability insurance in relation to the PRODUCT in an amount of not less than *** for so long as ELAN supplies LIGAND under this Agreement and for a period of 5 years thereafter.

Each party shall provide the other party with a certificate from the insurance company, if applicable, verifying the above and shall notify the other party in writing at least 30 days prior to the expiration or termination of such coverage.

CLAUSE 15 - ADVERSE EVENTS AND PRODUCT RECALL

15.1 Each party shall notify the other party promptly:

15.1.1 of any complaints from third parties reported to such party involving any serious and unexpected adverse reactions resulting from the use of the PRODUCT; and

15.1.2 of any potential recall of the PRODUCT by any governmental authority.

15.2 LIGAND shall be responsible for formal adverse event handling and reporting in the TERRITORY. LIGAND shall be responsible for furnishing post-marketing reports to the FDA. LIGAND and ELAN shall keep each other informed and shall copy the other party with all communications with the FDA and other relevant regulatory agencies with respect to the PRODUCT. LIGAND shall additionally assume responsibility for the maintenance of a global safety database relating to the PRODUCT and shall provide access to ELAN to such database following an agreement between the parties, including without limitation agreement on what data should be shared and a proportional sharing of the costs of such database.

15.3 In the event of any recall of the PRODUCT, as suggested or requested by any governmental authority:

15.3.1 LIGAND shall perform the recall of the PRODUCT in the TERRITORY and save as provided in CLAUSE 15.3.2, in all events the recall costs shall be borne by LIGAND.

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15.3.2 If the recall arises from ELAN's negligent acts or omissions in manufacturing the PRODUCT, the recall costs shall be borne by ELAN provided that LIGAND could not have discovered the said act or omission prior to sale of the PRODUCT by exercising the quality procedures to be agreed upon by the parties for the release of the PRODUCT.

15.3.3 [Intentionally Omitted]

15.4 Upon request by ELAN, the parties shall negotiate in good faith a safety data exchange agreement, including without limitation what data will be exchanged and a proportional sharing of the costs associated with such exchange.

CLAUSE 16 - MISCELLANEOUS PROVISIONS

16.1 SECRECY:

16.1.1 Any information, whether written or oral (oral information shall be reduced to writing within one month by the party giving the oral information and the written form shall be furnished to the other party) pertaining to the PRODUCT that has been or will be communicated or delivered by ELAN to LIGAND, or by LIGAND to ELAN, including, without limitation, trade secrets, business methods, and cost, supplier, manufacturing and customer information, shall be treated by LIGAND and ELAN, respectively, as confidential information, and shall not be disclosed or revealed to any third party whatsoever or used in any manner except as expressly provided for herein; provided, however, that such confidential information shall not be subject to the restrictions and prohibitions set forth herein to the extent that such confidential information:

(1) is available to the public in public literature or otherwise, or after disclosure by one party to the other becomes public knowledge through no default of the party receiving such confidential information; or

(2) was known to the party receiving such confidential information prior to the receipt of such confidential information by such party, whether received before or after the EFFECTIVE DATE; or

(3) is obtained by the party receiving such confidential information from a third party not subject to a requirement of confidentiality with respect to such confidential information; or

(4) is required to be disclosed pursuant to: (A) any order of a court having jurisdiction and power to order such information to be released or made public; or (B) any lawful action of a governmental or regulatory agency provided that each party shall notify the other in writing of any disclosure of information required hereunder prior to such disclosure and shall use all reasonable efforts to restrict the scope of disclosure, including without limitation by agreeing to appropriate redactions

and/or making requests for confidential treatment.

16.1.2 Each party shall take in relation to the confidential information of the other party all such precautions as it normally takes with its own confidential information to prevent any improper disclosure of such confidential information to any third party; provided, however, that such confidential information may be disclosed within the limits required to obtain or maintain any authorisation from the applicable FDA or any governmental or regulatory agency or, with the prior written consent of the other party, which shall not be unreasonably withheld, or as may otherwise be required in connection with the purposes of this Agreement.

16.1.3 LIGAND agrees that it will not use, directly or indirectly, any ELAN KNOW-HOW, or other confidential information disclosed to it by ELAN or obtained by it from ELAN pursuant to this Agreement, other than as expressly provided herein.

16.1.4 Neither party will publicise the existence of this Agreement in any way without the prior written consent of the other party subject to the disclosure requirements of applicable laws and regulations. In the event that either party wishes to make an announcement concerning the Agreement, that party will seek the consent of the other party. The terms of any such announcement shall be agreed in good faith.

16.1.5 At the request of a party in writing, the other party shall not disseminate any public announcement for a period of sixty (60) days from the receipt of such request regarding this Agreement or the transactions contemplated hereby or regarding such requesting party, without such requesting party's consent, which shall not be unreasonably withheld, provided, however, a party may disseminate a public announcement regarding the foregoing if such party obtains an opinion of independent counsel that such party is obligated by law to disseminate such information to the public.

16.2 SPECIFIC PERFORMANCE:

Each of ELAN and LIGAND acknowledges and agrees that in the event either party materially breaches any obligations under this Agreement which can be specifically performed, the aggrieved party shall be entitled to seek specific performance of this Agreement and to enjoin any continuing breach of this Agreement (without the necessity of proving actual damages and without posting bond or other security), in addition to any other remedy which such aggrieved party may be entitled to at law or in equity and each of ELAN and LIGAND will waive the defence in any action for specific performance or other equitable relief that a remedy at law would be adequate or that the services provided hereunder are personal in nature.

16.3 ASSIGNMENTS/SUB-CONTRACTING:

Neither party shall be permitted to assign or sub-licence any of its rights or obligations under this Agreement without the prior written consent of the other; provided that:

16.3.1 ELAN and LIGAND may assign its rights or obligations under this Agreement to an AFFILIATE without such consent provided that such assignment has no adverse tax implications for the other party and provided further that such assigning party is not relieved of its obligations hereunder;

16.3.2 LIGAND may transfer or assign its rights and obligations under this

Agreement without the prior written consent of ELAN to a person that acquires all or substantially all of the assets or capital stock of LIGAND, provided that such assignment has no adverse tax implications for ELAN under this Agreement;

16.3.3 ELAN may transfer or assign its rights and obligations under this Agreement insofar as they pertain to the PRODUCT outside the TERRITORY (including without limitation its rights under CLAUSE 7.2), provided that such assignment has no adverse tax implications for LIGAND under this Agreement;

16.3.4 ELAN shall transfer or assign all (but not a portion) of its other rights and obligations under this Agreement to a person that acquires all right, title and interest in, to and under the PRODUCT manufacturing facility and related manufacturing assets provided that such assignment has no adverse tax implications for LIGAND under this Agreement; and PROVIDED that following such transfer or assignment ELAN may solely retain any rights pursuant to CLAUSE 10.2, without the prior written consent of LIGAND; and

16.3.5 ELAN shall have the right to subcontract all or any portion of the manufacturing as provided in CLAUSE 9.4 and/or to subcontract the packaging of the PRODUCT to one or more third parties but shall be responsible for the acts and/or omissions of such subcontractors.

16.4 PARTIES BOUND:

This Agreement shall be binding upon and inure for the benefit of parties hereto, their successors and permitted assigns.

16.5 SEVERABILITY:

If any provision in this Agreement is agreed by the parties to be, or is deemed to be, or becomes invalid, illegal, void or unenforceable under any law that is applicable hereto:

16.5.1 such provision will be deemed amended to conform to applicable laws so as to be valid and enforceable or, if it cannot be so amended without materially altering the intention of the parties, it will be deleted, with effect from the date of such agreement or such earlier date as the parties may agree; and

16.5.2 the validity, legality and enforceability of the remaining provisions of this Agreement shall not be impaired or affected in any way.

16.6 FORCE MAJEURE:

Neither party to this Agreement shall be liable for delay in the performance of any of its obligations hereunder if such delay results from causes beyond its reasonable control, including, without limitation, acts of God, fires, strikes, acts of war, or intervention of a government authority, non-availability of raw materials, but any such delay or failure shall be remedied by such party as soon as practicable.

16.7 RELATIONSHIP OF THE PARTIES:

Nothing contained in this Agreement is intended or is to be construed to constitute ELAN and LIGAND as partners or members of a joint venture or either party as an employee of the other. Neither party hereto shall have any express or implied right or authority to assume or create any obligations on behalf of or in the name of the other party or to bind the other party to any contract, agreement or undertaking with any third party.

16.8 AMENDMENTS:

No amendment, modification or addition hereto shall be effective or binding on either party unless set forth in writing and executed by a duly authorised representative of both parties.

16.9 WAIVER:

No waiver of any right under this Agreement shall be deemed effective unless contained in a written document signed by the party charged with such waiver, and no waiver of any breach or failure to perform shall be deemed to be a waiver of any future breach or failure to perform or of any other right arising under this Agreement.

16.10 NO EFFECT ON OTHER AGREEMENTS:

This Agreement supersedes that certain Letter of Intent dated September 28, 1998 between the parties as such Letter of Intent relates to the subject matter hereof, and the Prior Agreement, but without prejudice to CLAUSE 10.4 hereof or to any accrued rights or obligations of the parties as at the AMENDMENT DATE. For the avoidance of doubt, rights and obligations in connection with (i) representations and warranties given by the parties under the Prior Agreement (whether at the EFFECTIVE DATE or otherwise) or (ii) covenants to be performed by a party from the EFFECTIVE DATE through the AMENDMENT DATE under the Prior Agreement shall be unaffected by this amendment and restatement of the Prior Agreement. Except as limited by the foregoing sentences, no provision of this Agreement shall be construed so as to negate, modify or affect in any way the provisions of any other agreement between the parties unless specifically referred to, and solely to the extent provided, in any such other agreement. There are no agreements or understandings with respect to the subject matter hereof, either oral or written, between the parties other than as set forth in this Agreement.

16.10A FURTHER ASSURANCE:

At the request of any of the parties, each other party shall (and shall use reasonable efforts to procure that any other necessary persons shall) execute and perform all such documents, acts and things as may reasonably be required subsequent to the execution of this Agreement for assuring to or vesting in the requesting party the full benefit of the terms hereof.

16.11 GOVERNING LAW AND JURISDICTION:

This Agreement is construed under and ruled by the laws of New York. For the purposes of this Agreement the parties submit to the non-exclusive jurisdiction of the courts of New York.

16.12 NOTICE:

16.12.1 Any notice or communications to be given under this Agreement shall be written in English and shall be sufficiently given if delivered personally or sent by nationally recognised overnight delivery service, or fax (receipt confirmed), addressed as follows:

ELAN at

c/o Elan International Services Ltd.
102 St. James Court
Flatts,
Smiths FL04
Bermuda

Attention: Secretary
Fax: +1 441 292 2224

LIGAND at

Ligand Pharmaceuticals Incorporated
10275 Science Center Drive
San Diego
California 92121

Attention: General Counsel

Telephone: (858) 550-7500

Fax: (858) 550-1825

or to such other address(es) and fax numbers as may from time to time be notified by either party to the other hereunder.

16.12.2 Any notice sent by mail shall be deemed to have been delivered within 7 working days after dispatch and any notice sent by fax shall be deemed to have been delivered within 24 hours of the time of the despatch. Notice of change of address shall be effective upon receipt.

16.13 ***

***Portions of this page have been omitted pursuant to a request for Confidential Treatment and filed separately with the Commission

IN WITNESS of which the parties have executed this Agreement.

Executed by LIGAND on _____, 2002

By : /S/DAVID E. ROBINSON

Name: David E. Robinson

Title: President & CEO

Executed by ELAN on NOV 12, 2002

By: /S/KEVIN INSLEY

Name: Kevin Insley

Title: Authorised Signatory

Executed by EML on NOV 12, 2002

By: /S/KEVIN INSLEY

Name: Kevin Insley

Title: Authorised Signatory

SCHEDULE 1

ELAN PATENTS

US Patent No. 6,066,339

Canadian patent application no. 2,306,333

*Portions of this page have been omitted pursuant to a request for Confidential Treatment and filed separately with the Commission

SCHEDULE 2

EXAMPLE CALCULATION

Net Sales (Average Price) 100
Elan Price to Ligand **

<TABLE>
<CAPTION>

	A	B		C		D	
	Base Line	Inc Up to ***		Inc Over ***		Add'l Spec	Less than Minimum Requirement
	A	B	A	B	A	B	
<S>	<C>	<C>	<C>	<C>	<C>	<C>	<C>
Elan's Fully Allocated Cost							
Material Described in 10.3.2.1	***	***	***	***	***	***	***
Other Variable Cost	***	***	***	***	***	***	***
Fixed Cost	***	***	***	***	***	***	***
	---	---	---	---	---	---	---
	***	***	***	***	***	***	***
***	***	***	***	***	***	***	***
Elan Price to Ligand	***	***	***	***	***	***	***

</TABLE>

*Increase vs Base Line reflects under absorption variance due to reduce requirement

***Portions of this page have been omitted pursuant to a request for Confidential Treatment and filed separately with the Commission

EXHIBIT 10.251

Dated November 12, 2002

LIGAND PHARMACEUTICALS INCORPORATED

ELAN INTERNATIONAL SERVICES, LTD.

AND

ELAN CORPORATION PLC

SECURITIES PURCHASE AGREEMENT

SECURITIES PURCHASE AGREEMENT

THIS SECURITIES PURCHASE AGREEMENT (this "Agreement") is made on the 12th day of November, 2002, by and between Ligand Pharmaceuticals Incorporated, a Delaware corporation (the "Company"), Elan International Services, Ltd., a Bermuda exempted company ("EIS"), and Elan Corporation plc, a public company organized under the laws of the Republic of Ireland ("Elan"). Elan is made a party to this Agreement with respect only to Sections 3 and 7 of this Agreement.

RECITALS

WHEREAS, concurrently with the execution of this Agreement, the Company and Elan are entering into an Amended and Restated Licence and Supply Agreement (the "Supply Agreement"); and

WHEREAS, the Company desires to purchase, and EIS desires to sell, 2,222,222 shares (the "Shares") of the Company's common stock, par value $0.001 per share ("Common Stock"), beneficially held by EIS as of the date of this Agreement.

THE PARTIES HEREBY AGREE AS FOLLOWS:

1. PURCHASE AND SALE OF SHARES.

1.1 PURCHASE AND SALE. Subject to the terms and conditions of this Agreement, the Company agrees to purchase at the Closing (as defined below), and EIS agrees to sell to the Company at the Closing, for an aggregate purchase price of Nineteen Million, Nine Hundred Ninety-Nine Thousand, Nine Hundred Ninety-Eight U.S. Dollars (US$19,999,998) (the "Purchase Price"), the Shares.

1.2 CLOSING. The purchase and sale of the Shares shall take place at the offices of Clifford Chance US LLP, 3811 Valley Centre Drive, Suite 200, San Diego, California 92130, on the date which is ninety (90) days after the effective date of this agreement, or at such other time and place as the Company and EIS shall agree upon in writing (the "Closing"). At the Closing, EIS shall deliver to the Company (a) a certificate or certificates representing 1,947,379 of the Shares (the "Certificate(s)"), together with EIS's endorsement or appropriate stock powers duly executed in blank, and (b) an Affidavit of Lost Stock Certificate (the "Affidavit") substantially in the form attached hereto as EXHIBIT A in lieu of a certificate representing 274,843 Shares, against payment of the Purchase Price therefor by wire transfer of immediately available funds to an account designated by EIS no later than three (3) business days in advance of the Closing. In the event that the number of shares of Common Stock represented by the Certificate(s) and the Affidavit is in excess of the total number of Shares being purchased pursuant to this Agreement, the Company will cause a new certificate to be issued to EIS representing a number of shares

equal to such excess.

2. REPRESENTATIONS, WARRANTIES AND COVENANTS OF EIS. EIS hereby represents, warrants and covenants that:

2.1 ORGANIZATION. EIS is a Bermuda exempted company duly organized, validly existing and in good standing under the laws of Bermuda.

2.2 CONSENTS AND APPROVALS. All governmental and other consents, approvals, authorizations and orders and any other actions necessary for (a) the consummation by EIS of the transactions contemplated by this Agreement and (b) the execution, delivery and performance by EIS of this Agreement have been obtained or made and are in full force and effect; EIS has full right, power and authority to enter into this Agreement, to sell, assign, transfer and deliver the Shares to the Company and to carry out all of the actions contemplated hereunder.

2.3 DUE AUTHORIZATION. This Agreement has been duly authorized, executed and delivered by EIS and constitutes a valid and legally binding obligation of EIS, enforceable against EIS in accordance with its terms, except as the enforceability hereof may be limited by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium or similar laws of general applicability affecting creditors' rights and by equitable principles of general applicability (regardless of whether enforcement is sought in a proceeding in equity or at law), including, without limitation, (a) the possible unavailability of specific performance, injunctive relief or any other equitable remedy, (b) concepts of materiality, reasonableness, good faith and fair dealing and (c) possible judicial action giving effect to foreign governmental actions or foreign laws.

2.4 NO CONFLICTS. The sale of the Shares by EIS hereunder, the compliance by EIS with all of the provisions of this Agreement and the consummation of the transactions contemplated hereby will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default or result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of EIS under, (a) any contract, indenture, mortgage, deed of trust, loan agreement, note, lease, joint venture or partnership agreement or other instrument or agreement to which EIS is a party, or by which EIS is or may be bound or to which any property or assets of EIS is or are subject, (b) any charter or by-laws of EIS or (c) any statute, law, rule, order, administrative regulation, injunction or decree of any court or administrative or governmental agency or body having jurisdiction over EIS, except to the extent that such conflict, breach, violation, default, creation or imposition, individually and in the aggregate, would not have a material adverse effect on the ability of EIS to perform its obligations hereunder.

2.5 LITIGATION. There has not been instituted and there is not pending any suit, action or proceeding by any governmental or regulatory authority as a result of this Agreement or any of the transactions contemplated hereby which questions the validity or legality of the transactions contemplated by this Agreement.

2.6 TITLE. EIS has, and immediately prior to the Closing EIS will have, good and valid title to the Shares to be sold by EIS hereunder, free and clear of all security interests, mortgages, pledges, liens, encumbrances, claims and equities; upon delivery of such Shares and payment therefor pursuant hereto, good and valid title to such Shares, free and clear of all security interests, mortgages, pledges, liens, encumbrances, claims and equities, will pass to the Company.

2.7 LOCK-UP. During the period beginning on the date of this Agreement and continuing to and including the date that is 180 days after such date, neither EIS nor any of its affiliates shall, directly or indirectly, without the prior written consent of the Company, sell, offer to sell, contract to sell (including, without limitation, any short sale, loan or pledge), grant any option to purchase or otherwise dispose of any securities of the Company held by

it at any time during such period; provided, however, that (a) any of such entities may dispose of securities in private placements in reliance on the so-called "4(1-1/2)" exemption under the Securities Act of 1933, as amended, in which the transferee agrees to be bound by the provisions of this Section 2.7 and (b) EIS may sell 416,667 shares of Common Stock the resale of which is currently registered under that certain registration statement on Form S-3 (File no. 333-53992) filed by the Company with the U.S. Securities and Exchange Commission.

2.8 STANDSTILL. During the period beginning on the date of this Agreement and continuing to and including the date that is 180 days after such date, neither EIS nor any of its affiliates shall, directly or indirectly, without the prior written consent of the Company, acquire, offer to acquire or agree to acquire, by purchase or otherwise, beneficial ownership of any of the Company's securities.

2.9 TAX COMPLIANCE. In order to document the Company's compliance with the reporting and withholding provisions of the Tax Equity and Fiscal Responsibility Act of 1982 with respect to the transactions herein contemplated, EIS will (and will cause any Permitted Transferee to, as applicable) deliver to the Company prior to or at the Closing a properly completed and executed United States Treasury Department Form W-9 (or other applicable form or statement specified by Treasury Department regulations in lieu thereof).

3. REPRESENTATIONS, WARRANTIES AND COVENANTS OF ELAN. Elan hereby represents, warrants and covenants that:

3.1 ORGANIZATION. Elan is a public limited company duly organized, validly existing and in good standing under the laws of the Republic of Ireland.

3.2 CONSENTS AND APPROVALS. All governmental and other consents, approvals, authorizations and orders and any other actions necessary for the execution, delivery and performance by Elan of this Agreement have been obtained or made and are in full force and effect; Elan has full right, power and authority to enter into this Agreement and to carry out all of the actions contemplated hereunder.

3.3 DUE AUTHORIZATION. This Agreement has been duly authorized, executed and delivered by Elan and constitutes a valid and legally binding obligation of Elan, enforceable against Elan in accordance with its terms, except as the enforceability hereof may be limited by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium or similar laws of general applicability affecting creditors' rights and by equitable principles of general applicability (regardless of whether enforcement is sought in a proceeding in equity or at law), including, without limitation, (a) the possible unavailability of specific performance, injunctive relief or any other equitable remedy, (b) concepts of materiality, reasonableness, good faith and fair dealing and (c) possible judicial action giving effect to foreign governmental actions or foreign laws.

3.4 NO CONFLICTS. The compliance by Elan with all of the provisions of this Agreement and the consummation of the transactions contemplated hereby will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default or result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of Elan under, (a) any contract, indenture, mortgage, deed of trust, loan agreement, note, lease, joint venture or partnership agreement or other instrument or agreement to which Elan is a party, or by which Elan is or may be bound or to which any property or assets of Elan is or are subject, (b) any charter or by-laws of Elan or (c) any statute, law, rule, order, administrative regulation, injunction or decree of any court or administrative or governmental agency or body having jurisdiction over Elan, except to the extent that such conflict, breach, violation, default, creation or imposition, individually and in the aggregate, would not have a material adverse effect on the ability of Elan to perform its obligations hereunder.

3.5 LITIGATION. There has not been instituted and there is not pending any suit, action or proceeding by any governmental or regulatory authority as a result of this Agreement or any of the transactions contemplated hereby which

questions the validity or legality of the transactions contemplated by this Agreement.

3.6 LOCK-UP. During the period beginning on the date of this Agreement and continuing to and including the date that is 180 days after such date, neither Elan nor any of its affiliates shall, directly or indirectly, without the prior written consent of the Company, sell, offer to sell, contract to sell (including, without limitation, any short sale, loan or pledge), grant any option to purchase or otherwise dispose of any securities of the Company held by it at any time during such period; provided, however, that (a) any of such entities may dispose of securities in private placements in reliance on the so-called "4(1-1/2)" exemption under the Securities Act of 1933, as amended, in which the transferee agrees to be bound by the provisions of this Section 3.6 and (b) EIS may sell 416,667 shares of Common Stock the resale of which is currently registered under that certain registration statement on Form S-3 (File no. 333-53992) filed by the Company with the U.S. Securities and Exchange Commission.

3.7 STANDSTILL. During the period beginning on the date of this Agreement and continuing to and including the date that is 180 days after such date, neither of Elan nor any of its affiliates shall, directly or indirectly, without the prior written consent of the Company, acquire, offer to acquire or agree to acquire, by purchase or otherwise, beneficial ownership of any of the Company's securities.

4. REPRESENTATIONS AND WARRANTIES OF THE COMPANY. The Company hereby represents and warrants that:

4.1 ORGANIZATION. The Company is a corporation duly organized, validly existing and in good standing under the laws of the Delaware.

4.2 CONSENTS AND APPROVALS. All governmental and other consents, approvals, authorizations and orders and any other actions necessary for (a) the consummation by the Company of the transactions contemplated by this Agreement and (b) the execution, delivery and performance by the Company of this Agreement and have been obtained or made and are in full

force and effect; the Company has full right, power and authority to enter into this Agreement, to purchase the Shares and to carry out all of the actions contemplated hereunder.

4.3 DUE AUTHORIZATION. This Agreement has been duly authorized, executed and delivered by the Company and constitutes a valid and legally binding obligation of the Company, enforceable against the Company in accordance with its terms, except as the enforceability hereof may be limited by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium or similar laws of general applicability affecting creditors' rights and by equitable principles of general applicability (regardless of whether enforcement is sought in a proceeding in equity or at law), including, without limitation, (a) the possible unavailability of specific performance, injunctive relief or any other equitable remedy, (b) concepts of materiality, reasonableness, good faith and fair dealing and (c) possible judicial action giving effect to foreign governmental actions or foreign laws.

4.4 NO CONFLICTS. The purchase of the Shares by the Company hereunder and the compliance by the Company with all of the provisions of this Agreement and the consummation of the transactions contemplated hereby will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default or result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company under, (a) any contract, indenture, mortgage, deed of trust, loan agreement, note, lease, joint venture or partnership agreement or other instrument or agreement to which the Company is a party, or by which the Company is or may be bound or to which any property or assets of the Company is or are subject, (b) the charter or by-laws of the Company or (c) any statute, law, rule, order, administrative regulation, injunction or decree of any court or administrative or governmental agency or body having jurisdiction over the Company, except to the extent that such conflict, breach, violation, default, creation or imposition, individually and in the aggregate, would not have a material adverse effect on the ability of the

Company to perform its obligations hereunder.

4.5 LITIGATION. There has not been instituted and there is not pending any suit, action or proceeding by any governmental or regulatory authority as a result of this Agreement or any of the transactions contemplated hereby which questions the validity or legality of the transactions contemplated by this Agreement.

5. CONDITIONS OF EIS'S OBLIGATIONS AT CLOSING. The obligations of EIS under Section 1.2 are subject to the fulfillment at or before the Closing of each of the following conditions, the waiver of which shall not be effective without EIS's consent:

5.1 REPRESENTATIONS AND WARRANTIES. The representations and warranties of the Company contained in Section 4 shall be true at and as of the Closing with the same effect as though such representations and warranties had been made at and as of the date of such Closing.

5.2 PERFORMANCE. The Company shall have performed and complied in all material respects with all agreements, obligations and conditions contained in this Agreement that are required to be performed or complied with by it at or before the Closing.

5.3 COMPLIANCE CERTIFICATE. The President of the Company shall deliver to EIS at the Closing a certificate stating that the conditions specified in Sections 5.1 and 5.2 have been fulfilled.

5.4 QUALIFICATIONS. All authorizations, approvals or permits, if any, of any governmental authority or regulatory body of the United States or of any state that are required for the lawful purchase and sale of the Shares pursuant to this Agreement shall be duly obtained and effective as of the Closing (except for such as may be properly obtained subsequent to the Closing).

5.5 PAYMENT OF PURCHASE PRICE. The Company shall have delivered the Purchase Price.

6. CONDITIONS OF THE COMPANY'S OBLIGATIONS AT CLOSING. The obligations of the Company under Section 1.2 are subject to the fulfillment at or before the Closing of each of the following conditions, the waiver of which shall not be effective without the Company's consent:

6.1 REPRESENTATIONS AND WARRANTIES OF EIS. The representations and warranties of EIS contained in Section 2 shall be true at and as of the Closing with the same effect as though such representations and warranties had been made at and as of the date of such Closing.

6.2 REPRESENTATIONS AND WARRANTIES OF ELAN. The representations and warranties of Elan contained in Section 3 shall be true at and as of the Closing with the same effect as though such representations and warranties had been made at and as of the date of such Closing.

6.3 PERFORMANCE BY EIS. EIS shall have performed and complied in all material respects with all agreements, obligations and conditions contained in this Agreement that are required to be performed or complied with by it at or before the Closing.

6.4 PERFORMANCE BY ELAN. Elan shall have performed and complied in all material respects with all agreements, obligations and conditions contained in this Agreement that are required to be performed or complied with by it at or before the Closing.

6.5 EIS COMPLIANCE CERTIFICATE. The President, Vice President or Chief Financial Officer of EIS shall deliver to the Company at the Closing a certificate stating that the conditions specified in Sections 6.1 and 6.3 have been fulfilled.

6.6 ELAN COMPLIANCE CERTIFICATE. The President, Vice President or Chief Financial Officer of Elan shall deliver to the Company at the Closing a certificate stating that the conditions specified in Sections 6.2 and 6.4 have

been fulfilled.

6.7 QUALIFICATIONS. All authorizations, approvals or permits, if any, of any governmental authority or regulatory body of the United States or of any state that are required for the lawful purchase and sale of the Shares pursuant to this Agreement shall be duly obtained and effective as of the Closing (except for such as may be properly obtained subsequent to the Closing).

6.8 DELIVERY OF SHARES. EIS shall have delivered to the Company the Certificate(s), together with EIS's endorsement or appropriate stock powers duly executed in blank, and the Affidavit.

7. MISCELLANEOUS.

7.1 SURVIVAL. The representations, warranties and covenants of the Company, EIS and Elan contained in or made pursuant to this Agreement shall survive the execution and delivery of this Agreement and the Closing.

7.2 SUCCESSORS AND ASSIGNS. Except as otherwise provided herein, the terms and conditions of this Agreement shall inure to the benefit of and be binding upon the respective successors and assigns of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party, other than the parties hereto or their respective successors and assigns, any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement.

7.3 GOVERNING LAW. This Agreement shall be governed by and construed under the laws of the State of New York as applied to agreements among New York residents entered into and to be performed entirely within New York.

7.4 TITLES AND SUBTITLES. The titles and subtitles used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.

7.5 NOTICES. All notices required or permitted hereunder shall be in writing and shall be deemed effectively given: (i) upon personal delivery to the party to be notified; (ii) when sent by confirmed facsimile if sent during normal business hours of the recipient, if not, then on the next business day; or (iii) one day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the address as set forth on the signature page hereof or at such other address as such party may designate by ten days advance written notice to the other parties hereto.

7.6 EXPENSES. Irrespective of whether the Closing is effected, each party hereto shall pay all costs and expenses that it incurs with respect to the negotiation, execution, delivery and performance of this Agreement. If any action at law or in equity is necessary to enforce or interpret the terms of this Agreement, the prevailing party shall be entitled to reasonable attorney's fees, costs and necessary disbursements in addition to any other relief to which such party may be entitled.

7.7 AMENDMENTS AND WAIVERS. Any term of this Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance and either retroactively or prospectively), only with the written consent of the parties hereto.

7.8 SEVERABILITY. If one or more provisions of this Agreement are held to be unenforceable under applicable law, such provision or provisions shall be excluded from this Agreement, and the balance of the Agreement shall be interpreted as if such provision or provisions were so excluded and shall be enforceable in accordance with its terms.

7.9 ENTIRE AGREEMENT. This Agreement and the documents referred to herein constitute the entire agreement among the parties with respect to the subject matter of this Agreement, and no party shall be liable or bound to any

other party in any manner by any representations, warranties or covenants relating to such subject matter except as specifically set forth herein or therein.

7.10 COUNTERPARTS. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

[REMAINDER OF PAGE LEFT INTENTIONALLY BLANK]

[SIGNATURE PAGE TO SECURITIES PURCHASE AGREEMENT]

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

LIGAND PHARMACEUTICALS INCORPORATED

By: /S/DAVID E. ROBINSON

Name: David E. Robinson
Title: President & CEO

Address: 12075 Science Center Drive
San Diego, CA 92121

ELAN INTERNATIONAL SERVICES, LTD.

By: /S/KEVIN INSLEY

Name:
Title:

Address:

By: /S/KEVIN INSLEY

Name:
Title:

Address:

[SIGNATURE PAGE TO SECURITIES PURCHASE AGREEMENT]

EXHIBIT A

FORM OF AFFIDAVIT RE: LOST STOCK CERTIFICATE

The undersigned, a holder of shares of common stock, par value $0.001 per share ("Common Stock"), of Ligand Pharmaceuticals Incorporated, a Delaware corporation (the "Company"), hereby represents, warrants and agrees as follows:

1. The undersigned is the sole record and beneficial owner of 274,843 shares of Common Stock represented by the certificate described below. Said certificate has been lost. The undersigned has diligently searched for the original certificate. The facts and circumstances relating to the loss of this certificate are:

2. Said certificate was dated December 20, 2001, numbered SB11503, and was issued and registered in the name of the undersigned, representing 274,843 shares of Common Stock.

3. The undersigned has not assigned, endorsed, transferred, hypothecated or in any way disposed of said certificate.

4. The undersigned does not know of any person, firm or corporation that claims, or may claim, any interest in said certificate.

5. If the undersigned finds or recovers the original certificate, the undersigned will immediately surrender it to the Company for cancellation without receiving any consideration therefor.

6. The undersigned hereby agrees to indemnify the Company, and its successors and assigns, from and against any loss, expense (including reasonable attorneys' fees) or liability arising from any claim that may be made against it on account of the loss of the certificate described above or the issuance of a new certificate representing the same underlying shares (except for any such loss, expense or liability resulting from the gross negligence or willful misconduct of the Company or its representatives).

The undersigned hereby declares under penalty of perjury that the foregoing matters are true of its own knowledge, and that this affidavit was executed in _____ on the date set forth above.

Dated: November 12, 2002

ELAN INTERNATIONAL SERVICES, LTD.

By:

Name:
Title:

Address:

EXHIBIT 10.252

Dated November 12, 2002

LIGAND PHARMACEUTICALS INCORPORATED

ELAN INTERNATIONAL SERVICES, LTD.

AND

ELAN CORPORATION PLC

AMENDMENT NO. 1 TO AMENDED AND RESTATED
REGISTRATION RIGHTS AGREEMENT

AMENDMENT NO. 1 TO AMENDED AND RESTATED
REGISTRATION RIGHTS AGREEMENT

THIS AMENDMENT NO. 1 TO AMENDED AND RESTATED REGISTRATION RIGHTS AGREEMENT (this "Amendment") is made on the 12th day of November, 2002, by and between Ligand Pharmaceuticals Incorporated, a Delaware corporation (the "Company"), Elan Corporation plc, a public limited company organized under the laws of the Republic of Ireland ("Elan"), and Elan International Services, Ltd., a Bermuda exempted Company ("EIS").

RECITALS

WHEREAS, concurrently with the execution of this Amendment, the Company, Elan and EIS are entering into a Securities Purchase Agreement and the Company and Elan are entering into an Amended and Restated Licence and Supply Agreement;

WHEREAS, the Company, Elan and EIS and certain other holders of the Company's capital stock have previously entered into that certain Amended and Restated Registration Rights Agreement dated June 29, 2000, including the addenda entered into through the date hereof (the "Prior Agreement");

WHEREAS, Section 2.6(b) of the Prior Agreement provides that the Prior Agreement may be amended with the written consent of the holders of a majority of the Registrable Securities (as such term is defined in the Prior Agreement) then outstanding; and

WHEREAS, the Company, Elan and EIS desire to amend certain terms of the Prior Agreement as set forth in this Amendment.

THE PARTIES HEREBY AGREE AS FOLLOWS:

1. SECTION 1.1(F). Section 1.1, paragraph (f) of the Prior Agreement is hereby restated in its entirety as follows:

"(f) The term "Registrable Securities" means (i) the shares of Common Stock (or the shares of such other class of stock into which the Common Stock is converted) issuable upon conversion of those certain Unsecured Convertible Promissory Notes dated October 30, 1997 issued to S.R. One Limited (the "S.R. One Notes") pursuant to the Stock and Note Purchase Agreement dated February 3, 1995 (and upon such conversion of the S.R. One Notes, SCHEDULE A shall be updated to include such shares), (ii) the shares of Common Stock (or the shares of such other class of stock into which the Common Stock is converted) issuable upon conversion of that certain Warrant (the "SmithKline Warrant") issued to SmithKline Beecham plc pursuant to the Stock Purchase Agreement dated April 24, 1998 (and upon such conversion of the SmithKline Warrant, SCHEDULE A shall be

updated to include such shares), (iii) the 1,278,970 shares of Common Stock (or that number of shares of such other class of stock into which the Common Stock is converted) issued to EIS pursuant to the Stock Purchase Agreement dated September 30, 1998, (iv) the 437,768 shares of Common Stock (or that number of shares of such other class of stock into which the Common Stock is converted) issued to EIS pursuant to the Securities Purchase Agreement dated November 6, 1998 (as amended, the "Elan Securities Purchase Agreement"), (v) the shares of Common Stock (or that number of shares of such other class of stock into which the Common Stock is converted) issued to EIS upon conversion of the

Zero Coupon Convertible Senior Notes due 2008 issued pursuant to the Elan Securities Purchase Agreement, (vi) the shares of Common Stock (or that number of shares of such other class of stock into which the Common Stock is converted) issued to Elan or EIS pursuant to the Development, Licence and Supply Agreement dated November 9, 1998, as amended and restated, (vii) the 52,742 shares of Common Stock (or that number of shares of such other class of stock into which the Common Stock is converted) issued to EIS pursuant to the Stock Purchase Agreement dated September 30, 1999, (viii) the 91,406 shares of Common Stock (or that number of shares of such other class of stock into which the Common Stock is converted) issued to EIS upon the exercise of that certain Amended and Restated Series X Warrant for the Purchase of 91,406 Shares of Common Stock dated November 22, 1999, (ix) the 188,572 shares of Common Stock (or that number of shares of such other class of stock into which the Common Stock is converted) issued to EIS pursuant to the Incentive Agreement dated December 31, 1999, (x) the 98,580 shares of Common Stock (or that number of shares of such other class of stock into which the Common Stock is converted) issued to EIS pursuant to the Incentive Agreement dated March 1, 2000, (xi) the 274,843 shares of Common Stock (or that number of shares of such other class of stock into which the Common Stock is converted) issued to EIS pursuant to the Incentive Agreement dated December 20, 2001, (xii) the 102,151 shares of Common Stock (or that number of shares of such other class of stock into which the Common Stock is converted) issued to EIS pursuant to the Incentive Agreement dated March 28, 2002, and (xiii) any Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right or other security which is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of the shares referenced in subsections (i) through (xii) above, excluding in all cases, however, any Registrable Securities sold by a person in a transaction in which rights under this Agreement are not assigned."

2. SECTION 1.2(D). There shall be added to the Prior Agreement a new Section 1.2(d) which shall read in its entirety as follows:

3. "(d) In addition to the rights and obligations set forth in this Section 1.2, if any Holder holding in the aggregate at least 4,000,000 shares of Registrable Securities making a request pursuant to this Section 1.2 additionally requests that such registration statement on Form S-3 be effected for an offering to be made on a delayed or continuous basis pursuant to Rule 415 under the Act covering all Registrable Securities owned by such Holder (a "Shelf Registration Statement"), the Company shall include such information in the written notice referred to in subsection 1.2(a). Additionally, at any time during the effectiveness of any such Shelf Registration Statement, if any Holder intends to distribute at least 3,000,000 shares of Registrable Securities covered by such Shelf Registration Statement by means of an underwriting, such Holder (a "Requesting Holder") may so advise the Company, and the Company shall provide written notice of such Requesting Holder's intention to all other Holders having Registrable Securities covered by such Shelf Registration Statement (the "Covered Holders"). The underwriter for any underwritten offering effected pursuant to this subsection 1.2(d) shall at the option of the Company (i) be selected by the Company from the list attached hereto as EXHIBIT A hereto and shall be reasonably acceptable to the Requesting Holder or (ii) be selected by the Requesting Holder and shall be reasonably acceptable to the Company. The right of any Covered Holder to include its Registrable Securities in such underwritten offering shall be conditioned upon such Covered Holder's participation in such underwriting and the inclusion of such Covered Holder's Registrable Securities in the underwriting (unless otherwise mutually

agreed by the Requesting Holder and such Holder) to the extent provided herein.

All Covered Holders proposing to distribute their securities through such underwriting shall (together with the Company as provided in subsection 1.5(e)) enter into an underwriting agreement in customary form with the underwriter or underwriters selected for such underwriting. Notwithstanding any other provision of this Agreement, if the underwriter advises the Requesting Holder or the Company in writing that marketing factors require a limitation of the number of shares to be underwritten, then the Requesting Holder or the Company shall so advise all Covered Holders of Registrable Securities which would otherwise be underwritten pursuant hereto, and the number of shares of Registrable Securities that may be included in the underwriting shall be allocated first to the Requesting Holder, and second to the Covered Holders participating in the underwritten offering in proportion (as nearly as practicable) to the amount of Registrable Securities of the Company owned by each such Covered Holder; PROVIDED, HOWEVER, that the number of shares of Registrable Securities to be included in such underwriting shall not be reduced unless all other securities which the Company proposes to sell are first entirely excluded from the underwriting. The Company is obligated to effect only two (2) underwritten offerings pursuant to this subsection 1.2(d) during the term of this Agreement; PROVIDED, HOWEVER, that if the number of shares of Registrable Securities of the Requesting Holder to be included in such underwritten offering is reduced by the underwriter or underwriters selected for such underwriting below 3,000,000 shares, the underwritten offering initiated by such Requesting Holder shall not be counted as an underwritten offering pursuant to this Section 1.2(d). For the avoidance of doubt, the expenses of the two (2) underwritten offerings contemplated by this Section 1.2(d) shall be treated for purposes of Section 1.2(c) in the same manner as the expenses of the filing of the Shelf Registration Statement to which such underwritten offerings relate are treated. Notwithstanding the foregoing, the Company shall not be obligated to effect any underwritten offering pursuant to this subsection 1.2(d) if the Company shall furnish to the Requesting Holder a certificate signed by the president of the Company stating that in the good faith judgment of the Board of Directors of the Company it would be materially detrimental to the Company and its stockholders for such underwritten offering to be effected at such time (without taking into account the costs to the Company), in which event the Company shall have the right to defer the commencement of such underwritten offering for a period of not more than 60 days after receipt of the request of the Requesting Holder under this subsection 1.2(d); provided, however, that the Company shall not utilize this right more than once in any twelve (12) month period."

4. SECTION 1.2(E). There shall be added to the Prior Agreement a new Section 1.2(e) which shall read in its entirety as follows:

"(e) In each underwritten offering effected pursuant to subsection 1.2(d), the Company shall use commercially reasonable efforts to (i) cause its senior management to assist in customary selling efforts relating to the Registrable Securities included in such underwritten offering as reasonably requested by the managing underwriter, including participating in one usual and customary "roadshow" in connection with such offering; provided, however, that any such "roadshow" shall be limited to five (5) business days in duration; and (ii) make reasonably available for inspection by the Holders including Registrable Securities in such offering, one (1) single counsel for such Holders and the underwriters for such offering and their counsel, at the offices where normally kept, during reasonable business hours and upon reasonable notice to the Company, all financial and other records and documents of the Company and its subsidiaries that

are pertinent to the offering, and cause the officers, directors, agents and employees of the Company and its subsidiaries to supply all information that is pertinent to such offering as is reasonably requested by such persons or entities."

5. SECTION 1.5(A). Section 1.5(a) of the Prior Agreement is hereby restated in its entirety as follows:

"(a) Prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its best efforts to cause such registration statement to become effective, and, upon the request of the Holders of a majority of the Registrable Securities then outstanding, keep such registration statement effective for up to one hundred twenty (120) days for a filing under Section 1.3 or 1.4, and up to one hundred eighty (180) days for a filing under

Section 1.2; provided, however, that, notwithstanding the foregoing, the Company shall keep any Shelf Registration Statement effective until the earlier of (i) two (2) years from the date of effectiveness of such Shelf Registration Statement and (ii) the date on which all Registrable Securities covered by such Shelf Registration Statement have been sold pursuant to such Shelf Registration Statement."

6. SCHEDULE A of the Prior Agreement is hereby restated in its entirety as attached to this Addendum.

7. There shall be added to the Prior Agreement a new Exhibit A which shall read in its entirety as follows:

EXHIBIT A

Credit Suisse First Boston
Goldman Sachs
Morgan Stanley
Salomon Smith Barney
UBS Warburg

8. EFFECT OF PRIOR AGREEMENT. Except as set forth herein, the Prior Agreement shall remain in full force and effect.

9. MISCELLANEOUS.

9.1 SUCCESSORS AND ASSIGNS. The terms and conditions of this Amendment shall inure to the benefit of and be binding upon the respective successors and assigns of the parties. Nothing in this Amendment, express or implied, is intended to confer upon any party, other than the parties hereto or their respective successors and assigns, any rights, remedies, obligations or liabilities under or by reason of this Amendment, except as expressly provided in this Amendment.

9.2 GOVERNING LAW. This Amendment shall be governed by and construed under the laws of the State of California as applied to agreements among California residents entered into and to be performed entirely within California.

9.3 TITLES AND SUBTITLES. The titles and subtitles used in this Amendment are used for convenience only and are not to be considered in construing or interpreting this Amendment.

9.4 COUNTERPARTS. This Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

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

LIGAND PHARMACEUTICALS INCORPORATED

By: /S/DAVID E. ROBINSON

Name: David E. Robinson
Title: President & CEO

Address: 12075 Science Center Drive
San Diego, CA 92121

ELAN INTERNATIONAL SERVICES, LTD.

By: /S/KEVIN INSLEY

Name:
Title:

Address:

By: /S/KEVIN INSLEY

Name:
Title:

Address:

[SIGNATURE PAGE TO AMENDMENT NO. 1
TO AMENDED AND RESTATED
REGISTRATION RIGHTS AGREEMENT]

SCHEDULE A

to
Amendment No. 1 to
Amended and Restated Registration Rights Agreement

<TABLE>
<CAPTION>

NAME	SHARES ISSUED
<S>	<C>
Elan International Services, Ltd.	14,041,326

</TABLE>

EXHIBIT 10.253

WARNER R. BROADDUS
VICE PRESIDENT, GENERAL COUNSEL & SECRETARY

19 December, 2002

David Madden
PHARMACEUTICAL ROYALTIES INTERNATIONAL (CAYMAN) LTD.
675 Third Avenue, Suite 3000
New York, NY 10017

VIA FACSIMILE AND U.S. MAIL

RE: SECOND AMENDMENT TO PURCHASE AGREEMENT DATED MARCH 6, 2002

Dear Dave:

Per our discussions, we wish to memorialize our agreement to move your December 20, 2002 Notice Date to December 30, 2002 under our Purchase Agreement dated March 6, 2002, as amended on July 29, 2002. Thus section 2.02(a) of that agreement is hereby amended by deleting it in its entirety and replacing it with the following:

"2.02 OPTIONS. (a) Seller hereby grants to Buyer the following options, each exercisable at Buyer's sole discretion, to acquire rights to receive additional percentages of both AHP Net Sales and Pfizer Net Sales on the same terms as described above in Section 2.01(a). For clarity, such options may be exercised only for additional percentages of both AHP Net Sales and Pfizer Net Sales. Payment of the Option Exercise Price specified below represents payment for the additional percentages of both the AHP Net Sales and the Pfizer Net Sales.

<TABLE>
<CAPTION>

NOTICE DATE (EACH A "NOTICE DATE")	EXERCISE DATE (EACH AN "EXERCISE DATE")	EXERCISE PRICE (EACH, AN "OPTION EXERCISE PRICE")	ADDITIONAL PERCENTAGE OF BOTH AHP NET SALES AND PFIZER NET SALES
<S>	<C>	<C>	<C>
May 1, 2002	May 15, 2002	$3,000,000	0.125%
September 20, 2002	September 30, 2002	$3,500,000	0.125%
December 30, 2002	December 31, 2002	$3,850,000	0.125%
September 15, 2003	September 30, 2003	$12,500,000	0.250%
March 16, 2004	March 31, 2004	$16,000,000	0.250%
May 17, 2004	May 31, 2004	$10,500,000	0.125%

</TABLE>

All other provisions of the Purchase Agreement, as amended, remain in full force and effect.

Very truly yours

ACCEPTED AND AGREED:
PHARMACEUTICAL ROYALTIES
INTERNATIONAL (CAYMAN) LTD.
By:

/S/WARNER BROADDUS /S/DAVID MADDEN

David Madden,
Attorney-in-fact

EXHIBIT 10.254

AMENDMENT NUMBER 3 TO PURCHASE AGREEMENT
BETWEEN
PHARMACEUTICAL ROYALTIES INTERNATIONAL (CAYMAN) LTD. AND
AND
LIGAND PHARMACEUTICALS INCORPORATED

THIS AMENDMENT TO PURCHASE AGREEMENT (the "AMENDMENT") is made and entered into on this 30th day of December, 2002 by and between Pharmaceutical Royalties International (Cayman) Ltd. ("BUYER") and Ligand Pharmaceuticals Incorporated ("SELLER").

WHEREAS, Seller and Buyer are parties to that certain Purchase Agreement dated as of March 6, 2002, as amended on each of July 29, 2002 and December 23, 2002 (the "PURCHASE AGREEMENT"), pursuant to which Seller agreed, subject to the terms thereof, to sell, transfer, assign and deliver to Buyer the right to receive from Seller the Applicable Percentage of the AHP Net Sales and the Applicable Percentage of the Pfizer Net Sales;

WHEREAS, Seller and Buyer wish to further amend the Purchase Agreement to revise the grant of options from Seller to Buyer to acquire rights to receive additional percentages of both AHP Net Sales and Pfizer Net Sales;

NOW, THEREFORE, in consideration of the mutual promises and covenants contained in this Amendment and in the Purchase Agreement, and pursuant to Section 8.02(a) of the Purchase Agreement, Seller and Buyer do hereby amend the Purchase Agreement, as follows:

1. Section 2.02(a) is hereby amended by deleting it in its entirety and replacing it with the following:

"2.02 OPTIONS. (a) Seller hereby grants to Buyer the following options, each exercisable at Buyer's sole discretion, to acquire rights to receive additional percentages of both AHP Net Sales and Pfizer Net Sales on the same terms as described above in Section 2.01(a). For clarity, such options may be exercised only for additional percentages of both AHP Net Sales and Pfizer Net Sales. Payment of the Option Exercise Price specified below represents payment for the additional percentages of both the AHP Net Sales and the Pfizer Net Sales.

<TABLE>
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NOTICE DATE (EACH, A "NOTICE DATE")	EXERCISE DATE (EACH, AN "EXERCISE DATE")	EXERCISE PRICE (EACH, AN "OPTION EXERCISE PRICE")	ADDITIONAL PERCENTAGE OF BOTH AHP NET SALES AND PFIZER NET SALES
<S>	<C>	<C>	<C>
May 1, 2002	May 15, 2002	$3,000,000	0.125%
September 20, 2002	September 30, 2002	$3,500,000	0.125%
December 30, 2002*	December 31, 2002*	***	***
September 15, 2003	September 30, 2003	$12,500,000	0.250%
December 1, 2003	December 31, 2003	***	***
March 16, 2004	March 31, 2004	$16,000,000	0.250%
May 17, 2004	May 31, 2004	$10,500,000	0.125%

</TABLE>

*** Portions of this page have been omitted pursuant to a request for Confidential Treatment and filed separately with the Commission

* With respect to this option only, the following terms shall apply notwithstanding anything to the contrary contained elsewhere in this Agreement:

If Buyer desires to exercise this option, Buyer shall give written notice (the "December 2002 Exercise Notice") to Seller at any time from the date which is 30 days prior to the applicable Notice Date up to and including 7:00 p.m. (New York City time) on such Notice Date. If Buyer delivers such December 2002 Exercise Notice, then:

(i) unless by 9:00 p.m. (New York City time) on such Notice Date Seller delivers to Buyer an Exception Notice, Seller shall be deemed to have represented and warranted to Buyer that, as of the applicable Exercise Date, all of Seller's representations and warranties contained herein are true and correct in all material respects on and as of such Exercise Date as if made on such Exercise Date; and

(ii) on such Exercise Date Buyer shall pay to Seller two-thirds (2/3) of the applicable Option Exercise Price; the remaining one-third (1/3) of such Option Exercise Price will be due and payable on the date that is one hundred twenty (120) days after such Exercise Date."

2. Sections 5.01(a) and (b) of the Purchase Agreement are hereby amended by deleting all references to "1.25%" therein and replacing such references with "*** (or, in the event that an Exercise Date expires without Buyer having exercised the corresponding option thereto, *** less the additional percentage of such corresponding option not exercised)".

3. REPRESENTATIONS AND WARRANTIES. Seller hereby makes the representations and warranties made to Buyer in Sections 3.01, 3.02, 3.03 and 3.04 of the Purchase Agreement with respect to this Amendment to the same extent made in the Purchase Agreement with respect to such Purchase Agreement.

4. DEFINITIONS. All capitalized terms used but not defined herein shall have the respective meanings ascribed to them in the Purchase Agreement.

5. GOVERNING LAW. This Amendment shall be governed construed in accordance with and governed by the law of the State of New York.

6. ENTIRE AGREEMENT. The Purchase Agreement, as amended hereby, constitutes the full and entire understanding between the parties regarding the subject matter herein. Except as otherwise expressly provided herein, the provisions hereof shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

7. FULL FORCE AND EFFECT. Except as amended hereby, the Purchase Agreement shall remain in full force and effect.

*** Portions of this page have been omitted pursuant to a request for Confidential Treatment and filed separately with the Commission

8. COUNTERPARTS. This Amendment may be signed in any number of counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument. This Amendment shall become effective when each party hereto shall have received a counterpart hereof signed by the other party hereto.

9. CAPTIONS. The titles and captions herein are included for convenience of reference only and shall be ignored in the construction or interpretation hereof.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereof have caused this Amendment to be duly executed and delivered as a deed by their respective authorized officers of the day and year first written above.

LIGAND PHARMACEUTICALS INCORPORATED

By: /S/DAVID E. ROBINSON

Name: _____

Title: _____

By: /S/WARNER R. BROADDUS

Name: Warner R. Broaddus

Title: VP & General Counsel

PHARMACEUTICAL ROYALTIES INTERNATIONAL (CAYMAN) LTD.

By: /S/DAVID MADDEN

Name: D. Madden

Title: Director

EXHIBIT 10.255

PURCHASE AGREEMENT

BETWEEN

PHARMACEUTICAL ROYALTIES INTERNATIONAL (CAYMAN) LTD.

and

LIGAND PHARMACEUTICALS INCORPORATED

Dated as of December 30, 2002

TARGRETIN(R) CAPSULES

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PURCHASE AGREEMENT

AGREEMENT dated as of December 30, 2002 between Ligand Pharmaceuticals Incorporated, a Delaware corporation ("Seller"), and Pharmaceutical Royalties International (Cayman) Ltd., a company organized under the laws of the Cayman Islands (including each of its successors, assigns and legal representatives, "Buyer").

W I T N E S S E T H:

WHEREAS, Buyer desires to purchase the rights to receive certain sales-based payments from Seller, and Seller desires to sell, assign and transfer such rights to Buyer, upon the terms and subject to the conditions hereinafter set forth;

NOW, THEREFORE, in consideration of the foregoing and the representations, warranties, covenants and agreements herein contained, the parties hereto agree as follows:

ARTICLE I

DEFINITIONS

1.01 DEFINITIONS. The following terms, as used herein, have the following meanings:

"Affiliate" means with respect to any Person, any Person directly or indirectly controlling, controlled by or under common control with such other Person. For the avoidance of doubt, none of Elan Corporation plc and its affiliates shall be considered to be "Affiliates" of Seller for any purpose under this Agreement.

"Agreement" means this Purchase Agreement between Buyer and Seller.

"Business Day" means any day that is not a Saturday, Sunday or a day on which banks are required or permitted to be closed in the city of New York, New York.

"Calendar Quarter" has the meaning set forth in Section 5.04(a).

"Closing" has the meaning set forth in Section 2.01.

"Confidential Disclosure Agreement" has the meaning set forth in Section 5.02.

"Distributor" means any Person with which Seller has entered into an agreement to market and/or promote the Product in any jurisdiction. For the avoidance of doubt, "Distributor" shall not include any Sublicensee except with respect to the United States.

"Excluded Liabilities and Obligations" has the meaning set forth in Section 2.03.

"Governmental Authority" means any government, court, regulatory or administrative agency or commission, or other governmental authority, agency or instrumentality, whether federal, state or local (domestic or foreign), including, without limitation, the PTO and the U.S. National Institutes of Health.

*** Portions of this page have been omitted pursuant to a request for Confidential Treatment and filed separately with the Commission

"Indemnified Party" has the meaning set forth in Section 6.02.

"Indemnifying Party" has the meaning set forth in Section 6.02.

"License Agreements" means that certain Settlement Agreement, License and Mutual General Release by and among Seller, Allergan Ligand, Allergan Ligand Retinoid Therapeutics, Inc., La Jolla Cancer Research Foundation, SelectRA Pharmaceuticals, Inc. and SRI International dated as of August 23, 1995, together with that certain letter from Seller to La Jolla Cancer Research Foundation and SRI International dated as of November 21, 1995 and that certain letter from Seller to The Burnham Institute dated as of November 26, 1996.

"Lien" means, with respect to any agreement or other asset, any mortgage, lien, pledge, charge, security interest or encumbrance of any kind in respect of such asset.

"Loss" has the meaning set forth in Section 6.01.

"Net Sales" means the gross amount actually received by Seller, its Affiliates or its Sublicensees in connection with the sale of the Product (including, with respect to Seller and its Affiliates, from any Distributor), as reflected in Seller's books and records and in accordance with Seller's standard accounting principles and generally accepted accounting principles (or, with respect to sales of the Product by any of Seller's Affiliates or Sublicensees, as reflected in the books and records of such Affiliate or Sublicensee, as applicable, and in accordance with the standard accounting principles of such Affiliate or Sublicensee, as applicable, and generally accepted accounting principles), less the following:

(i)customary trade, quantity or cash discounts to the extent actually allowed and taken;

(ii)amounts repaid or credited by reason of rejection or return;

(iii)to the extent separately stated on purchase orders, invoices or other documents of sale, any taxes or other governmental charges levied on the production, sale, transportation, delivery or use of the Product which is paid by or on behalf of the Seller or its Affiliates or Sublicensees;

(iv)outbound transportation costs prepaid or allowed and costs of insurance

in transit; and

(v)discounts, refunds, rebates, chargebacks, retroactive price adjustments and any other allowances which effectively reduce the net selling price;

PROVIDED, HOWEVER, that gross amounts received by Seller or its Affiliates or Sublicensees in connection with the sale of the Product to an end user in a country other than the United States in which the only indication for which use of the Product is approved by the appropriate Governmental Authority in such country is Cutaneous T-Cell Lymphoma ("CTCL") shall not be included in "Net Sales" unless and until use of the Product is approved by the appropriate Governmental Authority in such country for an indication other than CTCL, at which point all sales (including sales for CTCL indications) in such country shall be included in "Net Sales"; and, PROVIDED FURTHER, that such limitation on inclusion of sales shall apply on a country-by-country basis. Product shall be considered "sold" when such Product is reflected as sold in Seller's books and records in accordance with Seller's standard accounting principles and generally accepted accounting principles.

"Patents" means the patents and patent applications listed in EXHIBIT A hereto.

"Person" means an individual, corporation, partnership, association, trust or other entity or organization, but not including a government or political subdivision or any agency or instrumentality of such government or political subdivision.

"Product" means bexarotene in oral form (currently marketed as Targretin(R) Capsules) sold by Seller for any indication.

"PTO" means the United States Patent and Trademark Office.

"Purchase Price" has the meaning set forth in Section 2.01.

"SEC" has the meaning set forth in Section 3.09.

"Seller's Knowledge" means the actual knowledge of the executive officers of Seller.

"Sublicensee" means any Person that Seller grants a license or sublicense to make, have made, use, offer to sell, sell and import any Product worldwide. As used herein, "Sublicensee" shall include any Distributor appointed by Seller for the United States, but, for the avoidance of doubt, shall not include any Distributor appointed by Seller for any other jurisdiction.

"UCC" means the U.S. Uniform Commercial Code as in effect in the State of California and any successor statute, as in effect from time to time.

ARTICLE II

PURCHASE AND SALE OF RIGHTS

2.01 PURCHASE AND SALE. Upon the terms and subject to the conditions of this Agreement:

(a) Buyer agrees to purchase from Seller, and Seller agrees to sell, transfer, assign and deliver, or cause to be sold, transferred, assigned or delivered, to Buyer, upon execution of this Agreement, free and clear of all Liens, the right to receive from Seller royalty payments of one per cent (1.00%) of the Net Sales of Product beginning with royalty payments for sales made on and after January 1, 2003. In order to secure its obligations to Buyer under this Agreement, Seller hereby grants to Buyer a continuing first security interest in and lien to all of Seller's right, title and interest in and to the Product, including without limitation the Patents, and the rights granted to Seller under the License Agreements.

(b) For and in consideration of this right, Buyer shall pay to Seller *** (the "Purchase Price"). The payment of the Purchase Price by Buyer to Seller shall be made no later than December 31, 2002. The occurrence of such payment is sometimes hereinafter referred to as the "Closing." Except to the extent otherwise provided in Section 6.01, the Purchase Price is non-refundable.

(c) At the Closing, Seller shall cause to be delivered to Buyer:

(i) a certified copy of the resolutions of the Board of Directors of Seller authorizing this Agreement and the transactions contemplated hereby;

(ii) a receipt for the Purchase Price;

(iii) an opinion of counsel to Seller addressed to Buyer confirming the matters warranted in Sections 3.01, 3.02, 3.03, 3.04, 3.06 and 3.07; and

(iv) a letter authorizing Buyer to file, pursuant to the security interest granted by Seller to Buyer in Section 2.01(a), a UCC financing statement on Form UCC-1, and all amendments and modifications thereto, securing Buyer's rights hereunder.

At and after the Closing, if requested by Buyer, Seller will execute and deliver to Buyer such instruments and documents as may be reasonably requested by Buyer in order to evidence its ownership of the rights acquired hereunder, including without limitation such further UCC registration forms as Buyer may request.

2.02 EXPIRATION OF RIGHTS TO RECEIVE PAYMENTS. Each of the rights set forth in Section 2.01 shall expire on the later of (a) December 31, 2016 and (b) the expiration of the last to expire of the Patents, notwithstanding the future issuance of any patent having claims covering making, having made, using, offering to sell, selling or importing the Product.

2.03 EXCLUDED LIABILITIES AND OBLIGATIONS. Notwithstanding any provision in this Agreement or any other writing to the contrary, Buyer is acquiring only the rights to receive payments from Seller as expressly set forth herein and is not assuming any liability or obligation of Seller of whatever nature, whether presently in existence or arising or asserted hereafter. All such liabilities and obligations shall be retained by and remain obligations and liabilities of Seller (the "Excluded Liabilities and Obligations").

2.04 EXCLUDED ASSETS. Buyer does not, by purchase of the rights granted hereunder, acquire any assets or contract rights of Seller whether presently in existence or arising or asserted hereafter, except to the extent of the security interest granted by Seller to Buyer pursuant to Section 2.01(a).

ARTICLE III

REPRESENTATIONS AND WARRANTIES OF SELLER

*** Portions of this page have been omitted pursuant to a request for Confidential Treatment and filed separately with the Commission

Seller hereby represents and warrants to Buyer that:

3.01 CORPORATE EXISTENCE AND POWER. Seller is a corporation duly incorporated, validly existing and in good standing under the laws of the State of Delaware, and has all corporate powers and all material governmental licenses, authorizations, consents and approvals required to carry on its business as now conducted.

3.02 CORPORATE AUTHORIZATION. The execution, delivery and performance by Seller of this Agreement, and the consummation by Seller of the transactions contemplated hereby are within Seller's corporate powers and have been duly authorized by all necessary corporate action on the part of Seller. This Agreement has been duly executed and delivered and constitutes a valid and

binding agreement of Seller, enforceable against Seller in accordance with its terms, except that (A) the enforcement thereof may be subject to (i) bankruptcy, insolvency, reorganization, moratorium or other similar laws now or hereafter in effect relating to creditors' rights generally and (ii) general principles of equity and the discretion of the court before which any proceeding therefor may be brought and (B) any rights to indemnity or contribution thereunder may be limited by federal and state securities laws and public policy considerations.

3.03 GOVERNMENTAL AUTHORIZATION. The execution, delivery and performance by Seller of this Agreement does not require any notice to, action or consent by or in respect of, or filing with, any Governmental Authority except for filings required by the Securities Act of 1933, the Securities Exchange Act of 1934 or actions taken or filings made, if any.

3.04 NON-CONTRAVENTION.

(a) The execution, delivery and performance by Seller of this Agreement does not and will not (i) contravene or conflict with the corporate charter or bylaws of Seller, (ii) contravene or conflict with or constitute a violation of any provision of any law or regulation binding upon or applicable to Seller, which contravention, conflict or violation could reasonably be expected to have a material adverse effect on Buyer's right to receive payments hereunder; (iii) contravene or conflict with or constitute a violation of any judgment, injunction, order or decree binding upon or applicable to the Seller, which contravention, conflict or violation could reasonably be expected to have a material adverse effect on Buyer's right to receive payments hereunder; (iv) constitute a default under or give rise to any right of termination, cancellation or acceleration of any right or obligation of Seller or to a loss of any benefit relating to Buyer's right to receive payments hereunder, or (v) result in the creation or imposition of any Lien on the Patents or Seller's rights under the License Agreements (except for any Lien in favor of the Buyer).

(b) Other than pursuant to this Agreement, Seller has not granted, and there does not currently exist, any Lien on the Patents or Seller's rights under the License Agreements.

3.05 NO UNDISCLOSED MATERIAL LIABILITIES. There are no material liabilities or obligations of Seller related to Buyer's right to receive payments hereunder of any kind whatsoever, whether accrued, contingent, absolute, determined, determinable or otherwise, other than those which could not reasonably be expected to adversely affect Buyer's rights hereunder, and there is no existing condition, situation or set of circumstances which could reasonably be expected to result in such a liability or obligation, other than those which could not reasonably be expected to adversely affect Buyer's rights hereunder.

3.06 LITIGATION. There is no action, suit, investigation or proceeding (or any basis therefor), of which Seller has received notice, pending or, to Seller's Knowledge, threatened, before any Governmental Authority or arbitrator related to the Product which could reasonably be expected to have a material adverse effect on Buyer's rights hereunder. To Seller's Knowledge, there have been no claims made by any Person with respect to, and no actions, suits or other proceedings which could reasonably be expected to have a material adverse effect on Buyer's rights hereunder.

3.07 COMPLIANCE WITH LAWS. Seller is not in violation of, has not violated, and to the knowledge of Seller, is not under investigation with respect to and has not been threatened to be charged with or given notice of any violation of, any law, rule, ordinance or regulation, or judgment, order or decree entered by any Governmental Authority which could reasonably be expected to have a material adverse effect on Buyer's rights hereunder.

3.08 NO PRIOR TRANSFER. Seller has not assigned and has not in any other way conveyed, transferred, or encumbered all or any portion of its right, title and interest to the Patents or its rights under the License Agreements, except as could not reasonably be expected to adversely affect Buyer's rights hereunder.

3.09 LICENSE AGREEMENTS. A true and correct copy of each of the License Agreements has been delivered to Buyer, and each such copy is (a) if redacted, in the form filed with the United States Securities and Exchange Commission (the

"SEC"), and (b) if not filed with the SEC, complete. Each of the License Agreements is in full force and effect in the form so delivered. There have been no amendments or modifications to any of the License Agreements, other than as delivered to Buyer. Seller is in compliance with the License Agreements and is not in breach or default of its obligations under any of the License Agreements which breach or default could reasonably be expected to have a material adverse effect on Buyer's rights to receive payments hereunder. The execution, delivery and performance by Seller of this Agreement does not and will not contravene or constitute a breach or default of any provision of any of the License Agreements.

3.10 INTELLECTUAL PROPERTY.

(a) EXHIBIT A specifies as to each Patent, as applicable (i) the owner(s); and (ii) the jurisdictions by or in which each Patent has issued or an application for patent has been filed, including the respective patent or application numbers.

(b) Seller has taken all commercially reasonable actions in the United States and in all applicable foreign jurisdictions to protect its ownership interests in the Patents in each such jurisdiction.

(c) (i) To Seller's Knowledge there is no set of facts that could reasonably be expected to render the Patents invalid or unenforceable;

(ii) All assignments from each inventor, as the case may be, to Seller or to a predecessor in interest of Seller, have been executed and recorded with the PTO for each of the Patents, except as could not reasonably be expected to adversely affect Buyer's rights to receive payments hereunder;

(iii) Seller does not lack any material intellectual property rights or licenses to exploit the Patents or to make, have made, use, sell, or offer for sale the Product for the purposes currently contemplated by Seller;

(iv) To Seller's Knowledge, there are no pending U.S. or foreign patent applications which, if issued, would limit or prohibit the ability of Seller to make, have made, use, sell, or offer for sale the Product for the purposes currently contemplated by Seller;

(v) To Seller's Knowledge, there is no pending or threatened (x) action, suit, proceeding or claim by others that Seller is infringing or would infringe any patent or other intellectual property right of any other Person by making, having made, using, selling, or offering for sale the Product, or (y) any proceeding or claim by others that any claim under any of the Patents is invalid; and

(vi) To Seller's Knowledge, the Patents have not been, and are not being, infringed by any third parties, except as could not reasonably be expected to adversely affect Buyer's rights to receive payments hereunder.

3.11 FINDERS' FEES. There is no investment banker, broker, finder or other intermediary which has been retained by or is authorized to act on behalf of Seller who might be entitled to any fee or commission from Buyer or any of its Affiliates upon consummation of the transactions contemplated by this Agreement.

3.12 OTHER INFORMATION. Neither this Agreement nor any of the exhibits appended hereto contains any untrue statement of a material fact or omits to state a material fact necessary in order to make the statements contained therein not misleading, except as could not reasonably be expected to have a material adverse effect on Buyer's rights hereunder.

ARTICLE IV

REPRESENTATIONS AND WARRANTIES OF BUYER

Buyer hereby represents and warrants to Seller that:

4.01 ORGANIZATION AND EXISTENCE. Buyer is duly organized, validly existing and in good standing under the laws of its jurisdiction of organization and has

all applicable powers and all material governmental licenses, authorizations, consents and approvals required to carry on its business as now conducted.

4.02 CORPORATE AUTHORIZATION. The execution, delivery and performance by Buyer of this Agreement and the consummation by Buyer of the transactions contemplated hereby are within the powers of Buyer and have been duly authorized by all necessary action on the part of Buyer. This Agreement constitutes a valid and binding agreement of Buyer.

4.03 GOVERNMENTAL AUTHORIZATION. The execution, delivery and performance by Buyer of this Agreement does not require any action by or in respect of, or filing with, any Governmental Authority (except for actions taken or filings made, if any).

4.04 NON-CONTRAVENTION. The execution, delivery and performance by Buyer of this Agreement does not and will not (i) contravene or conflict with the organizational documents of Buyer, (ii) contravene or conflict with or constitute a violation of any provision of any law or regulation binding upon or applicable to Buyer; or (iii) contravene or conflict with or constitute a violation of any judgment, injunction, order or decree binding upon or applicable to Buyer, except as could not reasonably be expected to materially adversely affect Seller's rights to receive or retain the Purchase Price paid hereunder.

4.05 FINDERS' FEES. There is no investment banker, broker, finder or other intermediary that has been retained by or is authorized to act on behalf of Buyer who might be entitled to any fee or commission from Seller upon consummation of the transactions contemplated by this Agreement.

4.06 FINANCING. At the Closing, Buyer will have sufficient funds available to pay the Purchase Price.

4.07 LITIGATION. There is no action, suit, investigation or proceeding (or any basis therefor), of which Buyer has received notice, pending against, or to the knowledge of Buyer, threatened against or affecting, Buyer before any court or arbitrator or any governmental body, agency or official which could reasonably be expected to materially adversely affect Seller's rights to receive or retain the Purchase Price paid hereunder.

4.08 COMPLIANCE WITH LAWS. Buyer is not in violation of, has not violated, and to the knowledge of Buyer, is not under investigation with respect to and has not been threatened to be charged with or given notice of any violation of, any law, rule, ordinance or regulation, or judgment, order or decree entered by any Governmental Authority which could reasonably be expected to materially adversely affect Seller's rights to receive or retain the Purchase Price paid hereunder.

ARTICLE V

COVENANTS

Buyer and Seller agree that:

5.01 MAINTENANCE OF RIGHTS.

(a) Seller shall use commercially reasonable efforts (as such term relates to Seller's business taken as a whole) to maintain the Patents and to enforce the Patents against infringers.

(b) Seller shall exercise fully all of its rights, and comply fully with all of its obligations, under the License Agreements, except as could not reasonably be expected to adversely affect Net Sales. Seller shall not permit any amendment or modification to the License Agreements that could reasonably be expected to reduce Net Sales. Seller shall provide to Buyer a copy of any

amendment or modification to, or waiver under, any of the License Agreements.

(c) Seller shall not sell, transfer, assign, license or otherwise dispose of any right, title or interest in or to the Patents, its interest in the License Agreements or its business of selling or having sold the Product without making such sale, transfer, assignment, license or disposition subject to Buyer's rights hereunder (including Buyer's rights to receive 1% on Net Sales of the Product).

(d) Seller shall not grant any Lien on the Product, Patents or the License Agreements except any such Lien as would be subordinate in priority and right of payment to the security interest granted by Seller to Buyer pursuant to Section 2.01(a) hereof.

5.02 CONFIDENTIALITY. The parties have entered into a Confidential Disclosure Agreement dated January 24, 2002 (the "Confidential Disclosure Agreement") which, to the extent not otherwise inconsistent with this Agreement, remains in full force and effect.

5.03 PUBLIC ANNOUNCEMENT. The Confidential Disclosure Agreement notwithstanding, each party shall have the right to make disclosures relevant to this Agreement that are required by law, governmental rules and regulations or the rules and regulations of any applicable securities exchange or trading system. The parties agree to consult with each other before issuing any other press release or making any other public statement with respect to this Agreement.

5.04 PAYMENTS.

(a) The royalty payments due pursuant to Section 2.01 hereof shall be calculated quarterly as of the end of each Calendar Quarter and shall be paid within thirty (30) Business Days next following such date. Every such payment shall be supported by the accounting described in Section 5.05 of this Agreement. All payments shall be made in United States dollars by federal funds wire transfer at New York pursuant to instructions received from Buyer. When Product is sold for currency other than United States dollars, the earned royalties will be determined based on the corresponding United States dollar amounts appearing in Seller's books and records. "Calendar Quarter" shall mean the period of three (3) consecutive calendar months ending on March 31, June 30, September 30 or December 31, as the case may be.

(b) Any payment due hereunder (pursuant to Section 2.01) which is not made when due shall bear interest until paid at the prime interest rate as announced by Citibank, N.A., plus 2%, compounded monthly. Any payment due hereunder (pursuant to Section 2.01) shall be made without offset or deduction for any claim of rescission, offset or counterclaim or for any defense or other liability or obligation of Seller or any of its Affiliates. By notice to Seller in writing, Buyer may instruct Seller to make such payments to another of its accounts or the account(s) of Buyer's Affiliate(s); provided that Buyer provides to Seller any applicable tax forms exempting Seller from any withholding, transfer, value-added or sales tax imposed against Seller by any Governmental Authority.

5.05 ACCOUNTING REPORTS. With each quarterly payment, Seller shall deliver to Buyer a full and accurate accounting to include at least the following information relating to such payment: (a) Total receipts for each Product subject to royalty, by country and, to the extent used in any royalty calculations during such quarter, the applicable currency exchange rate used pursuant to Section 5.04;

(b) Deductions applicable as provided in the definition of Net Sales in Section 1.01;

(c) Amounts received from Sublicensees relating to sales of Products; and

(d) Names and addresses of all Sublicensees.

5.06 AUDITS. Not more than once in any calendar year, at Buyer's request and at Buyer's expense, Seller shall cause a certified public accountant

mutually acceptable to the parties to conduct an audit of the relevant books and records of Seller, for the purposes of verifying amounts due Buyer hereunder. Buyer's then-current independent accountant shall be deemed mutually acceptable to the parties under the preceding sentence. Such books and records are confidential information of Seller and may not be disclosed to Buyer. Accountant shall report to Buyer only that the amounts paid hereunder have been correct, or the amount of shortfall or overpayment, if any. Seller shall promptly pay any shortfall reported by such accountant and Buyer shall promptly refund any overpayment. If any shortfall in payments owed to Buyer exceeds 5% of the aggregate payments for Buyer for such calendar year, then Seller shall reimburse Buyer for the cost of such audit.

5.07 COMMERCIALLY REASONABLE EFFORTS; FURTHER ASSURANCES. Subject to the terms and conditions of this Agreement, each party will use its commercially reasonable efforts to take, or cause to be taken, all actions and to do, or cause to be done, all things necessary under applicable laws and regulations to consummate the transactions contemplated by this Agreement; provided that Buyer shall not be obligated to pay any amount of money or deliver any goods or services to Seller or any third party except as otherwise expressly provided in this Agreement. Buyer and Seller agree to execute and deliver such other documents, certificates, agreements and other writings (including any UCC filings requested by Buyer) and to take such other actions as may be reasonably necessary in order to consummate or implement expeditiously the transactions contemplated by this Agreement.

ARTICLE VI

SURVIVAL; INDEMNIFICATION

6.01 INDEMNIFICATION.

(a) Seller hereby indemnifies Buyer and its Affiliates against, and agrees to hold each of them harmless from, any and all damage, loss, liability and expense (including, without limitation, reasonable expenses of investigation and reasonable attorneys' fees and expenses in connection with any action, suit or proceeding) (collectively, "Loss") incurred or suffered by Buyer and its Affiliates arising out of any misrepresentation or breach of warranty, covenant or agreement made or to be performed by the Seller pursuant to this Agreement, including any failure by the Seller to satisfy any of the Excluded Liabilities and Obligations.

(b) Buyer hereby indemnifies Seller and its Affiliates against, and agrees to hold each of them harmless from, any and all Loss incurred or suffered by Seller and its Affiliates arising out of (i) any misrepresentation or breach of warranty contained in Article IV; and (ii) any breach of Section 5.02.

6.02 PROCEDURES; NO WAIVER; EXCLUSIVITY.

(a) The party seeking indemnification under Section 6.01 (the "Indemnified Party") agrees to give prompt notice to the party against whom indemnity is sought (the "Indemnifying Party") of the assertion of any claim, or the commencement of any suit, action or proceeding in respect of which indemnity may be sought under Section 6.01; provided that the failure to give such notice shall not affect the Indemnified Party's rights hereunder except to the extent the Indemnifying Party is materially prejudiced by such failure. The Indemnifying Party shall control the defense of any such third party suit, action or proceeding at its own expense. The Indemnifying Party shall not be liable under Section 6.01 for any settlement effected without its prior consent of any claim, litigation or proceeding in respect of which indemnity may be sought hereunder; provided that such consent may not be unreasonably withheld.

(b) No investigation by either party of other matters shall limit such party's rights to indemnification hereunder.

(c) After the Closing, Section 6.01 will provide the exclusive remedy for any misrepresentation, breach of warranty, covenant or other agreement or other claim arising out of this Agreement or the transactions contemplated hereby.

(d) The representations, warranties, covenants and agreements contained herein shall survive the Closing. The expiration of any term of this Agreement

shall not excuse any party hereto from its liability in respect of any breach hereof prior to such expiration.

ARTICLE VII

TERM

7.01 TERM. This Agreement will expire simultaneously with the last to expire right to receive payment under Section 2.02; provided, that Buyer shall have received all applicable payments due hereunder. The provisions of Section 5.02, Section 8.03 and Article VI in respect of any breaches prior to the expiration date of this Agreement, shall survive any expiration of this Agreement.

ARTICLE VIII

MISCELLANEOUS

8.01 NOTICES. All notices, requests and other communications to either party hereunder shall be in writing and shall be given by regular mail or courier as follows:

(a) if to Buyer, to:

c/o Royalty Pharma Management, LLC
675 Third Avenue, Suite 3000
New York, NY 10017
Attention: Alexander B. Kwit, Esq.
Telecopy: (917) 368-0021

with a copy to:

Testa, Hurwitz & Thibeault, LLP
125 High Street
Boston, MA 02110
Attention: F. George Davitt, Esq.
Telecopy: (617) 248-7100

(b) if to Seller, to:

Ligand Pharmaceuticals Incorporated
10275 Science Center Drive
San Diego, CA 92121
Attention: General Counsel
Facsimile: (858) 550-1825

or to such other address as any party may have furnished to the other in writing in accordance herewith. All notices and other communications given to any party hereto in accordance with the provisions of this Agreement shall be deemed to have been given on the date of receipt.

8.02 AMENDMENTS; NO WAIVERS.

(a) Any provisions of this Agreement may be amended or waived if, and only if, such amendment or waiver is in writing and signed, in the case of an amendment, by Buyer and Seller or in the case of a waiver, by the party against whom the waiver is to be effective.

(b) No failure or delay by either party in exercising any right, power or privilege hereunder shall operate as a waiver thereof nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege. The rights and remedies herein provided shall be cumulative and not exclusive of any rights or remedies provided by law.

8.03 EXPENSES. Except as otherwise provided herein, all costs and expenses incurred in connection with this Agreement shall be paid by the party incurring such cost or expense.

8.04 SUCCESSORS AND ASSIGNS. The provisions of this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns. After the Closing, without limiting the generality of the foregoing, nothing herein shall prohibit or restrict Buyer from assigning any of its rights and obligations hereunder to any Affiliate of Buyer or any other Person; provided that, without the consent of Seller, no such assignment shall relieve Buyer from its obligations hereunder.

8.05 GOVERNING LAW; JURISDICTION. This Agreement shall be construed in accordance with and governed by the law of the State of New York. Process in any such suit, action or proceeding may be served on any party anywhere in the world, whether within or without the jurisdiction of any such court.

8.06 COUNTERPARTS; EFFECTIVENESS. This Agreement may be signed in any number of counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument. This Agreement shall become effective when each party hereto shall have received a counterpart hereof signed by the other party hereto.

8.07 ENTIRE AGREEMENT. This Agreement and the Exhibits hereto, and the Confidential Disclosure Agreement constitute the entire agreement between the parties with respect to the subject matter hereof and supersede all prior agreements, understandings and negotiations, both written and oral, between the parties with respect to the subject matter of this Agreement; provided that in the event of any inconsistency between this Agreement and the Confidential Disclosure Agreement, the provisions of this Agreement shall govern. No representation, inducement, promise, understanding, condition or warranty not set forth herein has been made or relied upon by either party hereto. None of this Agreement, nor any provision hereof, is intended to confer upon any Person other than the parties hereto any rights or remedies hereunder.

8.08 CAPTIONS. The titles and captions herein are included for convenience of reference only and shall be ignored in the construction or interpretation hereof.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as a deed by their respective authorized officers as of the day and year first above written.

LIGAND PHARMACEUTICALS INCORPORATED

By:/S/DAVID E. ROBINSON

Name: _____

Title: _____

By:/S/WARNER R. BROADDUS

Name: Warner R. Broaddus

Title: VP & General Counsel

PHARMACEUTICAL ROYALTIES INTERNATIONAL (CAYMAN) LTD.

By:/S/DAVID MADDEN

Name: D. Madden

Title: Director

[SIGNATURE PAGE TO PURCHASE AGREEMENT]

EXHIBIT A

PATENTS AND PATENT APPLICATIONS

1. U.S. Patent No. 5,780,676, which issued from U.S. Serial No. 08/485,386, filed June 7, 1995. Owner, Seller.

2. U.S. Patent No. 5,962,731, which issued from U.S. Serial No. 08/472,784, filed June 7, 1995. Owner, Seller.

3. U.S. Patent No. 5,466,861, which issued from U.S. Serial No. 07/982,305, filed November 25, 1992. Owners, SRI International and The Burnham Institute.

4. Australian Patent No. 694177, which issued from Serial No. 55864/94, filed April 22, 1993. Owner, Seller.

5. Brazilian Patent Application Serial No. PI 1100895-4, filed May 14, 1997. Owner, Seller.

6. Brazilian Patent Application Serial No. PI 1100880-6, filed October 22, 1993. Owner, Seller.

7. Canadian Patent Application Serial No. 2,133,587, filed April 22, 1993. Owner, Seller.

8. Canadian Patent Application Serial No. 2,153,235, filed October 22, 1993. Owner, Seller.

9. European Patent No. 0637297, which issued from Serial No. 93910835.3, filed April 22, 1993 (including any corresponding national patents, applications and/or supplemental protection certificates). Owner, Seller.

10. European Patent Application Serial No. 99118827.7, filed April 22, 1993 (including any corresponding national patents, applications and/or supplemental protection certificates). Owner, Seller.

11. European Patent Application Serial No. 99118828.5, filed April 22, 1993 (including any corresponding national patents, applications and/or supplemental protection certificates). Owner, Seller.

12. Japanese Patent Application Serial No. 518708/1993, filed April 22, 1993. Owner, Seller.

13. Japanese Patent Application Serial No. 515962/1994, filed October 22, 1993. Owner, Seller.

14. Korean Patent No. 10-305154, which issued from Serial No. 703747/1994, filed April 22, 1993. Owner, Seller.

15. Korean Patent No. 306855, which issued from Serial No. 702842/1995, filed October 22, 1993. Owner, Seller.

16. Mexican Patent No. 208320, which issued from Serial No. 932349, filed April 22, 1993. Owner, Seller.

17. Norwegian Patent No. 303936, which issued from Serial No. 943943, filed April 22, 1993. Owner, Seller.

18. Russian Patent No. 2144913, which issued from Serial No. 94046449.00, filed April 22, 1993. Owner, Seller.

EXHIBIT 21.1

SUBSIDIARIES OF THE REGISTRANT
LIGAND PHARMACEUTICALS INCORPORATED
LIST OF SUBSIDIARIES

<TABLE>
<CAPTION>

Name	Jurisdiction of Incorporation
<S>	<C>
Glycomed Incorporated	California
Allergan Ligand Retinoid Therapeutics, Inc.	Delaware
Ligand Pharmaceuticals International, Inc.	Delaware
Ligand JVR, Inc.	Delaware
Seragen Incorporated	Delaware
Seragen Technology, Inc.	Delaware
Ligand Pharmaceuticals (Canada) Incorporated	Saskatchewan, Canada
Ligand Pharmaceuticals UK Limited	United Kingdom

</TABLE>

EXHIBIT 23.1

INDEPENDENT AUDITORS' CONSENT

We consent to the incorporation by reference in Registration Statement Nos. 333-53992, 333-87110 and 333-102483 on Form S-3 and Registration Statement Nos. 333-91414, 333-66256, 333-43252, 333-79447, 333-69919, 333-32297, 333-12913, 033-92436, 033-92470, 033-85366, 033-66186 and 033-54674 on Form S-8 of Ligand Pharmaceuticals Incorporated, of our report dated February 25, 2003 (which report expresses an unqualified opinion and includes an explanatory paragraph referring to a change in accounting principle), appearing in this Annual Report on Form 10-K of Ligand Pharmaceuticals Incorporated for the year ended December 31, 2002.

/S/DELOITTE & TOUCHE LLP

San Diego, California
March 21, 2003

EXHIBIT 99.1

CERTIFICATION BY PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

In connection with the accompanying Annual Report on Form 10-K of Ligand Pharmaceuticals Inc. for the year ended December 31, 2002, I, David E. Robinson, Chairman, President and Chief Executive Officer of Ligand Pharmaceuticals Inc., hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge and belief, that:

(1) such Annual Report on Form 10-K for the year ended December 31, 2002, fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in such Annual Report on Form 10-K for the year ended December 31, 2002, fairly presents, in all material respects, the financial condition and results of operations of Ligand Pharmaceuticals Inc.

Date: March 21, 2003 /S/DAVID E. ROBINSON

David E. Robinson
CHAIRMAN, PRESIDENT AND CHIEF EXECUTIVE OFFICER

EXHIBIT 99.2

CERTIFICATION BY CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

In connection with the accompanying Annual Report on Form 10-K of Ligand Pharmaceuticals Inc. for the year ended December 31, 2002, I, Paul V. Maier, Senior Vice President, Chief Financial Officer of Ligand Pharmaceuticals Inc., hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge and belief, that:

(1) such Annual Report on Form 10-K for the year ended December 31, 2002, fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in such Annual Report on Form 10-K for the year ended December 31, 2002, fairly presents, in all material respects, the financial condition and results of operations of Ligand Pharmaceuticals Inc.

Date: March 21, 2003 /S/PAUL V. MAIER

Paul V. Maier
SENIOR VICE PRESIDENT, CHIEF FINANCIAL OFFICER