AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON JANUARY 13, 2003
REGISTRATION STATEMENT NO. 333-_____

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SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM S-3
REGISTRATION STATEMENT
UNDER THE SECURITIES ACT OF 1933

LIGAND PHARMACEUTICALS INCORPORATED
(Exact Name of Registrant as Specified in its Charter)

DELAWARE
(State or Other Jurisdiction of Incorporation or Organization)

77-0160744
(I.R.S. Employer Identification Number)

10275 Science Center Drive, San Diego, California 92121-1117
(858) 550-7500
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

David E. Robinson
President and Chief Executive Officer
LIGAND PHARMACEUTICALS INCORPORATED

10275 Science Center Drive, San Diego,
California 92121-1117 (858) 550-7500
(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

Copies to:
Faye H. Russell, Esq.
CLIFFORD CHANCE US LLP
3811 Valley Centre Drive, 2nd Floor
San Diego, California 92130
(858) 720-3500

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box: [ ]

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box: [x]

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering: [ ]

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering: [ ]

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box: [ ]

CALCULATION OF REGISTRATION FEE

<TABLE>
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TITLE OF SECURITIES TO BE REGISTERED	AMOUNT TO BE REGISTERED	PROPOSED MAXIMUM AGGREGATE OFFERING PRICE (2)	AMOUNT OF REGISTRATION FEE
<S>	<C>	<C>	<C>
6% Convertible Subordinated Notes due 2007 (1)	$155,250,000	$155,250,000	$ 14,283
Common stock, $0.001 per share	25,149,025(3)	--	--(4)

</TABLE>

(1) The 6% Convertible Subordinated Notes due 2007 were issued by the registrant on November 26, 2002 and November 27, 2002 in an offering exempt from registration under the Securities Act of 1933. Under a registration rights agreement dated November 26, 2002 among the registrant and the initial purchaser of the notes which resold the notes in offerings exempt from registration under Rule 144A of the Securities Act of 1933, the registrant is obligated to file this registration statement to permit registered resales by the selling security holders of the notes and the shares of common stock underlying the notes.

(2) Estimated solely for purposes of calculating the registration fee pursuant to Rule 457(i) of the Securities Act of 1933 based upon the offering price of the notes when the registrant originally sold the notes on November 26, 2002 and November 27, 2002 in an offering that was exempt from registration under the Securities Act of 1933.

(3) Represents the number of shares of common stock issuable upon conversion of the 6% Convertible Subordinated Notes due 2007 registered hereby. 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, subject to adjustment in certain circumstances. Pursuant to Rule 416 under the Securities Act of 1933, such number of shares included an indeterminate number of shares of common stock as may be issuable from time to time upon the conversion of the notes as a result of a stock split, stock dividend, capitalization or similar event and the anti-dilution provisions thereof.

(4) The shares of common stock issuable upon conversion of the notes will be issued for no additional consideration, and therefore no registration fee is required pursuant to Rule 457(i) of the Securities Act of 1933.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1933, AS AMENDED, OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE SEC, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. The preliminary prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED JANUARY 13, 2003

PROSPECTUS

LIGAND PHARMACEUTICALS INCORPORATED
$155,250,000 6% CONVERTIBLE SUBORDINATED NOTES DUE 2007 AND 25,149,025 SHARES OF COMMON STOCK ISSUABLE UPON CONVERSION OF THE NOTES

The notes and the common stock issuable upon conversion of the notes may be offered and sold from time to time pursuant to this prospectus by the holders of those securities. The selling security holders will receive all of the net proceeds from the sale of the securities and will pay any applicable discounts, commission or concessions. The selling security holders and any underwriters, broker-dealers or agents that participate in the sale of the securities may be "underwriters" within the meaning of the Securities Act, and any discounts, commissions, concessions or profit they earn on any resale of the securities may be underwriting discounts or commissions under the Securities Act.

In November 2002 we issued and sold $155,250,000 of 6% convertible subordinated

notes due 2007 in a private placement in reliance on an exemption from registration under the Securities Act. The initial purchaser of the notes in that offering 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.

We will pay cash interest on the notes semi-annually on May 16 and November 16 of each year, with the first payment to be made on May 16, 2003 at the rate of 6% per annum. The notes will mature on November 16, 2007.

We have purchased and pledged to a trustee under an indenture, as security for the notes and for the exclusive ratable benefit of the holders of the notes, approximately $18 million of US government securities. These US government securities are sufficient, upon receipt of the scheduled principal and interest payments of such securities, to provide for the payment in full of the first four scheduled interest payments on the notes when due. Except to the extent described above, the notes will be unsecured. The notes are junior to all of our existing and future senior indebtedness and structurally subordinated to all existing and future liabilities of our subsidiaries, including trade payables, lease commitments and monies borrowed. As of September 30, 2002, we and our subsidiaries had approximately $8.6 million of consolidated indebtedness effectively ranking senior to the notes, of which $2.5 million has subsequently been retired. The indenture under which the notes were issued does not restrict our or our subsidiaries' ability to incur additional senior or other indebtedness.

On or after November 22, 2005, we may at our option redeem the convertible notes, in whole or in part, at the prices stated in this prospectus, plus any accrued and unpaid interest to the redemption date. Holders of the notes may require us to repurchase all or a portion of their convertible notes upon a change in control, as defined in the indenture, at 100% of their principal amount, plus any accrued and unpaid interest to the repurchase date.

Our common stock is traded on The Nasdaq National Market under the symbol "LGND." On January 10, 2003, the average of the high and low sales prices for our common stock was $5.39. The notes trade on the Private Offerings, Resales and Trading Through Linkages or "PORTAL" Market of the National Association of Securities Dealers, Inc. However, notes sold pursuant to this prospectus will no longer be eligible for trading on the PORTAL market. We do not intend to list the notes on any securities exchange or automated quotation system.

You should read this prospectus and any prospectus supplement carefully before you invest.

INVESTING IN THE NOTES AND THE COMMON STOCK INVOLVES A HIGH DEGREE OF RISK. SEE "RISK FACTORS" COMMENCING ON PAGE 7 FOR A DISCUSSION OF SOME IMPORTANT RISKS YOU SHOULD CONSIDER BEFORE BUYING ANY OF OUR SECURITIES.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED THESE SECURITIES, OR PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is January 13, 2003

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PROSPECTUS SUMMARY

THE FOLLOWING IS A SUMMARY HIGHLIGHTING SELECTED INFORMATION APPEARING ELSEWHERE IN THIS PROSPECTUS AND MAY NOT CONTAIN ALL OF THE INFORMATION THAT IS IMPORTANT TO YOU. THIS PROSPECTUS INCLUDES INFORMATION ABOUT THE SECURITIES WE ARE OFFERING, AS WELL AS INFORMATION REGARDING OUR BUSINESS AND DETAILED FINANCIAL DATA. WE ENCOURAGE YOU TO READ THIS PROSPECTUS IN ITS ENTIRETY, INCLUDING THE DOCUMENTS INCORPORATED BY REFERENCE.

OUR COMPANY

We are a biopharmaceutical company involved in the discovery, development and commercialization of new drugs that address 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 marketed products and products in development are designed to be safer, more effective, more convenient (taken orally or topically administered) and more cost efficient than existing therapies.

We currently market five products and are developing, either exclusively or with our collaboration partners, 23 selected additional products in development for multiple therapeutic indications, as summarized in the table below. Our five marketed products are Avinza(TM), ONTAK(R), Targretin(R) capsules, Targretin(R) gel and Panretin(R) gel. Our efforts are directed toward building a profitable biopharmaceutical company that generates income from biopharmaceutical products that we develop and market, and from research, milestone and royalty revenues from our collaborations with large pharmaceutical partners.

PRODUCT SUMMARY BY THERAPEUTIC AREA (LIGAND AND COLLABORATIVE PARTNERS)

<TABLE>
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MARKETED PRODUCTS	CLINICAL PROGRAMS	PRE-CLINICAL PROGRAMS
<S>	<C>	<C>
(5 PRODUCTS)	(4 PHASE III / 5 PHASE II / 6 PHASE I PRODUCTS IN DEVELOPMENT)	(8 PRODUCTS IN DEVELOPMENT)
Cancer	Cancer	Aging and frailty
Moderate/Severe Pain	Hormone replacement therapy	Autoimmune diseases
	Osteoporosis	Dermatology
	Dermatology	Diabetes
	Diabetes	Hormone replacement therapy

Inflammation	Inflammatory diseases
Thrombocytopenia	Sexual dysfunction
Dyslipidemia	

OUR MARKETED PRODUCTS

PRODUCT	US APPROVED INDICATION	EUROPEAN STATUS
Avinza	Once-daily treatment of chronic moderate-to-severe pain	Not applicable
ONTAK	Cutaneous T-cell lymphoma	MAA submitted
Targretin capsules	Cutaneous T-cell lymphoma	MA issued
Targretin gel	Cutaneous T-cell lymphoma	MAA withdrawn
Panretin gel	Kaposi's sarcoma	MA issued

AVINZA. Avinza is marketed for the once-daily treatment of chronic moderate-to-severe pain to patients who require continuous, around-the-clock opioid therapy. We launched US sales and marketing of Avinza with distribution in June 2002 and national promotion in July 2002 following receipt of FDA approval in March 2002. We licensed exclusive rights to Avinza in the United States and Canada from Elan in 1998. Avinza is an oral once-daily morphine product and has a more rapid onset and more stable pharmocokinetic profile with less peak-to-trough fluctuation than other competing sustained release products. The sustained-release opioid market was estimated at $2.3 billion in the United States in 2001.

ONTAK. ONTAK is marketed for the treatment of patients with persistent or recurrent cutaneous T-cell lymphoma, or CTCL. ONTAK was approved by the FDA and launched in the United States 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 three Phase II clinical trials for the treatment of patients with B-cell Non-Hodgkin's lymphoma. Clinical trials using ONTAK for the treatment of patients with psoriasis, rheumatoid arthritis and chronic lymphocytic leukemia, or CLL, have also been conducted, and further trials are being considered. There are physician-sponsored Phase II trials ongoing in CLL, peripheral T-cell lymphoma and graft versus host disease. We believe that these indications provide significantly larger market opportunities than CTCL. A European MAA for CTCL was filed in December 2001, and a decision from the EMEA is expected in the first half of 2003. In Europe, ONTAK will be marketed as ONZAR, if approved.

TARGRETIN CAPSULES. Targretin capsules are marketed for the treatment of patients with CTCL. We launched US 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 for a variety of larger market opportunities, including non-small cell lung cancer and moderate-to-severe plaque psoriasis. 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 Europe in the fourth quarter of 2001.

TARGRETIN GEL. Targretin gel is marketed for the treatment of patients with CTCL. We launched US 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. Preliminary data presented at the American Academy of Dermatology meeting in March 2001 showed that Targretin gel produced an overall response rate of 75% in patients with untreated, early-stage CTCL. Targretin gel is currently in clinical development for hand dermatitis, and we released interim Phase I/II data from a 55-patient trial in September 2002.

PANRETIN GEL. Panretin gel is marketed for the treatment of patients with AIDS-related Kaposi's sarcoma, or KS. Panretin gel was approved by the FDA and launched in February 1999 as the first FDA-approved patient-applied topical treatment for AIDS-related Kaposi's sarcoma. 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 United States 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.

SALES AND MARKETING

As of December 2002, our marketing and selling organization consisted of approximately 120 people. Since 1998, we had assembled a 35-person sales force for the United States focused on specialty cancer sales and selling ONTAK, Targretin capsules, Avinza, Targretin gel and Panretin gel. We have also formed a separate sales force of approximately 50 representatives to market only Avinza by targeting pain specialists and general pain centers not currently served by our specialty cancer representatives. Since a relatively small number of physicians are responsible for writing a majority of prescriptions in our target markets, we believe that the size of our sales force is appropriate to reach our target physicians.

COLLABORATIVE RESEARCH AND DEVELOPMENT PROGRAMS

We are currently involved in the research phase of research and development collaborations with Eli Lilly and TAP Pharmaceuticals. Collaborations in the development phase are being pursued by Abbott Laboratories, Allergan, GlaxoSmithKline, Organon (AKZO-Nobel), Pfizer and Wyeth (formerly American Home Products). Currently, our corporate partners have ten Ligand products in human development, four products moving toward regulatory filings for human clinical trials and numerous compounds in research and pre-clinical stages. These products are being studied for the treatment of health problems in large markets such as osteoporosis, diabetes, contraception and cardiovascular disease. Three of these partner products are being tested in three separate pivotal Phase III clinical trial programs: lasofoxifene, which is being developed by Pfizer for osteoporosis; and bazedoxifene (formerly TSE-424), which is being developed by Wyeth both as monotherapy for osteoporosis and in combination with Wyeth's Premarin as hormone replacement therapy, or HRT.

PROPRIETARY TECHNOLOGY PLATFORM

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, a technology for regulating how genes control cellular activity. Our proprietary technologies involve two natural mechanisms that regulate gene activity: hormone-activated intracellular receptors, or IRs, a type of sensor or switch inside cells that turns genes on and off and alters the production of proteins in response to hormones, and Signal Transducers and Activators of Transcription, or STATs, another type of protein production switch. Targretin capsules, Targretin gel, Panretin gel and all but one of our corporate partner products currently on human development track were discovered using our IR technology.

PRODUCT PIPELINE SUMMARY

We are developing several proprietary products for which we have worldwide rights for a variety of cancers, skin diseases and other indications, as summarized in the table below. 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. In addition to our proprietary product pipeline, our collaborative partners have multiple products in human development, as well as numerous compounds in research and pre-clinical stages.

PRODUCT PIPELINE SUMMARY (CONTINUED)

<TABLE>
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PRODUCT	CLINICAL INDICATION	DEVELOPMENT STATUS	COMMERCIALIZATION RIGHTS
<S>	<C>	<C>	<C>
OUR MARKETED PRODUCTS AND DEVELOPMENT PROGRAMS			
Avinza.....	Chronic pain (moderate-to-severe)	Marketed	United States and Canada
ONTAK.....	Cutaneous T-cell lymphoma	Marketed	Worldwide
	Peripheral T-cell lymphoma	Phase II	
	Chronic lymphocytic leukemia	Phase II	
	B-cell Non-Hodgkin's lymphoma	Phase II	

Targretin capsules.....	Cutaneous T-cell lymphoma	Marketed	Worldwide
	Non-small cell lung cancer (combination and monotherapy)	Phase III	
	Psoriasis (moderate to severe)	Phase II	
Targretin gel.....	Cutaneous T-cell lymphoma	Marketed	Worldwide
	Hand dermatitis	Phase II	
	Psoriasis	Phase II	
Panretin gel.....	Kaposi's sarcoma	Marketed	Worldwide
Panretin capsules.....	Kaposi's sarcoma, bronchial metaplasia	Phase II	Worldwide
LGD 1550.....	Advanced cancers	Phase II	Worldwide
	Acne, psoriasis	Pre-clinical	
LGD 1331.....	Acne, prostate cancer, androgenetic alopecia, hirsutism	Pre-clinical	Worldwide
Glucocorticoid agonist....			
	Inflammation, cancer	Pre-clinical	Worldwide
Mineralocorticoid receptor modulators....			
	Congestive heart failure, hypertension	Research	Worldwide

OUR COLLABORATIVE RESEARCH AND DEVELOPMENT PROGRAMS

Lasofoxifene.....	Osteoporosis and breast cancer prevention	Phase III	Pfizer
Bazedoxifene (TSE424).....	Osteoporosis	Phase III	Wyeth
Bazedoxifene + Premarin...	Hormone replacement therapy	Phase III	Wyeth
ERA 923.....	Breast cancer	Phase II	Wyeth
NSP 989.....	Contraception, hormone replacement therapy	Phase I	Wyeth
GW 516.....	Dyslipidemia	Phase I	GlaxoSmithKline
LY 929.....	Type II diabetes, dyslipidemia	Phase I	Lilly
LY 818.....	Type II diabetes	Phase I	Lilly
SB-497115.....	Thrombocytopenia	Phase I	GlaxoSmithKline
LY 674.....	Dyslipidemia	Phase I	Lilly
LGD 2226/ back-ups.....	Sexual dysfunction--hypogonadism	IND Track	TAP
NSP 808	Contraception, hormone replacement therapy	IND Track	Wyeth
LY YYY	Type II diabetes, dyslipidemia	IND Track	Lilly
LY WWW	Dyslipidemia	IND Track	Lilly

</TABLE>

Our principal executive offices are located at 10275 Science Center Drive, San Diego, California 92121, and our telephone number is (858) 550-7500. Our website is located at www.ligand.com. The information on our website is not a part of this prospectus.

Our trademarks, trade names and service marks referenced in this document include Ligand(R), Avinza(R), ONTAK(R), Panretin(R) and Targretin(R). Each other trademark, trade name or service mark appearing in this document belongs to its holder.

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

RECENT DEVELOPMENTS

EXPANSION OF RELATIONSHIP WITH ROYALTY PHARMA AG

On January 6, 2003, we announced that we had expanded our existing royalty-sharing arrangement with Royalty Pharma AG relating to three selective estrogen receptor modulator products, or SERMs, and had entered into a new royalty-sharing agreement relating to Targretin capsules.

Royalty Pharma exercised an expanded, existing option in December 2002 and agreed to pay Ligand $6.775 million for 0.1875% of potential future sales of the three SERM products which are now in Phase III development and for 1% of worldwide sales of Targretin capsules. In addition, we revised our existing agreement to provide Royalty Pharma with an additional option with a price of $12.5 million that may be exercised in the fourth quarter of 2003.

Under the new agreement relating to Targretin capsules, Royalty Pharma will receive 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 cutaneous T-cell lymphoma, or CTCL, until the product is approved for an indication other than CTCL.

MILESTONE PAYMENT AS GLAXOSMITHKLINE BEGINS HUMAN TRIALS FOR SB-497115

On January 6, 2003, we announced that we had earned a $2.0 million milestone payment from GlaxoSmithKline, which has begun human trials with SB-497115, an oral, small molecule drug that mimics the activity of thrombopoietin, a protein factor that promotes growth and production of blood platelets.

The research phase of our collaboration with GlaxoSmithKline ended in 2001. GlaxoSmithKline is responsible for the development and registration of any products resulting from the collaboration, and is obligated to pay us milestone payments as products move through the development process. GlaxoSmithKline has exclusive worldwide marketing rights to products resulting from the research, and will pay us royalties on sales of any products that make it to market.

COMPLETION OF RESTRUCTURING OF AVINZA LICENSE AND SUPPLY AGREEMENT

On December 9, 2002, we announced the completion of the restructuring of our AVINZA license and supply agreement with Elan Corporation, plc, thereby improving our gross margin on AVINZA and facilitating a potential co-promotion agreement with a future partner.

Under the terms of the restructuring, we paid Elan $100 million in return for a reduction in Elan's royalty rate on sales of AVINZA by us, rights to sublicense and obtain a co-promotion partner in the Unites States and Canada, and rights to qualify and purchase AVINZA from a second manufacturing source.

THE OFFERING

Issuer..... Ligand Pharmaceuticals Incorporated.

Notes..... $155.25 million aggregate principal amount of 6% convertible subordinated notes due November 16, 2007.

Interest..... We will pay 6% interest per annum on the principal amount payable on the notes semi-annually on May 16 and November 16 of each year, starting on May 16, 2003.

Maturity..... The notes will mature on November 16, 2007.

Conversion..... 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, subject to adjustment in certain circumstances. This rate results in an initial conversion price of $6.17 per share. See "Description of notes--Conversion Rights."

Security..... We have purchased and pledged to the trustee under the indenture, as security for the notes and for the exclusive ratable benefit of the holders of the notes, approximately $18 million of US government securities. These US government securities are sufficient, upon receipt of the scheduled principal and interest payments of such securities, to provide for the payment in full of the first four scheduled interest payments on the notes when due. The notes will not otherwise be secured. See "Description of notes--Security."

Sinking fund..... None.

Optional redemption..... On or after November 22, 2005, we may, at our option, redeem the notes, in whole or in part, at the redemption prices described in this prospectus, plus any accrued and unpaid interest to the redemption date. See "Description of notes--Redemption of Notes at Our Option."

Ranking..... Except to the extent described

under "Description of notes--Security," the notes will be unsecured. The notes are junior to all of our existing and future senior indebtedness and structurally subordinated to all existing and future liabilities of our subsidiaries, including trade payables, lease commitments and monies borrowed. As of September 30, 2002, we and our subsidiaries had approximately $8.6 million of consolidated indebtedness effectively ranking senior to the notes, of which $2.5 million has subsequently been retired. The indenture under which the notes were issued does not restrict our or our subsidiaries'ability to incur additional senior or other indebtedness. See "Description of notes--Subordination of Notes."

Change in control..... If we experience a change in control, as defined in the indenture, each holder may require us to purchase all or a portion of the holder's notes at 100% of the principal amount, plus any accrued and unpaid interest to the repurchase date. See "Description of notes--Change in Control Permits Purchase of Notes by Us at the Option of the Holder."

Events of default..... If an event of default on the notes has occurred and is continuing, the principal amount of the notes plus any accrued and unpaid interest may be declared immediately due and payable. These amounts automatically become due and payable upon certain events of default. See "Description of notes--Events of Default."

Use of proceeds..... We will not receive any proceeds from the sale of the notes or common stock offered in this prospectus. See "Selling Security Holders."

Listing and trading..... The notes trade on The PORTAL Market. Notes sold pursuant to this prospectus will no longer be eligible for trading on the PORTAL market. Our common stock is listed on the The National Market under the symbol"LGND."

Risk factors..... In analyzing an investment in the notes offered by this prospectus, prospective investors should carefully consider, along with other matters referred to in this prospectus, the information set forth under "Risk factors."

For a more complete description of the terms of the notes, see "Description of notes." For a more complete description of our common stock, see "Description of capital stock," including the documents incorporated by reference in this prospectus that are referred to in that section.

RATIO OF EARNINGS TO FIXED CHARGES

The following table sets forth our ratio of earnings to fixed charges for the years ended December 31, 1997, 1998, 1999, 2000, 2001 and the nine months ended September 30, 2002. As earnings are inadequate to cover the combined fixed charges, we have provided the deficiency amounts. For purposes of this computation, "Earnings" consist of loss before income taxes, excluding the cumulative effect of a change in accounting principle, plus fixed charges, and

"fixed charges" consist of interest and the amortization of debt issuance costs and debt discount incurred and the portion of rental expense deemed by us to be representative of the interest factor of rental payments under leases. The extent to which earnings were insufficient to cover fixed charges is as follows:

<TABLE>
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	YEAR ENDED DECEMBER 31,					NINE MONTHS ENDED
	1997	1998	1999	2000	2001	SEPTEMBER 30, 2002
	(IN THOUSANDS)					
<S>	<C>	<C>	<C>	<C>	<C>	<C>
Deficiency of earnings available to cover fixed charges	$100,150	$117,886	$74,719	$59,277	$42,995	$25,868

</TABLE>

For the periods indicated above, we had no outstanding shares of preferred stock with required dividend payments.

RISK FACTORS

IN ADDITION TO THE OTHER INFORMATION IN THIS PROSPECTUS, YOU SHOULD CAREFULLY CONSIDER THE FOLLOWING RISKS AND UNCERTAINTIES BEFORE PURCHASING OUR SECURITIES. EACH OF THESE RISKS AND UNCERTAINTIES COULD ADVERSELY AFFECT OUR BUSINESS, OPERATING RESULTS AND FINANCIAL CONDITION, AS WELL AS THE VALUE OF AN INVESTMENT IN OUR SECURITIES.

RISKS RELATED TO US AND OUR BUSINESS

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 September 30, 2002, our accumulated deficit was approximately $612 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 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 85 people, some of whom are contracted from a third party. 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. 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. To the extent we enter into co-promotion or licensing arrangements, any revenues we receive will depend on the marketing 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, 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.

Our products include 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 January 2001 and April 2002 we issued 2 million shares and 4.3 million shares of our common stock, respectively, in private placements. 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 are currently convertible 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 drug development programs. 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 and Phase II trials by our partner for ERA 923. Our 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, Roxane Laboratories, Inc.'s Oramorph SR and Purepac Phamaceutical Co.'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, since January 1, 2001, the daily last reported sale price of our common stock on The Nasdaq National Market has been as high as $19.99 and as low as $4.91. 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.

RISKS RELATED TO THE NOTES

THE NOTES ARE SUBORDINATED TO OUR SENIOR INDEBTEDNESS AND ARE STRUCTURALLY SUBORDINATED TO ALL LIABILITIES OF OUR SUBSIDIARIES.

The notes are junior in right of payment to all of our existing and future senior indebtedness, and are structurally subordinated to all liabilities of our subsidiaries, including trade payables. However, payment to the holders of the notes from the proceeds of the US government securities pledged to the trustee as security for the exclusive ratable benefit of the holders of the notes, as described under "Description of notes--Security," are subordinated to any senior indebtedness or subject to the subordination restrictions described in this prospectus. As of September 30, 2002, we and our subsidiaries had approximately $8.6 million of consolidated indebtedness effectively ranking senior to the notes, of which $2.5 million has subsequently been retired. The indenture governing the notes does not restrict the incurrence of senior indebtedness or other debt by us or our subsidiaries. A significant amount of our operations are conducted through subsidiaries. None of our subsidiaries has guaranteed or otherwise become obligated with respect to the notes. As a result, except as described under "Description of notes--Security," the notes are structurally subordinated to all indebtedness and other obligations of our subsidiaries with respect to our subsidiaries' assets. By reason of such subordination, in the event of the insolvency, bankruptcy, liquidation, reorganization, dissolution or winding up of our business, our assets will be available to pay the amounts due on the notes only after all of our senior indebtedness has been paid in full, and, therefore, there may not be sufficient assets remaining to pay amounts due on any or all of the notes then outstanding.
See "Description of notes--Subordination of Notes."

WE AND OUR SUBSIDIARIES MAY STILL BE ABLE TO INCUR SUBSTANTIALLY MORE DEBT WHICH COULD INCREASE OUR LEVERAGE AND THE RISK TO YOU OF HOLDING THE NOTES.

We and our subsidiaries may be able to incur substantial additional debt in the future. Some or all of any future borrowings could be senior to the notes. If a substantial amount of new debt in addition to the notes offered hereby is added to our and our subsidiaries' current debt levels, it could have important consequences to our business. For example, it could:

>> limit our ability to borrow additional amounts for working capital, capital expenditures, acquisitions, debt service requirements, execution of our growth strategy or other purposes;

>> require us to dedicate a substantial portion of our cash flow to pay principal and interest on our debt, which will reduce the funds available for working capital, capital expenditures, acquisitions and other general corporate purposes;

>> limit our flexibility in planning for and reacting to changes in our business and our industry that could make us more vulnerable to adverse changes in general economic, industry and competitive conditions and adverse changes in government regulation; and

>> place us at a disadvantage compared to our competitors that have less debt.

In addition, we cannot assure you that sufficient cash flow will be available to make all required principal payments. Therefore, we may need to refinance at least a portion of any outstanding debt as it matures. We may not be able to refinance this debt at all or on terms as favorable as the terms of the existing debt.

WE MAY NOT HAVE THE ABILITY TO RAISE THE FUNDS NECESSARY TO FINANCE THE CHANGE IN CONTROL OFFER REQUIRED BY THE INDENTURE.

If we undergo a change in control (as defined in the indenture), each holder of the notes may require us to repurchase all or a portion of the holder's notes. We cannot assure you that there will be sufficient funds available for any required repurchases of these securities if a change in control occurs. In addition, the terms of any agreements related to borrowing which we may enter from time to time may prohibit or limit or make our repurchase of notes an event of default under those agreements. If we fail to repurchase the notes in that circumstance, we will be in default under the indenture governing the notes. See "Description of notes--Change in Control Permits Purchase of Notes by Us at the Option of the Holder."

THE NOTES MAY NOT BE TRANSFERRED ABSENT AN EXEMPTION FROM REGISTRATION.

The notes are not registered under the Securities Act or any state securities laws. Accordingly, purchasers of the notes cannot offer or sell them absent an exemption from the registration requirements of the Securities Act and applicable state securities laws or pursuant to an effective registration statement covering their resale.

We intend to use our reasonable best efforts to cause the registration statement of which this prospectus is a part to become effective under the Securities Act. However, the SEC has broad discretion whether to declare any registration statement effective and may delay or deny the effectiveness of any registration statement for a variety of reasons. In the course of the SEC's review of the shelf registration statement of which this prospectus is a part, we may be required to make changes to the description of our business and other information and financial data, which changes could be significant.

ABSENCE OF A PUBLIC MARKET FOR THE NOTES COULD CAUSE PURCHASERS OF THE NOTES TO BE UNABLE TO RESELL THEM FOR AN EXTENDED PERIOD OF TIME.

Although the notes trade on the PORTAL Market, there is not an established trading market for the notes and we cannot assure you that an active public market for the notes will develop, or if such market develops, how liquid it will be. Notes sold pursuant to this prospectus will no longer be eligible for trading on the PORTAL market, and we do not intend to list the notes on any securities exchange or automated quotation system. At the time of the initial offering and sale of the notes, the initial purchaser of the notes informed us that it intended to make a market in the notes. The initial purchaser may cease its market making activities, if any, at any time without notice.

If the private placement of the notes prior to this registration statement violated securities laws, purchasers in the private offering would have the right to seek refunds or damages.

If a trading market does not develop or is not maintained, holders of the notes may experience difficulty in reselling, or an inability to sell, the notes. If a market for the notes develops, any such market may be discontinued at any time. If a public trading market develops for the notes, future trading prices of the notes will depend on many factors, including, among other things, the price of our common stock into which the notes are convertible, prevailing interest rates, our operating results and the market for similar securities. Depending on the price of our common stock into which the notes are convertible, prevailing interest rates, the market for similar securities and other factors, including our financial condition, the notes may trade at a discount from their principal amount.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus may contain forward-looking statements that involve substantial risks and uncertainties regarding future events or our future

performance within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. You can identify these statements by forward-looking words such as "may," "will," "expect," "intent," "anticipate," "believe," "estimate" and "continue" or similar words. You should read statements that contain these words carefully because they discuss our future expectations, contain projections of our future results of operations or of our financial condition or state other "forward-looking" information. We believe that it is important to communicate our future expectations to our investors. However, there may be events in the future that we are not able to accurately predict or control. The factors listed in the section captioned "Risk Factors," as well as any cautionary language included in this prospectus or incorporated by reference, provide examples of risks, uncertainties and events that may cause our actual results to differ materially from the expectations we describe in our forward-looking statements. Before you invest in our common stock, you should be aware that the occurrence of the events described in the "Risk Factors" section and described or incorporated by reference elsewhere in this prospectus could have a material adverse effect on our business, operating results and financial condition. All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by these statements. This caution is made under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and special reports, proxy statements and other information with the SEC. You may read and copy any document we file at the SEC's public reference rooms at 450 Fifth Street, N.W., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the public reference rooms. Our SEC filings are also available to the public on the SEC's website at http://www.sec.gov.

INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to incorporate by reference the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and later information filed with the SEC will update and supersede this information. We incorporate by reference the documents listed below and any future filings we make with the SEC under Section 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act of 1934 from the date of the initial registration statement until the completion of the offering of the securities covered by this prospectus:

- Our annual report on Form 10-K for the fiscal year ended December 31, 2001,
- Our quarterly reports on Form 10-Q for the quarterly periods ended March 31, 2002, June 30, 2002 and September 30, 2002,
- Our current reports on Form 8-K filed April 2, 2002, April 4, 2002, April 12, 2002, July 10, 2002, November 13, 2002, November 21, 2002, November 25, 2002 and December 2, 2002,
- The description of our common stock, contained in our registration statement on Form 8-A filed on November 21, 1994, including any amendments or reports filed for the purpose of updating such descriptions, and
- The description of our preferred stock purchase rights, contained in our registration statement on Form 8-A filed on September 30, 1996, including any amendments or reports filed for the purpose of updating such descriptions.

The reports and other documents that we file after the date of this prospectus will update and supersede the information in this prospectus.

You may request a copy of these filings, at no cost, by writing or telephoning us at:

Ligand Pharmaceuticals Incorporated
Attn: Investor Relations
10275 Science Center Road
San Diego, California 92121-1117
(858) 550-7500

YOU SHOULD RELY ONLY ON THE INFORMATION PROVIDED OR INCORPORATED BY REFERENCE IN THIS PROSPECTUS OR ANY RELATED PROSPECTUS SUMMARY. WE HAVE NOT AUTHORIZED ANYONE TO PROVIDE YOU WITH DIFFERENT INFORMATION. YOU SHOULD NOT

ASSUME THAT THE INFORMATION IN THIS PROSPECTUS OR ANY RELATED PROSPECTUS SUMMARY IS ACCURATE AS OF ANY DATE OTHER THAN THE DATE ON THE FRONT OF THE DOCUMENT.

USE OF PROCEEDS

We will receive no proceeds from the resale by the selling security holders of the notes or the common stock issuable upon conversion of the notes. The selling security holders will receive all of the net proceeds from the resales.

SELLING SECURITY HOLDERS

We initially issued the notes to the initial purchaser of the notes who then resold the notes in transactions exempt from the registration requirements of the Securities Act to persons reasonably believed to be "qualified institutional buyers" (as defined in Rule 144A under the Securities Act). The selling security holders (which term includes their transferees, pledgees, donees or their successors) may from time to time offer and sell pursuant to this prospectus or any applicable prospectus supplement any or all of the notes and common stock issuable upon conversion of the notes.

No offer or sale under this prospectus may be made by a selling security holder unless that holder is listed in the table in this prospectus or until that holder has notified us and a supplement to this prospectus has been filed or an amendment to the registration statement of which this prospectus is a part has become effective. We will supplement or amend this prospectus to include additional selling security holders upon request and upon provision of all required information to us. Information concerning the selling security holders may change from time to time and any changed information will be set forth in supplements to this prospectus if and when necessary.

The following table sets forth information about each selling security holder, including the name, the number and percentage of the notes beneficially owned and being offered by the selling security holder and the number and percentage of common stock beneficially owned and being offered by the selling security holder. The percentages of common stock beneficially owned and being offered are calculated based on 71,448,313 shares of common stock issued and outstanding as of December 31, 2002. Unless otherwise indicated below, none of the selling security holders nor any of their affiliates, officers, directors or principal equity holders has held any position or office or has had any material relationship with us or our predecessors or affiliates within the past three years.

<TABLE>
<CAPTION>

NAME	PRINCIPAL AMOUNT OF NOTES BENEFICIALLY OWNED AND OFFERED HEREBY	PERCENTAGE OF NOTES OUTSTANDING	SHARES OF COMMON STOCK BENEFICIALLY OWNED AND OFFERED HEREBY (2)	PERCENTAGE OF COMMON STOCK OUTSTANDING OFFERED HEREBY
<S>	<C>	<C>	<C>	<C>
1976 Distribution Trust FBO A.R. Lauder/Zinterhofer	5,000	*	809	*
2000 Revocable Trust FBO A.R. Lauder/Zinterhofer	5,000	*	809	*
AIG DKR Soundshore Holdings Ltd.	1,204,000	*	195,036	*
AIG DKR Soundshore Opportunity Holding Fund Ltd.	2,766,000	1.8%	448,065	*
AIG DKR Soundshore Strategic Holding Fund Ltd.	2,030,000	1.3%	328,840	*
Allentown City Officers & Employees Pension Fund	11,000	*	1,781	*
Allentown City Police Pension Plan	22,000	*	3,563	*
Allentown City Firefighters Pension Plan	17,000	*	2,753	*
Allstate Insurance Company	650,000	*	105,293	*
Allstate Life Insurance Company	350,000	*	56,696	*
Alpine Associates	3,900,000	2.5%	631,762	*
Alpine Partners, L.P.	600,000	*	97,194	*
Amaranth LLC	2,550,000	1.6%	413,075	*
Arapahoe County Colorado	41,000	*	6,641	*
Arbitex Master Fund L.P.	5,000,000	3.2%	809,952	1.1%
Argent Classic Convertible Arbitrage Fund L.P.	2,000,000	1.3%	323,981	*
Argent Classic Convertible Arbitrage Fund (Bermuda) L.P.	2,500,000	1.6%	404,976	*
Arlington County Employees Retirement System	450,000	*	72,895	*
Bear Stearns & Co., Inc.	500,000	*	80,995	*

</TABLE>

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<CAPTION>

NAME	PRINCIPAL AMOUNT OF NOTES BENEFICIALLY OWNED AND OFFERED HEREBY	PERCENTAGE OF NOTES OUTSTANDING	SHARES OF COMMON STOCK BENEFICIALLY OWNED AND OFFERED HEREBY (2)	PERCENTAGE OF COMMON STOCK OUTSTANDING OFFERED HEREBY (1)
<S>	<C>	<C>	<C>	<C>
BNP Paribas Equity Strategies, SNC (3)	1,782,000	1.1%	288,667	*
BP Amoco PLC Master Trust	316,000	*	51,188	*
British Virgin Islands Social Security Board	59,000	*	9,557	*
CC Investments LOC	1,000,000	*	161,990	*
City of New Orleans	169,000	*	27,376	*
City University of New York	102,000	*	16,523	*
Cooper Neff Convertible Strategies (Cayman) Master Fund, LP	987,000	*	159,884	*
Credit Suisse First Boston-London	1,000,000	*	161,990	*
Delaware PERS	730,000	*	118,253	*
Delaware Public Employees Retirement System	1,043,000	*	168,956	*
DKR Saturn Event Driven Holding Fund Ltd.	2,000,000	1.3%	323,981	*
Farallon Capital Institutional Partners II, LP	575,000	*	93,144	*
Farallon Capital Institutional Partners III, LP	315,000	*	51,027	*
Farallon Capital Institutional Partners, LP	2,305,000	1.5%	373,388	*
Farallon Capital Offshore Investors, Inc.	5,075,000	3.3%	822,101	1.1%
Farallon Capital Partners, LP	1,625,000	1%	263,234	*
Grady Hospital Foundation	89,000	*	14,417	*
Guggenheim Portfolio Co. XV, LLC	350,000	*	56,696	*
Hotel Union & Hotel Industry of Hawaii Pension Plan	134,000	*	21,706	*
ICI American Holdings Trust	175,000	*	28,348	*
McMahan Securities Co. L.P.	350,000	*	56,696	*
Municipal Employees	161,000	*	26,080	*
New Orleans Firefighters Pension/Relief Fund	91,000	*	14,741	*
Occidental Petroleum Corporation	174,000	*	28,186	*
Pioneer High Yield Fund	25,950,000	16.7%	4,203,653	5.6%
Pioneer High Yield VCT Portfolio	300,000	*	48,597	*
Policeman and Firemen Retirement System of the City of Detroit	398,000	*	64,472	*
Pro-mutual	505,000	*	81,805	*
Ramius Capital Group	350,000	*	56,696	*
RCG Halifax Master Fund, LTD	350,000	*	56,696	*
RCG Latitude Master Fund, LTD	1,225,000	*	198,438	*
RCG Multi Strategy A/C, LP	1,225,000	*	198,438	*
Shell Pension Trust	265,000	*	42,927	*
Sphinx Convertible Arb Fund SPC	154,000	*	24,946	*
State of Maryland Reirement Agency	2,153,000	1.4%	348,765	*
Sturgeon Limited	231,000	*	37,419	*
Sunrise Partners Limited Partnership	8,200,000	5.3%	1,328,322	1.8%
Syngenta AG	120,000	*	19,439	*
The Grable Foundation	60,000	*	9,719	*
Tinicum Partners, LP	105,000	*	17,009	*
Trustmark Insurance	232,000	*	37,581	*
UBS O'Connor LLC F/B/O O'Connor Global Convertible Arbitrage Master Limited	1,350,000	*	218,687	*
UBS O'Connor LLC F/B/O O'Connor Global Convertible Portfolio	150,000	*	24,298	*
UBS Warburg LLC (4)	1,373,000	*	222,412	*
Viacom Inc. Pension Plan Master Trust	11,000	*	1,781	*
Victus Capital, LP	1,500,000	1%	242,985	*

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<CAPTION>

NAME	PRINCIPAL AMOUNT OF NOTES BENEFICIALLY OWNED AND OFFERED HEREBY	PERCENTAGE OF NOTES OUTSTANDING	SHARES OF COMMON STOCK BENEFICIALLY OWNED AND OFFERED HEREBY (2)	PERCENTAGE OF COMMON STOCK OUTSTANDING OFFERED HEREBY (1)
<S>	<C>	<C>	<C>	<C>
White River Securities L.L.C.	500,000	*	80,995	*
Zeneca Holding Trust	175,000	*	28,348	*
Zurich Institutional Benchmarks Master Fund Ltd.	385,000	*	62,366	*

</TABLE>

* Less than one percent

(1) We prepared this table based on the information supplied to us by the selling security holders named in the table and we have not sought to verify such information. This table only reflects information regarding selling security holders who have provided us with such information. We expect that we will update this table as we receive more information from holders of the notes who have not yet provided us with their information.

(2) Assumes conversion of all of the holder's notes at a conversion rate of 161.9905 shares of common stock per $1,000 principal amount of the notes. However, this conversion rate will be subject to adjustment as described under "Description of notes--Conversion Rights." As a result, the amount of common stock issuable upon conversion of the notes may increase or decrease in the future.

(3) As of December 19, 2992, BNP Paribas Equity Strategies, SNC held an additional 49,339 shares of our common stock that are not being offered under this prospectus.

(4) As of January 7, 2003, UBS Warburg LLC held an additional 8,554 shares of our common stock that are not being offered under this prospectus.

The selling security holders listed in the above table may have sold or transferred, in transactions exempt from the registration requirements of the Securities Act, some or all of their notes since the date on which the information in the above table was provided to us. Information about the selling security holders may change over time.

Because the selling security holders may offer all or some of the notes or the shares of common stock issuable upon conversion of the notes from time to time, we cannot estimate the amount of the notes or shares of common stock that will be held by the selling security holders upon the termination of any particular offering by a selling security holder. See "Plan of Distribution."

PLAN OF DISTRIBUTION

The selling security holders, which term includes their transferees, pledgees or donees or their successors, may from time to time sell the notes and the underlying common stock covered by this prospectus directly to purchasers or offer the notes and underlying common stock through underwriters, broker-dealers or agents, who may receive compensation in the form of underwriting discounts, concessions or commissions from the selling security holders and/or the purchasers of securities for whom they may act as agent, which discounts, concessions or commissions as to any particular underwriter, broker-dealer or agent may be in excess of those customary in the types of transactions involved.

The notes and the underlying common stock may be sold in one or more transactions:

>> at fixed prices;

>> at prevailing market prices;

>> at varying prices determined at the time of sale; or

>> at negotiated prices.

These sales may be effected in transactions, which may involve block transactions, in the following manner:

>> on any national securities exchange or quotation service on which the notes or the common stock may be listed or quoted at the time of sale;

>> in the over-the-counter-market;

>> in transactions otherwise than on these exchanges or services or in the over-the-counter-market; or

>> through the writing and exercise of options, whether these options are listed on an options exchange or otherwise.

In connection with the sale of the notes and common stock, the selling security holders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the securities in the course of hedging positions they assume. The selling security holders may sell the notes or common stock and deliver notes or common stock to close out short positions, or loan or pledge the securities to broker-dealers

that in turn may sell these securities.

The aggregate proceeds to the selling security holders from the sale of the securities offered by them hereby will be the purchase price of such securities less discounts and commissions, if any. The selling security holder reserves the right to accept and, together with its agent from time to time, to reject, in whole or in part, any proposed purchase of securities to be made directly or through agents. We will not receive any of the proceeds from the resale by the selling security holders of the notes or the common stock issuable upon conversion of the notes.

The notes are traded on The PORTAL Market. However, notes sold pursuant to this prospectus will no longer be eligible for trading on the PORTAL market. We do not intend to list the notes on any securities exchange or automated quotation system. Our common stock is listed for trading on The Nasdaq National Market under the symbol "LGND."

In order to comply with the securities laws of some states, if applicable, the securities may be sold in such jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the securities may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from registration or qualification requirements is available and is complied with.

The selling security holders, and any underwriters, broker-dealers or agents that participate in the sale of the securities, may be "underwriters" within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the securities may be underwriting discounts and commissions under the Securities Act. The selling security holders have acknowledged that they understand their obligations to comply with the provisions of the Securities Exchange Act of 1934 and the rules thereunder relating to stock manipulation, particularly Regulation M.

At the time of a particular offering of securities by a selling security holder, a supplement to this prospectus, if required, will be circulated setting forth the aggregate amount and type of securities being offered and the terms of the offering, including the name or names of any underwriters, broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the selling security holders and any discounts, commission or concessions allowed or reallowed or paid to broker-dealers.

We entered into a registration rights agreement for the benefit of holders of the notes to register their notes and the underlying common stock under applicable federal and state securities laws under specific circumstances and at specific times. The registration rights agreement provides for indemnification by us of the selling security holders and their controlling persons and by the selling security holders of us and our directors, officers and controlling persons against specific liabilities in connection with the offer and sale of the notes and the underlying common stock, including liabilities under the Securities Act.

DESCRIPTION OF NOTES

On November 26th and 27th 2002 we issued and sold the notes in a private placement transaction. The initial purchaser of the notes in that offering resold the notes to persons reasonably believed to be qualified institutional buyers (as defined in Rule 144A under the Securities Act of 1933). The notes were issued under the indenture dated November 26, 2002 between us and J.P. Morgan Trust Company, National Association, as trustee. The following statements are subject to the detailed provisions of the indenture and are qualified in their entirety by reference to the indenture. The indenture has been filed as an exhibit to the registration statement of which this prospectus is a part. Particular provisions of the indenture which are referred to in this prospectus are incorporated by reference as a part of the statements made, and the statements are qualified in their entirety by the reference. For the purposes of this summary, the terms "Ligand," the "Company," "we" or "our" refer only to Ligand Pharmaceuticals Incorporated and not to any of our subsidiaries. References to "interest" shall be deemed to include, unless the context otherwise requires, the additional amounts payable in the event of a registration default as described below under the caption "Registration rights; additional payments."

GENERAL

Except as described under "Security," the notes represent our unsecured general obligations, subordinate in right of payment to certain of our obligations as described under "Subordination of notes," and convertible into our common stock

as described under "Conversion rights." The notes are limited to $155.25 million aggregate principal amount. Interest on the principal amount of the notes will be payable semi-annually on May 16 and November 16 of each year, with the first interest payment to be made on May 16, 2003, at the rate of 6% per annum, to the persons who are registered holders of the notes at the close of business on the preceding May 1 and November 1, respectively. Unless previously redeemed, repurchased or converted, the notes will mature on November 16, 2007. The notes will be payable at the office of the paying agent, which initially will be an office or agency of the trustee, or an office or agency maintained by us for such purpose, in the Borough of Manhattan, the City of New York. Payments in respect of the notes may, at our option, be made by check and mailed to the holders of record as shown on the register for the notes.

We issued the notes without coupons in denominations of $1,000 and integral multiples thereof.

Holders may present for conversion any notes that have become eligible for conversion at the office of the conversion agent, and may present notes for registration of transfer at the office of the trustee.

The indenture does not contain any financial covenants or any restrictions on the payment of dividends or on the repurchase of our securities. The indenture does not require us to maintain any sinking fund or other reserves for repayment of the notes.

The notes are not subject to defeasance or covenant defeasance.

SECURITY

On the closing dates of the offering in which the notes were issued, we purchased in the aggregate approximately $18 million of US government securities as security for the notes and for the exclusive ratable benefit of the holders of the notes (and not for the benefit of our other creditors). These U.S. government securities are sufficient, upon receipt of the scheduled interest and principal payments of such securities, to provide for payment in full of the first four scheduled interest payments on the notes when due. The US government securities are held and invested by the trustee in accordance with the terms of the pledge agreement that we entered into with the trustee. We refer to payments on the notes derived from the pledged US government securities as "permitted payments" in this prospectus.

The US government securities have been pledged by us to the trustee under the indenture for the exclusive ratable benefit of the holders of the notes and are held by the trustee in a pledge account in accordance with a pledge agreement entered into by us and the trustee and in accordance with a control agreement entered into by us, the trustee and the account intermediary therein. Immediately prior to each of the first four interest payment dates, the trustee will

release from the pledge account proceeds sufficient to pay interest then due on the notes. We may also make additional payments to the trustee to ensure that sufficient funds are available to pay interest then due on the notes, if necessary. A failure to pay interest on the notes when due through the first four scheduled interest payment dates will constitute an event of default under the indenture.

The pledged US government securities and the pledge account also secures, to the extent available, the repayment of the principal amount on the notes. If prior to November 16, 2005:

>> an event of default under the notes or the indenture occurs and is continuing; and

>> the trustee or the holders of not less than 25% in aggregate principal amount of the notes then outstanding accelerate the notes by declaring the principal amount of the notes plus accrued and unpaid interest to be immediately due and payable (by written consent, at a meeting of holders of the notes or otherwise), except for the occurrence of an event of default relating to our bankruptcy, insolvency or reorganization, or that of any of our subsidiaries, upon which the notes will be accelerated automatically,

then the proceeds from the pledged US government securities will be promptly released for payment to the holders of the notes, subject to the automatic stay provisions of bankruptcy law, if applicable. Distributions from the pledge account will be applied:

>> first, to any accrued and unpaid interest on the notes; and

>> second, to the extent available, to the repayment of a portion of the principal amount of the notes.

If an event of default is not cured prior to the acceleration of the notes by the trustee or holders of the notes referred to above, the trustee and the holders of the notes will be able to accelerate the notes as a result of that event of default.

For example, if the first two interest payments were made when due but the third interest payment was not made when due and the holders of the notes promptly exercised their right to declare the principal amount of the notes to be immediately due and payable, then, assuming the automatic stay provisions of bankruptcy law are not applicable and the proceeds of the pledged US government securities are promptly distributed from the pledge account:

>> an amount equal to the interest payment due on the third interest payment would be distributed from the pledge account as accrued interest; and

>> the balance of the proceeds of the pledge account would be distributed as a portion of the principal amount of the notes.

In addition, holders would have an unsecured claim against us for the remainder of the principal amount of their notes.

If prior to the fourth interest payment with respect to the notes,

>> any notes are converted; or

>> we repurchase any notes,

then the trustee will disburse to us a pro rata portion of the pledge account corresponding to the remaining interest payments with respect to such notes secured by the pledge account.

Once we make the first four scheduled interest payments on the notes, all of the remaining pledged US government securities and cash, if any, will be released to us from the pledge account, and the notes will thereafter be unsecured.

CONVERSION RIGHTS

Before the close of business on the date of maturity of the notes, subject to prior redemption or repurchase, holders of the notes may convert the notes, or portions thereof (if the portions are $1,000 or whole multiples thereof), into 161.9905 shares of common stock per $1,000 of principal amount of notes. This rate results in an initial conversion price of approximately $6.17 per share. Except as described below, the number of shares into which a note is

convertible will not be adjusted for dividends on any common stock issued on conversion. We will not issue fractional shares of common stock upon conversion of notes and instead will pay a cash adjustment based on the market price of the common stock on the last trading day prior to the conversion date. In the case of notes called for redemption, conversion rights will expire at the close of business on the date one business day prior to the redemption date.

We are not obligated to pay accrued interest on notes submitted for conversion. Accordingly, if a note is converted after the close of business on a record date for the payment of interest and before the opening of business on the next succeeding interest payment date, notes submitted for conversion must be accompanied by funds equal to the interest payable to the registered holder on the interest payment date on the principal amount of such notes submitted for conversion. We will then make the interest payment due on the interest payment date to the registered holder of the note on the record date. Notwithstanding anything to the contrary in this paragraph, any note submitted for conversion need not be accompanied by any funds if such notes have been called for redemption on a redemption date that is after the close of business on a record date for the payment of interest and before the close of business on the business day following the corresponding interest payment date.

As soon as practicable following the conversion date, we will deliver through the conversion agent a certificate for the full number of full shares of common stock into which any note is converted, together with any cash payment for fractional shares. For a discussion of the tax treatment of a holder receiving common shares upon surrendering notes for conversion, see "Certain US federal income tax considerations--US Holders--Conversion of the notes."

We will adjust the conversion rate for:

>> dividends or distributions on shares of our common stock payable in common

stock or other capital stock of ours;

>> subdivisions, combinations or certain reclassifications of our common stock;

>> distributions to all or substantially all holders of common stock of certain rights or warrants entitling them for a period of 60 days or less to purchase common stock at less than the current market price at the time;

>> distributions to all or substantially all holders of our common stock of our assets or debt securities or certain rights to purchase our securities, but excluding cash dividends or other cash distributions from current or retained earnings referred to in the next paragraph;

>> all-cash distributions to all or substantially all holders of our common stock in an aggregate amount that, together with

  >> any cash and the fair market value of any other consideration payable in respect of any tender offer or exchange offer for our common stock consummated within the preceding 12 months not triggering a conversion rate adjustment and

  >> all other all-cash distributions to all or substantially all stockholders made within the preceding 12 months not triggering a conversion rate adjustment,

  exceeds an amount equal to 10% of the market capitalization of our common stock on the business day immediately preceding the day on which we declare the distribution;

>> payments in respect of a tender offer or exchange offer for our common stock to the extent that the offer involves aggregate consideration that, together with

  >> any cash and the fair market value of any other consideration payable in respect of any tender offer or exchange offer for our common stock consummated within the preceding 12 months not triggering a conversion rate adjustment and

  >> all-cash distributions to all or substantially all stockholders made within the preceding 12 months not triggering a conversion rate adjustment,

  exceeds an amount equal to 10% of the market capitalization of our common stock on the expiration date of the tender offer or exchange offer.

Each adjustment referred to above will be made upon conclusion of the applicable event. We will not adjust the conversion rate, however, in certain cases, including where holders of notes are to participate in the transaction without conversion under circumstances that our board of directors determines to be fair and appropriate.

To the extent that our stockholders rights plan is still in effect, upon conversion of the notes into common stock, the holders will receive, in addition to the common stock, the rights described in our stockholders rights plan, whether or not the rights have separated from the common stock at the time of conversion, subject to certain limited exceptions. If we implement a new stockholders rights plan, we will be required under the indenture to provide that the holders of notes will receive the rights upon conversion of the notes, whether or not these rights were separated from the common stock prior to conversion, subject to certain limited exceptions.

Except as stated above, the number of shares issuable on conversion will not be adjusted for the issuance of common stock or any securities convertible into or exchangeable for common stock, or carrying the right to purchase any of the foregoing. The terms of the notes do not require any adjustment for rights to purchase common stock pursuant to our present or any future stockholders rights plan or pursuant to any plans we have for reinvestment of dividends or interest, or for a change in the par value of the common stock. To the extent that the notes become convertible into cash, no adjustment will be required thereafter as to cash.

No adjustment to the conversion rate will be required unless the adjustment would require a change of at least 1% in the conversion rate then in effect; provided that any adjustment that would otherwise be required to be made will be carried forward and taken into account in any subsequent adjustment.

We are permitted to make such increases in the conversion rate as we, in our

discretion, determine to be advisable in order that any stock dividend, subdivision of shares, distribution or rights to purchase stock or securities or securities convertible into or exchangeable for stock made by us to our stockholders will not be taxable to the recipients. In addition, we may at any time increase the conversion rate by any amount for any period of time if our board of directors determines that such increase would be in our best interests, provided that:

>> the conversion price is not less than the par value of a share of our common stock;

>> the period during which the increased rate is in effect is at least 20 days (or such longer period as may be required by law); and

>> the increased rate is irrevocable during such period.

If we are party to a consolidation, merger or binding share exchange pursuant to which the common stock is converted into cash, securities or other property, at the effective time of the transaction, the right to convert a note into common stock will be changed into a right to convert it into the kind and amount of cash, securities or other property which the holder would have received if the holder had converted its note immediately prior to the transaction.

In the event of:

>> a taxable distribution to holders of shares of common stock which results in an adjustment to the conversion rate; or

>> an increase in the conversion rate at our discretion,

the holders of the notes may, in certain circumstances, be deemed to have received a distribution subject to Federal income tax as a dividend. See "Certain United States federal income tax considerations--US Holders--Adjustment of conversion price."

REDEMPTION OF NOTES AT OUR OPTION

No sinking fund is provided for the notes. Prior to November 22, 2005, we cannot redeem the notes. The notes will be redeemable at our option, in whole or in part, at any time on or after November 22, 2005, on any date not less than 30 nor more than 60 days after the mailing of a redemption notice to each holder of notes to be redeemed at the address of the holder appearing in the security register. The redemption price for the notes, expressed as a percentage of principal amount, is as follows for the periods set forth below:

<TABLE>
<CAPTION>

PERIOD	REDEMPTION PRICE
<S>	<C>
November 22, 2005 to November 15, 2006.....	102.4%
November 16, 2006 to November 15, 2007.....	101.2%

</TABLE>

Accrued and unpaid interest will also be paid to the redemption date.

If we redeem less than all of the outstanding notes, the trustee will select the notes to be redeemed on a pro rata basis in principal amounts of $1,000 or integral multiples of $1,000. If a portion of a holder's notes is selected for partial redemption and the holder converts a portion of the notes, the converted portion shall be deemed to be the portion selected for redemption.

CHANGE IN CONTROL PERMITS PURCHASE OF NOTES BY US AT THE OPTION OF THE HOLDER

In the event of a change in control (as defined below) with respect to us, each holder will have the right, at its option, subject to the terms and conditions of the indenture, to require us to purchase for cash all or any portion of the holder's notes in integral multiples of $1,000 principal amount, at a price for each $1,000 principal amount of such notes tendered for repurchase equal to 100% of the principal amount of such notes tendered, plus any accrued and unpaid interest to the purchase date. We will be required to purchase the notes no later than 30 business days after notice of a change in control has been mailed as described below. We refer to this date in this prospectus as the "change in control purchase date."

Within 30 business days after the occurrence of a change in control, we must mail to the trustee and to all holders of notes at their addresses shown in the register of the registrar and to beneficial owners as required by applicable law

a notice regarding the change in control, which notice must state, among other things:

>> the event or events causing a change in control;

>> the date of such change in control;

>> the last date on which a holder may exercise the purchase right;

>> the change in control purchase price;

>> the change in control purchase date;

>> the name and address of the paying agent and the conversion agent;

>> the conversion rate and any adjustments to the conversion rate;

>> that notes with respect to which a change in control purchase notice is given by the holder may be converted, if otherwise convertible, only if the change in control purchase notice has been withdrawn in accordance with the terms of the indenture; and

>> the procedures that holders must follow to exercise these rights.

To exercise this right, the holder must deliver a written notice so as to be received by the paying agent no later than the close of business on the third business day prior to the change in control purchase date. The required purchase notice upon a change in control must state:

>> the certificate numbers of the notes to be delivered by the holder, if applicable;

>> the portion of the principal amount of notes to be purchased, which portion must be $1,000 or an integral multiple of $1,000; and

>> that we are to purchase such notes pursuant to the applicable provisions of the notes.

A holder may withdraw any change in control purchase notice by delivering to the paying agent a written notice of withdrawal prior to the close of business on the business day prior to the change in control purchase date. The notice of withdrawal must state:

>> the principal amount of the notes being withdrawn;

>> the certificate numbers of the notes being withdrawn, if applicable; and

>> the principal amount, if any, of the notes that remain subject to a change in control purchase notice.

Our obligation to pay the change in control purchase price for a note for which a change in control purchase notice has been delivered and not validly withdrawn is conditioned upon delivery of the note, together with necessary endorsements, to the paying agent at any time after the delivery of such change in control purchase notice. We will cause the change in control purchase price for such note to be paid promptly following the later of the change in control purchase date or the time of delivery of such note.

If the paying agent holds money sufficient to pay the change in control purchase price of the note on the change in control purchase date in accordance with the terms of the indenture, then, immediately after the change in control purchase date, interest on such note will cease to accrue, whether or not the note is delivered to the paying agent. Thereafter, all other rights of the holder shall terminate, other than the right to receive the change in control purchase price upon delivery of the note.

Under the indenture, a "change in control" is deemed to have occurred at such time as:

>> any "person" or "group" (as such terms are used for purposes of Sections 13(d) and 14(d) of the Exchange Act) is or becomes the "beneficial owner" (as such term is used in Rule 13d-3 under the Exchange Act), directly or indirectly, of 50% or more of the voting power of our common stock or other capital stock into which our common stock is reclassified or changed;

>> at any time the following persons cease for any reason to constitute a majority of our board of directors:

>> individuals who on the issue date of the notes constituted our board of directors and

>> any new directors whose election by our board of directors or whose nomination for election by our stockholders was approved by at least a majority of the directors then still in office who were either directors on the issue date of the notes or whose election or nomination for election was previously so approved; or

>> the sale, lease or transfer of all or substantially all of our assets and property to any "person" or "group" (as such terms are used in Sections 13(d) and 14(d) of the Exchange Act).

However, a change in control will not be deemed to have occurred if either:

>> the last sale price of our common stock for any five trading days during the ten trading days immediately preceding the change in control is at least equal to 105% of the conversion price in effect on such trading day; or

>> in the case of a merger or consolidation, all of the consideration (excluding cash payments for fractional shares and cash payments pursuant to dissenters' appraisal rights) in the merger or consolidation constituting the change in control consists of common stock traded on a US national securities exchange or quoted on The Nasdaq National Market (or which will be so traded or quoted when issued or exchanged in connection with such change in control) and as a result of such transaction or transactions the notes become convertible solely into such common stock.

If a change in control occurs, there can be no assurance that we would have sufficient funds or financing to repay any senior indebtedness then required to be repaid or to repurchase any or all notes then required to be repurchased under the indenture. Any failure by us to repurchase the notes when required following a change in control would result in an event of default under the indenture, whether or not such repurchase is permitted by the subordination provisions of the indenture. Any such default may, in turn, cause a default under our existing or future senior debt.

In connection with any purchase offer in the event of a change in control, we will to the extent applicable:

>> comply with the provisions of Rule 13e-4, Rule 14e-1 and any other tender offer rules under the Exchange Act which may then be applicable; and

>> file Schedule TO or any other required schedule under the Exchange Act.

There is inherent uncertainty in the phrase "all or substantially all." Interpretation of this phrase as it relates to any transfer of our assets and property will be governed by applicable law and will be dependent upon the particular facts and circumstances. We cannot assure you how a court would interpret this phrase if you attempt to exercise your rights following the occurrence of a transaction that you believe constitutes a transfer of "all or substantially all" of our assets and property. As a result, you may not receive the change in control purchase price under circumstances in which you believe you are entitled to it. In addition, we cannot assure you that we will have the financial resources necessary, or otherwise be able, to acquire the notes tendered upon a change in control.

The change in control purchase feature of the notes may in certain circumstances make more difficult or discourage a takeover of our company.

We could, in the future, enter into transactions, including certain recapitalizations, that would not constitute a change in control with respect to the change in control purchase feature of the notes but that would increase the amount of our, or our subsidiaries', indebtedness and adversely affect the value of the notes.

We may not purchase notes at the option of holders upon a change in control if there has occurred and is continuing an event of default with respect to the notes, other than a default in the payment of the change in control purchase price with respect to the notes.

SUBORDINATION OF NOTES

Upon any distribution to our creditors in our liquidation or dissolution or in a bankruptcy, reorganization, insolvency, receivership or similar proceeding relating to us or our property, the payment of all amounts due on the notes (other than cash payments due upon conversion in lieu of fractional shares, and

other than permitted payments) will be subordinated, to the extent provided in the indenture, in right of payment to the prior payment in full of all senior indebtedness and all indebtedness of our subsidiaries.

We will not pay, directly or indirectly, any amount due on the notes (including any change of control purchase price pursuant to the exercise of the change of control purchase right, but excluding any permitted payments), or acquire any of the notes, in the following circumstances:

>> if any default in payment of principal, premium, if any, or interest on senior indebtedness (as defined below) exists, unless and until the default has been cured or waived or has ceased to exist;

>> if any default, other than a default in payment of principal, premium, if any, or interest, has occurred with respect to senior indebtedness, and that default permits the holders of the senior indebtedness to accelerate its maturity, until the expiration of the "payment blockage period" described below unless and until the default has been cured or waived or has ceased to exist; or

>> if the maturity of senior indebtedness has been accelerated, until the senior indebtedness has been paid or the acceleration has been cured or waived.

A "payment blockage period" is a period that begins on the date that we receive a written notice from any holder of senior indebtedness or a holder's representative, or from a trustee under an indenture under which senior indebtedness has been issued, that an event of default with respect to and as defined under any senior indebtedness (other than default in payment of the principal of, or premium, if any, or interest on any senior indebtedness), which event of default permits the holders of senior indebtedness to accelerate its maturity, has occurred and is continuing and ends on the earlier of (1) the date on which such event of default has been cured or waived, (2) 180 days from the date notice is received, (3) the date on which such senior indebtedness is discharged or paid in full or (4) the date of which such payment blockage period shall have been terminated by written notice to the trustee or us from the trustee or other representative initiating such payment blockage period. Notwithstanding the foregoing, no new payment blockage period shall commence until a period of at least 365 consecutive days shall have elapsed since the beginning of the prior payment blockage period. No default (other than a default in payment) that existed or was continuing on the date of delivery of any payment blockage notice, shall be the basis for any subsequent payment blockage notice, unless such event of default has been cured or waived for a period of not less than 90 consecutive days. However, if the maturity of such senior indebtedness is accelerated, no payment may be made on the notes until such senior indebtedness that has matured has been paid or such acceleration has been cured or waived.

Senior indebtedness is defined in the indenture as all indebtedness (as defined below) of ours outstanding at any time, except:

>> the notes;

>> indebtedness that by its terms is not senior in right of payment to the notes; and

>> indebtedness that by its terms is pari passu or junior in right of payment to the notes.

Senior indebtedness does not include our indebtedness to any of our subsidiaries.

Indebtedness is defined with respect to any person as the principal of, and premium, if any, and interest on (a) all indebtedness of such person for borrowed money (including all indebtedness evidenced by notes, debentures or other securities sold by such person for money), (b) all obligations incurred by such person in the acquisition (whether by way of purchase, merger, consolidation or otherwise and whether by such person or another person) of any business, real property or other assets (except inventory and related items acquired in the ordinary course of the conduct of the acquiror's usual business), (c) guarantees by such person of indebtedness described in clause (a) or (b) of another person, (d) all renewals, extensions, refundings, deferrals, restructurings, amendments and modifications of any indebtedness, obligation or guarantee, (e) all reimbursement obligations of such person with respect to letters of credit, bankers' acceptances or similar facilities issued for the account of such person, (f) all capital lease obligations of such person, (g) all net obligations of such person under interest rate swap, currency exchange or similar agreements of such person and (h) all obligations and other

liabilities, contingent or otherwise, under any lease or related document, including a purchase agreement, conditional sale or other title retention agreement, in connection with the lease of real property or improvements thereon (or any personal property included as part of any such lease) which provides that such person is contractually obligated to purchase or cause a third party to purchase the leased property or pay an agreed upon residual value of the leased property, including such person's obligations under such lease or related document to purchase or cause a third party to purchase such leased property or pay an agreed upon residual value of the leased property to the lessor.

By reason of the subordination provisions described above, in the event of insolvency, funds which would otherwise be payable to holders of the notes other than as permitted payments will be paid to the holders of senior indebtedness to the extent necessary to pay senior indebtedness in full.

Substantially all of our operations are currently and are expected in the future to be conducted through subsidiaries, which are separate and distinct legal entities and have no obligation, contingent or otherwise, to pay any amounts due on the notes or to make any funds available therefor, whether by dividends, loans or other payments. The payment of dividends and loans and advances to us by our subsidiaries may be subject to statutory or contractual restrictions, are contingent upon the earnings of our subsidiaries and are subject to various business considerations.

Except for permitted payments, the notes are effectively subordinated to all indebtedness and other liabilities and commitments (including trade payables and lease obligations) of our subsidiaries. Any right that we have to receive assets of any of our subsidiaries upon its liquidation or reorganization (and the consequent right of the holders of the notes to participate in those assets) will be effectively subordinated to the claims of that subsidiary's creditors (including trade creditors), except to the extent that we ourselves are recognized as a creditor of that subsidiary, in which case our claims would still be subordinate to any security interests in the assets of that subsidiary and any indebtedness of that subsidiary senior to that held by us.

There are no restrictions in the indenture upon the creation of additional senior indebtedness by us, or on the creation of any indebtedness by us or any of our subsidiaries. As of September 30, 2002, we and our subsidiaries had approximately $8.6 million of consolidated indebtedness effectively ranking senior to the notes, of which $2.5 million has subsequently been retired.

MERGER OR CONSOLIDATION, OR CONVEYANCE, TRANSFER OR LEASE OF PROPERTIES AND ASSETS

The indenture provides that we may not consolidate with or merge with or into any other person or transfer or lease all or substantially all of our properties and assets to another person, unless, among other things:

>> the resulting, surviving or transferee person is a corporation organized and existing under the laws of the United States, any state thereof or the District of Columbia or a corporation or comparable legal entity organized under the laws of a foreign jurisdiction and whose equity securities are listed on a national securities exchange in the United States or authorized for quotation on The Nasdaq National Market (provided, however, that in the case of a transaction where the surviving entity is organized under the laws of a foreign jurisdiction, we may not consummate the transaction without first (1) making provision for the satisfaction of our obligations to repurchase the notes following a change in control, if any, and (2) obtaining an opinion of tax counsel experienced in such matters to the effect that, under then existing US federal income tax laws, there would be no material adverse tax consequences to holders of the notes resulting from such transaction);

>> such person assumes all of our obligations under the notes and the indenture; and

>> we or such successor person shall not immediately thereafter be in default under the indenture.

Upon the assumption of our obligations by such a person in such circumstances, subject to certain exceptions, we shall be discharged from all obligations under the notes and the indenture.

Although such transactions are permitted under the indenture, certain of the foregoing transactions could constitute a change in control permitting each holder to require us to purchase the notes of such holder as described in "--Change in control permits purchase of notes by us at the option of the holder."

EVENTS OF DEFAULT

The following will be events of default for the notes:

>> default in the payment of the principal amount, redemption price or change in control purchase price with respect to any note when such amount becomes due and payable;

>> default in the payment of accrued and unpaid interest, if any (including additional payments in the event of a "registration default"), on the notes for 30 days; provided that a failure to make any of the first four scheduled interest payments on the notes within three business days of the applicable interest payment date will constitute an event of default with no additional grace or cure period;

>> failure by us to comply with any of our other covenants in the notes or the indenture upon receipt by us of notice of such default by the trustee or by holders of not less than 25% in aggregate principal amount of the notes then outstanding and our failure to cure (or obtain a waiver of) such default within 60 days after receipt of such notice;

>> default by us or any of our significant subsidiaries in the payment at the final maturity thereof, after the expiration of any applicable grace period, of principal of, or premium, if any, on indebtedness for money borrowed, in the principal amount then outstanding of $15 million or more, or acceleration of any indebtedness in such principal amount so that it becomes due and payable prior to the date on which it would otherwise have become due and payable and such acceleration is not rescinded or such default cured within 30 business days after notice to us in accordance with the indenture;

>> certain events of bankruptcy, insolvency or reorganization affecting us or any of our significant subsidiaries; or

>> the pledge agreement or the control agreement ceases to be in full force and effect or enforceable in accordance with its terms.

If an event of default shall have occurred and be continuing, either the trustee or the holders of not less than 25% in aggregate principal amount of notes then outstanding may declare the principal amount of the notes plus accrued and unpaid interest, if any, on the notes accrued through the date of such declaration to be immediately due and payable. In the case of certain events of our bankruptcy, insolvency or reorganization, the principal amount of the notes plus accrued and unpaid interest, if any, accrued thereon through the occurrence of such event shall automatically become and be immediately due and payable.

MODIFICATIONS OF THE INDENTURE

We and the trustee may enter into supplemental indentures that add, change or eliminate provisions of the indenture or modify the rights of the holders of the notes with the consent of the holders of at least a majority in principal amount of the notes then outstanding. However, without the consent of each holder, no supplemental indenture may:

>> reduce the rate or change the time of payment of interest (including additional payments in the event of a "registration default") on any note;

>> make any note payable in money or securities other than as stated in the note or the indenture;

>> change the stated maturity of any note;

>> reduce the principal amount, redemption price or change in control purchase price with respect to any note;

>> make any change that adversely affects the right of a holder to require us to purchase a note;

>> waive a default in the payment of any amount due with respect to any note;

>> change the right to convert, or receive payment with respect to, a note, or the right to institute suit for the enforcement of any payment with respect to, or conversion of, the notes; or

>> change the provisions in the indenture that relate to modifying or amending the indenture.

Without the consent of any holder of notes, we and the trustee may enter into supplemental indentures for any of the following purposes:

>> to evidence a permitted successor to us and the required assumption by that successor of our obligations under the indenture and the notes;

>> to add to our covenants for the benefit of the holders of the notes or to surrender any right or power conferred upon us;

>> to secure our obligations in respect of the notes;

>> to make any changes or modifications to the indenture necessary in connection with the registration of the notes under the Securities Act and the qualification of the indenture under the Trust Indenture Act; or

>> to cure any ambiguity or inconsistency in the indenture.

Without the consent of the holders of a majority in principal amount of the notes, no supplemental indenture may be entered into pursuant to the preceding paragraph if such supplemental indenture would materially and adversely affect the interests of the holders of the notes.

The holders of a majority in principal amount of the outstanding notes may, on behalf of the holders of all notes:

>> waive compliance by us with restrictive provisions of the indenture, as detailed in the indenture; and

>> waive any past default under the indenture and its consequences, except a default in the payment of the principal amount, accrued and unpaid interest, if any (including additional payments in the event of a "registration default"), redemption price or change in control purchase price or obligation to deliver common shares upon conversion with respect to any note or in respect of any provision which under the indenture cannot be modified or amended without the consent of the holder of each outstanding note affected.

NO PERSONAL LIABILITY OF DIRECTORS, OFFICERS, EMPLOYEES, INCORPORATORS AND STOCKHOLDERS

No director, officer, employee, incorporator or stockholder of ours, as such, shall have any liability for any of our obligations under the notes or the indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each holder of notes by accepting a note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the notes. The waiver may not be effective to waive liabilities under the federal securities laws, and it is the view of the Commission that a waiver of such liabilities is against public policy.

SATISFACTION AND DISCHARGE

We may discharge our obligations under the indenture while notes remain outstanding if:

>> all outstanding notes have or will become due and payable at their scheduled maturity within one year; or

>> all outstanding notes are scheduled for redemption within one year,

and in either case, we have deposited with the trustee an amount sufficient to pay and discharge all outstanding notes on the date of their scheduled maturity or the scheduled date of redemption.

UNCLAIMED MONEY AND PRESCRIPTION

If money deposited with the trustee or paying agent for the payment of principal or interest remains unclaimed for two years, the trustee and paying agent shall notify us and shall pay the money back to us at our written request. Thereafter, holders of notes entitled to the money must look to us for payment, subject to applicable law, and all liability of the trustee and the paying agent shall cease. Other than as described in this paragraph, the indenture does not provide for any prescription period for the payment of interest and principal on the notes.

REPORTS TO TRUSTEE

We will regularly furnish to the trustee copies of our annual report to stockholders, containing audited financial statements, and any other financial

reports which we furnish to our stockholders.

RULE 144A INFORMATION REQUIREMENTS

We agreed in the indenture to furnish to the holders or beneficial holders of the notes and prospective purchasers of the notes designated by the holders of the notes, upon their request, the information required to be delivered pursuant to Rule 144A(d)(4) under the Securities Act until such time as we register the notes and the underlying common stock for resale under the Securities Act. In addition, we will agree to furnish such information if, at any time while the notes or the common stock issuable upon conversion of the notes are restricted securities within the meaning of the Securities Act, we are not subject to the informational requirements of the Exchange Act.

TRUSTEE AND TRANSFER AGENT

The trustee for the notes is J.P. Morgan Trust Company, National Association. The transfer agent for our common stock is Mellon Investor Services LLC.

LISTING AND TRADING

The notes trade on The PORTAL Market. However, notes sold pursuant to this prospectus will no longer be eligible for trading on the PORTAL market. We do not intend to list the notes on any securities exchange or automated quotation system. Our common stock is listed on The Nasdaq National Market under the symbol "LGND."

BOOK, ENTRY, DELIVERY AND FORM

Notes resold under the registration statement of which this prospectus forms a part will be represented by one or more permanent global securities in definitive fully registered form, which will be deposited with the trustee as custodian for DTC and registered in the name of DTC. We initially issued the notes in the form of two global securities, bearing a legend relating to restrictions on transfer, which was deposited with the trustee as custodian for DTC and registered in the name of the nominee of DTC. Except as set forth below, the global securities may be transferred, in whole and not in part , only to DTC or another nominee of DTC. You may hold your beneficial interests in the global securities directly through DTC if you have an account with DTC or indirectly through organizations that have accounts with DTC. Notes in definitive certificated form (referred to as certificated securities) will be issued only in certain limited circumstances described below.

DTC has advised us that it is:

>> a limited purpose trust company organized under the laws of the state of New York;

>> a member of the Federal Reserve System;

>> a "clearing corporation" within the meaning of the New York Uniform Commercial Code; and

>> a "clearing agency" registered pursuant to the provisions of Section 17A of the Exchange Act.

DTC was created to hold securities of institutions that have accounts with DTC (referred to as participants) and to facilitate the clearance and settlement of securities transactions among its participants in such securities through electronic book-entry changes in accounts of the participants, thereby eliminating the need for physical movement of securities certificates. DTC's participants include securities brokers and dealers, which may include the initial purchasers, banks, trust companies, clearing corporations and certain other organizations. Access to DTC's book-entry system is also available to others such as banks, brokers, dealers and trust companies (referred to as indirect participants) that clear through or maintain a custodial relationship with a participant, whether directly or indirectly.

Pursuant to procedures established by DTC, upon the deposit of the global securities with DTC, DTC credited, on its book-entry registration and transfer system, the principal amount of notes represented by such global securities to the accounts of participants. The accounts to be credited were designated by the initial purchasers. Ownership of beneficial interests in the global securities will be limited to participants or persons that may hold interests through participants. Ownership of beneficial interests in the global securities will be shown on, and the transfer of those beneficial interests will be effected only through, records maintained by DTC (with respect to participants' interests),

the participants and the indirect participants. The laws of some jurisdictions may require that certain purchasers of securities take physical delivery of such securities in definitive form. These limits and laws may impair the ability to transfer or pledge beneficial interests in the global securities.

Owners of beneficial interests in global securities who desire to convert their interests into common stock should contact their brokers or other participants or indirect participants through whom they hold such beneficial interests to obtain information on procedures, including proper forms and cut-off times, for submitting requests for conversion.

So long as DTC, or its nominee, is the registered owner of holder of a global security, DTC or its nominee, as the case may be, will be considered the sole owner or holder of the notes represented by the global security for all purposes under the indenture and the notes. In addition, no owner of a beneficial interest in a global security will be able to transfer that interest except in accordance with the applicable procedures of DTC. Except as set forth below, as an owner of a beneficial interest in the global security, you will not be entitled to have the notes represented by the global security registered in your name, will not receive or be entitled to receive physical delivery of certificated securities, except as described below, and will not be considered to be the owner or holder of any notes under the global

securities. We understand that under existing industry practice, if an owner of a beneficial interest in the global securities desires to take any action that DTC, as the holder of the global securities, is entitled to take, DTC would authorize the participants to take such action, and the participants would authorize beneficial owners owning through such participants to take such action or would otherwise act upon the instructions of beneficial owners owning through them.

We will make payments of principal of, premium, if any, and interest (including any additional interest) on the notes represented by the global securities registered in the name of and held by DTC or its nominee to DTC or its nominee, as the case may be, as the registered owner and holder of the global securities. Neither the trustee, any paying agent nor we will have any responsibility or liability for any aspect of the records relating to or payments made on account of beneficial interests in the global securities or for maintaining, supervising or reviewing any records relating to such beneficial interests.

We expect that DTC or its nominee, upon receipt of any payment of principal of, premium, if any, or interest (including liquidated damages) on the global securities, will credit participants' accounts with payments in amounts proportionate to their respective beneficial interests in the principal amount of the global securities, as shown on the records of DTC or its nominee. We also expect that payments by participants or indirect participants to owners of beneficial interests in the global securities held through such participants or indirect participants will be governed by standing instructions and customary practices and will be the responsibility of such participants or indirect participants. We will not have any responsibility or liability for any aspect of the records relating to, or payments made on account of, beneficial interests in the global securities for any note or for maintaining, supervising or reviewing any records relating to such beneficial interests or for any other aspect of the relationship between DTC and its participants or indirect participants or the relationship between such participants or indirect participants and the owners of beneficial interests in the global securities owning through such participants.

Transfers between participants in DTC will be effected in the ordinary way in accordance with DTC rules and will be settled in same-day funds.

DTC has advised us that it will take any action permitted to be taken by a holder of notes only at the direction of one or more participants to whose account DTC's interests in the global securities is credited and only in respect of that portion of the aggregate principal amount of notes as to which the participant or participants have given such direction. However, if DTC notifies us that it is unwilling to be a depository for the global securities or ceases to be a clearing agency or there is a continuing event of default under the notes, DTC will exchange the global securities for certificated securities which it will distribute to its participants and which will be appropriately legended, if required.

Although DTC is expected to follow the foregoing procedures in order to facilitate transfers of interests in the global securities among participants of DTC, it is under no obligation to perform or continue to perform these procedures, and these procedures may be discontinued at any time. Neither the trustee nor we will have any responsibility or liability for the performance by DTC or the participants or indirect participants of their respective obligations

under the rules and procedures governing their respective operations.

PAYMENTS OF PRINCIPAL AND INTEREST

The indenture requires that payments in respect of the notes held of record by DTC or its nominee (including notes evidenced by the global securities) be made in same day funds. Payments in respect of the notes held of record by holders other than DTC may, at our option, be made by check and mailed to such holders of record as shown on the register for the notes.

REGISTRATION RIGHTS AND ADDITIONAL PAYMENTS

We and the initial purchaser entered into a registration rights agreement November 26, 2002. Pursuant to the registration rights agreement, we agreed to file a registration statement, of which this prospectus is a part, covering the resales of the notes and the common stock issuable upon conversion of the notes in accordance with Rule 415 under the Securities Act of 1933.

We will use our reasonable best efforts to cause a registration statement to be declared effective and, subject to certain rights to suspend use of the registration statement, to keep it effective until the earlier of (x) the date on which the offer and sale of such note or underlying share of common stock has been effectively registered under the Securities Act and such note or underlying share has been disposed of, whether or not in accordance with the registration statement, and (y) the date which is two years after the later of the date of original issue of such notes and the last date that we or any of our affiliates was the owner of such notes (or any predecessor thereto) or such shorter period of time as permitted by Rule 144(k) under the Securities Act or any successor provision thereunder. There can be no assurance that we will be able to maintain an effective and current registration statement as required. The absence of such a registration statement may limit the holder's ability to sell such registrable securities or adversely affect the price at which such registrable securities can be sold.

We have agreed to pay a predetermined liquidated damages, as described herein, to holders of the notes and the holders of common stock issued upon conversion of the notes if:

>> the registration statement is not filed with the SEC by February 24, 2003 (90 days from the date the notes were originally issued),

>> the registration statement has not been declared effective by the SEC by May 25, 2003 (180 days from the date the notes were originally issued) or

>> the registration statement is filed and declared effective but shall thereafter cease to be effective (without being succeeded immediately by an additional registration statement filed and declared effective) or usable for the offer and sale of registrable securities for a period of time (including any suspension period) which shall exceed 30 days in the aggregate in any 3-month period or 60 days in the aggregate in any 12-month period,

The liquidated damages shall accrue at a rate per year equal to 0.25% for the first 90-day period, increasing with respect to each subsequent 90-day period by an additional 0.25%, up to a maximum rate per year of 0.75% of the aggregate principal amount of the notes, and, if applicable, on an equivalent basis per share of common stock (valued on the basis of the conversion price then in effect and subject to adjustment in the event of stock splits, stock recombinations, stock dividends and the like) until the registration statement is declared effective or again becomes effective or usable, as the case may be.

The foregoing summary of certain provisions of the registration rights agreement does not purport to be complete and is subject to, and is qualified in its entirety by reference to, the provisions of the registration rights agreement. Copies of the registration rights agreement are available from us or the initial purchaser upon request.

GOVERNING LAW

The indenture and the notes are governed by and construed in accordance with the laws of the State of New York, without giving effect to such state's conflicts of laws principles.

DESCRIPTION OF CAPITAL STOCK

DESCRIPTION OF PREFERRED STOCK

Our board of directors is authorized to issue by resolution an aggregate of 5

million shares of preferred stock in one or more series and to fix the designation, powers, preferences, rights, qualifications, limitations and restrictions of the shares of each such series, including the dividend rights, dividend rate, conversion rights, voting rights, rights and terms of redemption (including sinking fund provisions), liquidation preferences and the number of shares constituting any such series, without any further vote or action by the stockholders. The rights and preferences of preferred stock may in all respects be superior and prior to the rights of the common stock. The issuance of the preferred stock could decrease the amount of earnings and assets available for distribution to holders of common stock or adversely affect the rights and powers, including voting rights, of the holders of the common stock and could have the effect of delaying, deferring or preventing a change in control. In connection with the adoption of our stockholder rights plan, the board of directors designated 1,600,000 shares of series A participating preferred stock, none of which are outstanding as of the date of this prospectus.

DESCRIPTION OF COMMON STOCK

Our authorized common stock consists of 130 million shares, $0.001 par value per share.

The holders of common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders. Subject to preferences that may be applicable to any outstanding preferred stock, holders of common stock are entitled to receive ratably such dividends as may be declared by our board of directors out of funds legally available. In the event of liquidation, dissolution or winding up of the Company, holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preference of any outstanding preferred stock. Holders of common stock have no preemptive rights and no right to cumulate votes in the election of directors. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are fully paid and nonassessable.

Mellon Investor Services LLC, is the transfer agent and registrar for our common stock.

The description of our capital stock is incorporated by reference to filings with the SEC. See "Incorporation by Reference."

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We intend to retain any future earnings to support operations and to finance the growth and development of our business and we do not anticipate paying cash dividends in the foreseeable future on our capital stock.

CERTAIN UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS

The following is a general discussion of certain US federal income tax considerations to a holder with respect to the purchase, ownership and disposition of the notes and our common stock acquired upon conversion of a note. This summary is generally limited to holders that purchase notes in the offering at the price set forth on the cover of this prospectus and hold the notes and the shares of common stock as "capital assets" (generally, property held for investment). This discussion does not describe all of the US federal income tax consequences that may be relevant to a holder in light of its particular circumstances or to holders subject to special rules, such as tax-exempt organizations, holders subject to the US federal alternative minimum tax, dealers in securities, financial institutions, insurance companies, regulated investment companies, certain former citizens or former long-term residents of the United States, partnerships or other pass-through entities, US holders (as defined below) whose "functional currency" is not the US dollar and persons that hold the notes or shares of common stock in connection with a "straddle," "hedging," "conversion" or other risk reduction transaction. For purposes of this general discussion, references to "we," "us" and "our" refer only to Ligand Pharmaceuticals Incorporated and not to any of Ligand's subsidiaries.

The US federal income tax considerations set forth below are based upon the Internal Revenue Code of 1986, as amended, Treasury regulations promulgated thereunder, court decisions, and rulings and pronouncements of the Internal Revenue Service, referred to as the "IRS," now in effect, all of which are subject to change. Prospective investors should particularly note that any such change could have retroactive application so as to result in US federal income tax consequences different from those discussed below. We have not sought any ruling from the IRS with respect to statements made and conclusions reached in this discussion and there can be no assurance that the IRS will agree with such

statements and conclusions.

As used herein, the term "US holder" means a beneficial owner of a note (or our common stock acquired upon conversion of a note) that is for US federal income tax purposes:

>> an individual who is a citizen or resident of the United States;

>> a corporation, or other entity taxable as a corporation for US federal income tax purposes, created or organized in or under the laws of the United States, any state thereof or the District of Columbia;

>> an estate the income of which is subject to US federal income taxation regardless of its source; or

>> a trust, if a court within the United States is able to exercise primary jurisdiction over its administration and one or more US persons have authority to control all of its substantial decisions, or if the trust has a valid election in effect under applicable Treasury regulations to be treated as a US person.

As used herein, the term "non-US holder" means a holder that is not a US holder. Non-US holders are subject to special US federal income tax considerations, some of which are discussed below.

If a partnership is a beneficial owner of a note (or our common stock acquired upon conversion of a note), the tax treatment of a partner in the partnership will generally depend upon the status of the partner and the activities of the partnership. A beneficial owner that is a partnership and partners in such a partnership should consult their tax advisors about the US federal income tax consequences of the purchase, ownership and disposition of the notes (or our common stock acquired upon conversion of a note).

This discussion does not address the tax consequences arising under any state, local or foreign law. In addition, this summary does not consider the effect of the US federal estate or gift tax laws.

INVESTORS CONSIDERING THE PURCHASE OF THE NOTES SHOULD CONSULT THEIR OWN TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE US FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES ARISING UNDER THE US FEDERAL ESTATE OR GIFT TAX RULES OR UNDER THE LAWS OF ANY STATE, LOCAL OR FOREIGN TAXING JURISDICTION OR UNDER ANY APPLICABLE TAX TREATY.

US HOLDERS

PAYMENTS OF INTEREST

A US holder will be required to recognize as ordinary income any interest paid or accrued on the notes, in accordance with the holder's regular method of tax accounting. In certain circumstances, we may be obligated to pay holders of the notes amounts in excess of stated interest or principal. For example, as more fully described under "Description of notes--Registration rights and Additional payments," in the event of a "registration default" we will be required to pay additional interest to holders of the notes. Under the contingent payment debt rules of the original issue discount regulations, certain possible payments are not treated as contingencies (for example, in cases in which the possible payments are remote or incidental). We do not plan to treat the possible payments described above as contingent payments that are subject to the contingent payment debt rules and, therefore, in the event an additional amount becomes due on the notes, we believe US holders will be taxable on such amount as interest in accordance with each holder's regular method of tax accounting. However, because of the lack of authority on point, the tax consequences of these additional payments are uncertain. Our determination in this regard is binding on US holders unless they disclose their contrary position in the manner required by applicable Treasury regulations. Our determination is not, however, binding on the IRS, and it is possible that the IRS may take a different position regarding these payments or potential payments, in which case the timing and amount of income with respect to a note may be significantly different than described herein and a US holder may be required to treat as interest income all or a portion of any gain realized on the disposition of a note (including also possibly upon conversion of the note into our common stock). Prospective purchasers should consult their own tax advisors as to the tax considerations that relate to these payments or potential payments. The rest of this discussion assumes that the possible payments described above are not treated as contingent payments that are subject to the contingent payment debt rules.

SALE, REDEMPTION OR EXCHANGE OF NOTES

A US holder will generally recognize capital gain or loss if the holder disposes of a note in a sale, redemption or exchange (other than a conversion of the note into common stock). The US holder's gain or loss will equal the difference between the proceeds received by the holder and the holder's adjusted tax basis in the note. The proceeds received by a US holder will include the amount of any cash and the fair market value of any other property received for the note. The portion of any proceeds that is attributable to accrued interest will not be taken into account in computing the US holder's capital gain or loss. Instead, that portion will be recognized as ordinary interest income to the extent that the US holder has not previously included the accrued interest in income. The gain or loss recognized by a US holder on a disposition of the note will be long-term capital gain or loss if the holder held the note for more than one year. Long-term capital gains of noncorporate taxpayers are generally taxed at a lower maximum marginal

rate than the maximum marginal rate applicable to ordinary income. The maximum marginal tax rate for capital gains is further reduced for property held for more than five years. The deductibility of capital losses is subject to limitation.

CONVERSION OF THE NOTES

A US holder generally should not recognize income, gain or loss upon conversion of the notes solely into our common stock, except with respect to cash received in lieu of fractional shares. The US holder's tax basis in the common stock received on conversion should be the same as the holder's adjusted tax basis in the notes exchanged therefore at the time of conversion (reduced by any basis allocable to a fractional share), and the holding period for the common stock received on conversion should include the holding period of the notes that were converted. Cash received in lieu of a fractional share of common stock upon conversion of the notes into common stock will generally be treated as a payment in exchange for the fractional share of common stock. Accordingly, the receipt of cash in lieu of a fractional share of common stock generally will result in capital gain or loss measured by the difference between the cash received for the fractional share and the holder's adjusted tax basis in the fractional share.

DIVIDENDS ON COMMON STOCK

We have not paid any dividends on our common stock and do not anticipate paying any dividends in the foreseeable future. However, if, after a US holder converts a note into common stock, we do make distributions on our common stock, the distributions will constitute dividends taxable to the holder as ordinary income for US federal income tax purposes to the extent of our current or accumulated earnings and profits as determined under US federal income tax principles. To the extent that the US holder receives distributions on shares of common stock that would otherwise constitute dividends for US federal income tax purposes but that exceed our current and accumulated earnings and profits, such distributions will be treated first as a non-taxable return of capital reducing the holder's basis in the shares of common stock. Any such distributions in excess of the US holder's basis in the shares of common stock will generally be treated as capital gain. Subject to applicable limitations, distributions constituting dividends paid to holders that are US corporations will qualify for the dividends-received deduction.

ADDITIONAL PAYMENTS IN THE CASE OF A REGISTRATION DEFAULT

Similar to the additional interest described above, we will be required to make additional payments in respect of our common stock held by US holders in the event of a "registration default" occurring after the conversion of any notes held by such holders. Any such additional payment generally should be treated for US federal income tax purposes in a manner similar to a distribution by us described under "Dividends on common stock" above.

ADJUSTMENT OF CONVERSION PRICE

The conversion price of the notes is subject to adjustment under certain circumstances, see "Description of notes--Conversion rights." Certain adjustments to (or the failure to make such adjustments to) the conversion price of the notes that increase the proportionate interest of a US holder in our assets or earnings and profits may result in a taxable constructive distribution to the holders of the notes, whether or not the holders ever convert the notes. This could occur, for example, if the conversion rate is adjusted to compensate holders of notes for certain distributions of cash or property to our stockholders. Such constructive distribution will be treated as a dividend, resulting in ordinary income (and a possible dividends received deduction in the case of corporate holders), to the extent of our current or accumulated earnings and profits. As a result, US holders of notes could have taxable income as a

result of an event pursuant to which they receive no cash or property. Generally, a US holder's tax basis in a note will be increased to the extent any such constructive distribution is treated as a dividend. Moreover, if there is an adjustment (or a failure to make an adjustment) to the conversion price of the notes that increases the proportionate interest of the holders of outstanding common stock in our assets or earnings and profits, then such increase in the proportionate interest of the holders of the common stock generally will be treated as a constructive distribution to such holders, taxable as described above.

SALE OF COMMON STOCK

A US holder will generally recognize capital gain or loss on a sale or exchange of our common stock. The US holder's gain or loss will equal the difference between the proceeds received by the holder and the holder's adjusted tax basis in the stock, which will generally be the holder's adjusted basis in the note immediately before a conversion of the note into common stock. The proceeds received by a US holder will include the amount of any cash and the fair market value of any other property received for the stock. The gain or loss recognized by a US holder on a sale or exchange of stock will be long-term capital gain or loss if the holder's holding period for the stock (which would include the holding period for the note) is more than one year. Long-term capital gains of noncorporate taxpayers are generally taxed at a lower maximum marginal rate than the maximum marginal rate applicable to ordinary income. The maximum marginal rate for capital gains is further reduced for property held for more than five years. The deductibility of capital losses is subject to limitation.

BACKUP WITHHOLDING AND INFORMATION REPORTING

Certain noncorporate US holders may be subject to IRS information reporting and backup withholding on payments of interest on the notes, dividends on common stock and proceeds from the sale or other disposition of the notes or common stock. Backup withholding will only be imposed where the noncorporate US holder:

>> fails to furnish its taxpayer identification number, referred to as a "TIN";

>> furnishes an incorrect TIN;

>> is notified by the IRS that he or she has failed to properly report payments of interest or dividends;

>> under certain circumstances, fails to certify, under penalties of perjury, that he or she has furnished a correct TIN and has not been notified by the IRS that he or she is subject to backup withholding; or

>> the IRS otherwise requires us to backup withhold.

Backup withholding is not an additional tax. The amount of any backup withholding from a payment to a US holder will be allowed as a credit against the US holder's federal income tax liability and may entitle such holder to a refund, provided that the required information is furnished to the IRS.

SPECIAL TAX RULES APPLICABLE TO NON-US HOLDERS

The following rules apply to you if you are a non-US holder (as defined above).

PAYMENTS OF INTEREST

Generally, payments of interest on the notes to, or received on behalf of, a non-US holder will be considered "portfolio interest" and will not be subject to US federal income or withholding tax where such interest is not effectively connected with the conduct of a trade or business within the United States by such non-US holder if:

>> such non-US holder does not actually or by attribution own 10% or more of the total combined voting power of all classes of our stock entitled to vote;

>> the non-US holder is not a bank receiving interest pursuant to a loan agreement entered into in the ordinary course of its trade or business;

>> such non-US holder is not a controlled foreign corporation for US federal income tax purposes that is related to us, actually or by attribution, through stock ownership; and

>> the certification requirements, as described below, are satisfied.

To satisfy the certification requirements referred to above, either (i) the beneficial owner of a note must certify, under penalties of perjury, to us or our paying agent, as the case may be, that such owner is a non-US person and must provide such owner's name and address, and TIN, if any, or (ii) a securities clearing organization, bank or other financial institution that holds customer securities in the ordinary course of its trade or business, referred to as a "Financial Institution," and holds the note on behalf of the beneficial owner thereof must certify, under penalties of perjury, to us or our paying agent, as the case may be, that such certificate has been received from the beneficial owner and must furnish the payor with a copy thereof. Such requirement will be fulfilled if the beneficial owner of a

note certifies on IRS Form W-8BEN, under penalties of perjury, that it is a non-US holder and provides its name and address or any Financial Institution holding the note on behalf of the beneficial owner files a statement with the withholding agent to the effect that it has received such a statement from the beneficial owner (and furnishes the withholding agent with a copy thereof). Special certification rules apply for notes held by foreign partnerships and other intermediaries.

If interest on the note is effectively connected with the conduct of a trade or business in the United States by a non-US holder (and, if certain tax treaties apply, is attributable to a "US permanent establishment" maintained by the non-US holder in the United States), the non-US holder, although exempt from US federal withholding tax (provided that the certification requirements discussed in the next sentence are met), will generally be subject to US federal income tax on such interest on a net income basis in the same manner as if it were a US holder. In order to claim an exemption from withholding tax, such a non-US holder will be required to provide us with a properly executed IRS Form W-8ECI certifying, under penalties of perjury, that the holder is a non-US person and the interest is effectively connected with the holder's conduct of a US trade or business and is includable in the holder's gross income. In addition, if such non-US holder so engaged is a foreign corporation, it may be subject to a branch profits tax equal to 30% (or such lower rate provided by an applicable treaty) of its effectively connected earnings and profits for the taxable year, subject to certain adjustments.

Interest on notes not effectively connected with a US trade or business and not excluded from US federal withholding tax under the "portfolio interest" exception described above generally will be subject to withholding at a 30% rate, except where a non-US holder can claim the benefits of an applicable tax treaty to reduce or eliminate such withholding tax and demonstrates such eligibility to us and the IRS.

As described under "--US Holders--Payments of interest" above, we may be required to pay holders of the notes additional interest in the event of a "registration default." It is unclear whether the payment of such additional interest to a non-US holder would be subject to US federal income tax or any withholding thereof. We intend to withhold US federal income tax from any payment of additional interest to a non-US holder at a rate of 30% or lower treaty rate, if applicable. Prospective purchasers should consult their own tax advisors as to the tax considerations that relate to the potential payment of additional interest.

CONVERSION OF THE NOTES

A non-US holder generally will not be subject to US federal income or withholding tax on the conversion of a note into our common stock. To the extent a non-US holder receives cash in lieu of a fractional share of common stock upon conversion, such cash may give rise to gain that would be subject to the rules described below with respect to the sale or exchange of a note or common stock. See "--Sale or exchange of the notes or common stock" below.

ADJUSTMENT OF CONVERSION PRICE

The conversion price of the notes is subject to adjustment in certain circumstances. Any such adjustment could, in certain circumstances, give rise to a deemed distribution to non-US holders of the notes. See "--US Holders--Adjustment of conversion price" above. In such case, the deemed distribution would be subject to the rules below regarding withholding of US federal tax on dividends in respect of common stock. See "--Dividends on common stock" below.

SALE OR EXCHANGE OF THE NOTES OR COMMON STOCK

A non-US holder generally will not be subject to US federal income or withholding tax on gain realized on the sale or other taxable disposition (including a redemption) of a note or common stock received upon conversion

thereof unless:

>> the holder is an individual who was present in the United States for 183 days or more during the taxable year of the disposition and (a) such holder has a "tax home" in the United States or (b) the gain is attributable to an office or other fixed place of business maintained in the United States by such holder; in this case the non-US holder will be subject to a 30% tax on gain derived from the disposition; or

>> the gain is effectively connected with the conduct of a US trade or business by the non-US holder (and, if required by a tax treaty, the gain is attributable to a permanent establishment maintained in the United States); in this case, the non-US holder will generally be taxed on its net gain derived from the disposition at the regular graduated rates and in the manner applicable to US persons and, if the non-US holder is a foreign corporation, the "branch profits tax" described above may also apply.

We do not believe that we are currently a US real property holding corporation (a "USRPHC"), nor that we will become a USRPHC in the future. However, if we were to become a USRPHC, a non-US holder could be subject to federal income tax withholding with respect to gain realized on the disposition of notes or shares of common stock. In that case, any withholding tax withheld pursuant to the rules applicable to dispositions of US real property interests would be creditable against that non-US holder's US federal income tax liability and could entitle that non-US holder to a refund upon furnishing required information to the IRS.

DIVIDENDS ON COMMON STOCK

We have not paid any dividends on our common stock and do not anticipate paying any dividends in the foreseeable future. However, if, after a non-US holder converts a note into common stock, we do make distributions on our common stock, the distributions will constitute a dividend for US federal income tax purposes to the extent of our current or accumulated earnings and profits as determined under US federal income tax principles. Except as described below, dividends paid on common stock held by a non-US holder will be subject to US federal withholding tax at a rate of 30% or lower treaty rate, if applicable. A non-US holder generally will be required to satisfy certain IRS certification requirements in order to claim a reduction of or exemption from withholding under a tax treaty by filing IRS Form W-8BEN upon which the non-US holder certifies, under penalties of perjury, its status as a non-US person and its entitlement to the lower treaty rate with respect to such payments.

If dividends paid to a non-US holder are effectively connected with the conduct of a US trade or business by the non-US holder and, if required by a tax treaty, the dividends are attributable to a permanent establishment maintained in the United States, we and other payors generally are not required to withhold tax from the dividends, provided that the non-US holder furnishes to us a valid IRS Form W-8ECI certifying, under penalties of perjury, that the holder is a non-US person, and the dividends are effectively connected with the holder's conduct of a US trade or business and are includible in the holder's gross income. Effectively connected dividends will be subject to US federal income tax on net income that applies to US persons generally (and, with respect to corporate holders under certain circumstances, the branch profits tax).

ADDITIONAL PAYMENTS IN THE CASE OF A REGISTRATION DEFAULT

Similar to the additional interest described above, we will be required to make additional payments in respect of our common stock held by non-US holders in the event of a "registration default" occurring after the conversion of any notes held by such holders. Any such additional payment generally should be treated for US federal income tax purposes in a manner similar to a distribution by us described under "Dividends on common stock" above.

BACKUP WITHHOLDING AND INFORMATION REPORTING

We must report annually to the IRS and to each non-US holder the amount of interest or dividends paid to that holder and the tax withheld from those payments of interest or dividends. These reporting requirements apply regardless of whether withholding was reduced or eliminated by any applicable tax treaty. Copies of the information returns reporting those payments of interest or dividends and withholding may also be made available to the tax authorities in the country in which the non-US holder is a resident under the provisions of an applicable income tax treaty or agreement.

A non-US holder will generally not be subject to additional information reporting or to backup withholding with respect to payments of interest on the notes or dividends on common stock or to information reporting or backup

withholding with respect to proceeds from the sale or other disposition of the notes or common stock to or through a US office of any broker, as long as the holder has furnished to the payor or broker:

>> a valid IRS Form W-8BEN certifying, under penalties of perjury, its status as a non-US person;

>> other documentation upon which it may rely to treat the payments as made to a non-US person in accordance with Treasury regulations; or

>> otherwise establishes an exemption.

The payment of the proceeds from the sale or other disposition of the notes or common stock to or through a foreign office of a broker generally will not be subject to information reporting or backup withholding. However, a sale or disposition of the notes or common stock will be subject to information reporting, but not backup withholding, if it is to or through a foreign office of a broker that is a "US related broker" unless the documentation requirements described above are met or the holder otherwise establishes an exemption. A broker is a "US related broker" if the broker is:

>> a US person;

>> a controlled foreign corporation for US federal income tax purposes;

>> a foreign person 50% or more of whose gross income is effectively connected with the conduct of a US trade or business for a specified three-year period; or

>> a foreign partnership, if at any time during its tax year one or more of its partners are US persons, as defined in Treasury regulations, who in the aggregate hold more than 50% of the income or capital interest in the partnership, or such foreign partnership is engaged in the conduct of a US trade or business.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a non-US holder will be allowed as a credit against such holder's US federal income tax liability, if any, or will otherwise be refundable, provided that the requisite procedures are followed and the proper information is filed with the IRS on a timely basis. Non-US holders should consult their own tax advisors regarding their qualification for exemption from backup withholding and the procedure for obtaining such an exemption, if applicable.

The preceding discussion of certain US federal income tax consequences is for general information only and is not tax advice. Accordingly, you should consult your own tax advisor as to particular tax consequences to you of purchasing, holding and disposing of the notes and our common stock, including the applicability and effect of any state, local or foreign tax laws, and of any proposed changes in applicable laws.

LEGAL MATTERS

Clifford Chance US LLP, San Diego, will pass on the validity of the notes and the common stock issuable upon their conversion.

EXPERTS

The consolidated financial statements for the years ended December 31, 2001 and 2000 incorporated in this prospectus by reference from our Annual Report on Form 10-K for the year ended December 31, 2001 have been audited by Deloitte & Touche LLP, independent auditors, as stated in their report, which is incorporated herein by reference (which report expresses an unqualified opinion and includes an explanatory paragraph referring to a change in accounting principle), and have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

The consolidated financial statements incorporated by reference in our Annual Report on Form 10-K for the year ended December 31, 1999 have been audited by Ernst & Young LLP, independent auditors, as set forth in their report thereon included therein and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and

auditing.

WE HAVE NOT AUTHORIZED ANY PERSON TO MAKE A STATEMENT THAT DIFFERS FROM WHAT IS IN THIS PROSPECTUS. IF ANY PERSON DOES MAKE A STATEMENT THAT DIFFERS FROM WHAT IS IN THIS PROSPECTUS, YOU SHOULD NOT RELY ON IT. THIS PROSPECTUS IS NOT AN OFFER TO SELL, NOR IS IT AN OFFER TO BUY, THESE SECURITIES IN ANY STATE IN WHICH THE OFFER OR SALE IS NOT PERMITTED. THE INFORMATION IN THIS PROSPECTUS IS COMPLETE AND ACCURATE AS OF ITS DATE, BUT THE INFORMATION MAY CHANGE AFTER THAT DATE.

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

The following table sets forth all expenses, other than underwriting discounts and commissions, payable by the registrant in connection with the resales of the securities being registered. All the amounts shown are estimates, except for the SEC registration fee.

<TABLE>
<S> <C>
SEC registration fee..... $14,283
Printing and engraving expenses..... 5,000
Legal fees and expenses..... 15,000
Accounting fees and expenses..... 12,000
Trustee fees..... 30,000
Miscellaneous expenses..... 10,000
TOTAL..... $86,283
=======
</TABLE>

ITEM 15. INDEMNIFICATION OF OFFICERS AND DIRECTORS.

Under Section 145 of the Delaware General Corporation Law, we have broad powers to indemnify our directors and officers against liabilities they may incur in such capacities, including liabilities under the Securities Act.

Our amended and restated certificate of incorporation provides for the indemnification of all persons to the fullest extent permissible under Delaware law.

Our amended and restated by-laws provide for the indemnification of officers, directors and third parties acting on our behalf if such person acted in good faith and in a manner reasonably believed to be in and not opposed to our best interest, and, with respect to any criminal action or proceeding, the indemnified party had no reason to believe his or her conduct was unlawful.

We maintain directors and officers insurance providing indemnification for certain of our directors and officers for certain liabilities.

We also entered into indemnification agreements between us and our directors and officers, which may be sufficiently broad to permit indemnification of our officers and directors for liabilities arising under the Securities Act.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling us pursuant to the foregoing provisions, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

ITEM 16. EXHIBITS.

(A) EXHIBITS.

EXHIBIT NO. DESCRIPTION

1.1 Purchase Agreement dated November 21, 2002, between Ligand Pharmaceuticals Incorporated and UBS Warburg LLC

4.1 Instruments defining the rights of stockholders. Reference is made to our Form 8-A registration statement filed on November 21, 1994 (incorporated into this registration statement by reference), our Amended and Restated Certificate of Incorporation (incorporated into this registration statement by reference to Exhibit 3.2 to our Form S-4 registration statement filed on July 9, 1998), our Bylaws (incorporated into this registration statement by reference to Exhibit 3.3 of our Form S-4 registration statement, filed on July 9, 1998), our Amended Certificate of Designation of Rights, Preferences and Privileges of Series A Participating Preferred Stock (incorporated into this registration statement by reference to Exhibit 3.3 to our quarterly report on Form 10-Q for the period ended March 31, 1999), our Form 8-A registration statement filed on September 30, 1996 and our specimen stock certificate for shares of our common stock (incorporated into this registration statement by reference to Exhibit 4.1 filed with the our registration statement filed on April 16, 1992 as amended), including any amendments or reports filed for the purposes of updating such descriptions.

4.2 Registration Rights Agreement dated November 26, 2002 between Ligand Pharmaceuticals Incorporated and UBS Warburg LLC

4.3 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

4.4 Form of 6% Convertible Subordinated Note due 2007

4.5 Pledge Agreement dated November 26, 2002, between Ligand Pharmaceuticals Incorporated and J.P. Morgan Trust Company, National Association

4.6 Control Agreement dated November 26, 2002, among Ligand Pharmaceuticals Incorporated, J.P. Morgan Trust Company, National Association and JP Morgan Chase Bank

5.1 Opinion of Clifford Chance US LLP

12.1 Statement Regarding Ratio of Earnings to Fixed Charges

23.1 Consent of Deloitte & Touche LLP, Independent Auditors

23.2 Consent of Ernst & Young, Independent Auditors

23.3 Consent of Clifford Chance US LLP. Included in the Opinion of Clifford Chance US LLP filed as Exhibit 5.1

24.1 Power of Attorney (See Signature Page on Page II-5)

25.1 Statement of Eligibility of Trustee on Form T-1

ITEM 17. UNDERTAKINGS.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) to include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii)to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof;

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer, or controlling person of the registrant in the successful defense of any action, suit, or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes to file an application for the purpose of determining the eligibility of the trustee to act under subsection (a) of Section 310 of the Trust Indenture Act (the "Act") in accordance with the rules and regulations prescribed by the Commission under Section 305(b)(2) of the Act.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Diego, State of California, on January 13, 2003.

LIGAND PHARMACEUTICALS INCORPORATED

By: /S/DAVID E. ROBINSON

David E. Robinson, President
and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each individual whose signature appears below constitutes and appoints David E. Robinson and Paul V. Maier, and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to sign any registration statement for the same offering covered by this registration

statement that is to be effective upon filing pursuant to Rule 462(b) promulgated under the Securities Act of 1933, as amended, and all post-effective amendments thereto, and to file the same, with all exhibits thereto and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or his or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated:

<TABLE>
<CAPTION>

SIGNATURE	TITLE	DATE
<S>	<C>	<C>
/S/DAVID E. ROBINSON		January 13, 2003
David E. Robinson	President and Chief Executive Officer (Principal Executive Officer)	
/S/PAUL V. MAIER		January 13, 2003
Paul V. Maier	Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	
/S/HENRY F. BLISSENBACH		January 13, 2003
Henry F. Blissenbach	Director	
/S/ALEXANDER D. CROSS		January 13, 2003
Alexander D. Cross	Director	
/S/MICHAEL A. ROCCA		January 13, 2003
Michael A. Rocca	Director	
/S/JOHN GROOM		January 13, 2003
John Groom	Director	
/S/IRVING S. JOHNSON		January 13, 2003
Irving S. Johnson	Director	
/S/CARL C. PECK		January 13, 2003
Carl C. Peck	Director	

</TABLE>

EXHIBIT INDEX

EXHIBIT NO.	DESCRIPTION
1.1	Purchase Agreement dated November 21, 2002, between Ligand Pharmaceuticals Incorporated and UBS Warburg LLC
4.1	Instruments defining the rights of stockholders. Reference is made to our Form 8-A registration statement filed on November 21, 1994 (incorporated into this registration statement by reference), our Amended and Restated Certificate of Incorporation (incorporated into this registration statement by reference to Exhibit 3.2 to our Form S-4 registration statement filed on July 9, 1998), our Bylaws (incorporated into this registration statement by reference to Exhibit 3.3 of our Form S-4 registration statement, filed on July 9, 1998), our Amended Certificate of Designation of Rights, Preferences and Privileges of Series A Participating Preferred Stock (incorporated into this registration statement by reference to Exhibit 3.3

to our quarterly report on Form 10-Q for the period ended March 31, 1999), our Form 8-A registration statement filed on September 30, 1996 and our specimen stock certificate for shares of our common stock (incorporated into this registration statement by reference to Exhibit 4.1 filed with the our registration statement filed on April 16, 1992 as amended), including any amendments or reports filed for the purposes of updating such descriptions.

4.2 Registration Rights Agreement dated November 26, 2002 between Ligand Pharmaceuticals Incorporated and UBS Warburg LLC

4.3 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

4.4 Form of 6% Convertible Subordinated Note due 2007

4.5 Pledge Agreement dated November 26, 2002, between Ligand Pharmaceuticals Incorporated and J.P. Morgan Trust Company, National Association

4.6 Control Agreement dated November 26, 2002, among Ligand Pharmaceuticals Incorporated, J.P. Morgan Trust Company, National Association and JP Morgan Chase Bank

5.1 Opinion of Clifford Chance US LLP

12.1 Statement Regarding Ratio of Earnings to Fixed Charges

23.1 Consent of Deloitte & Touche LLP, Independent Auditors

23.2 Consent of Ernst & Young, Independent Auditors

23.3 Consent of Clifford Chance US LLP. Included in the Opinion of Clifford Chance US LLP filed as Exhibit 5.1

24.1 Power of Attorney (See Signature Page on Page II-5)

25.1 Statement of Eligibility of Trustee on Form T-1

Exhibit 1.1

$135,000,000 Principal Amount

Ligand Pharmaceuticals Incorporated

6% Convertible Subordinated Notes due 2007

PURCHASE AGREEMENT

PURCHASE AGREEMENT

November 21, 2002

UBS WARBURG LLC
as Initial Purchaser
299 Park Avenue
New York, New York 10171

Dear Sirs and Mesdames:

Ligand Pharmaceuticals Incorporated, a Delaware corporation (the "COMPANY"), proposes to issue and sell to UBS Warburg LLC (the "INITIAL PURCHASER") $135,000,000 aggregate principal amount of its 6% Convertible Subordinated Notes due 2007 (the "FIRM NOTES"). In addition, solely for the purpose of covering over-allotments, the Company proposes to grant to the Initial Purchaser the option to purchase from the Company up to an additional $20,250,000 aggregate principal amount of the Company's 6% Convertible Subordinated Notes due 2007 (the "ADDITIONAL NOTES"). The Firm Notes and the Additional Notes are hereinafter collectively sometimes referred to as the "NOTES."

The Notes are to be issued pursuant to an indenture (the "INDENTURE") to be dated as of November 26, 2002, between the Company and J.P. Morgan Trust Company, National Association, as trustee (the "TRUSTEE"). The Notes will be convertible in accordance with their terms and the terms of the Indenture into shares of the common stock (the "COMMON STOCK") of the Company, par value $0.001 per share (the "SHARES").

The Notes and the Shares will be offered without being registered under the Securities Act of 1933, as amended (the "SECURITIES ACT"), to "qualified institutional buyers" in compliance with the exemption from registration provided by Rule 144A under the Securities Act ("RULE 144A").

The Initial Purchaser and its direct and indirect transferees will be entitled to the benefits of a Registration Rights Agreement to be entered into at or prior to the time of purchase (as hereinafter defined) between the Company and the Initial Purchaser (the "REGISTRATION RIGHTS AGREEMENT").

The Company will purchase United States government securities in such amount sufficient to provide for payment in full of the first four scheduled interest payments on the Firm Notes (and Additional Notes, if issued). The Company will pledge the government securities as security for the Firm Notes (and Additional Notes, if issued) for the exclusive and ratable benefit of the holders of the Notes (including the Initial Purchaser and its direct and indirect transferees) pursuant to a Pledge Agreement to be entered into at or prior to the time of purchase between the Company and the Trustee (the "PLEDGE AGREEMENT") and pursuant to a Control Agreement to be entered into at or prior

to the time of purchase among the Company, the Trustee and a securities intermediary and depository bank (the "CONTROL AGREEMENT").

In connection with the sale of the Notes, the Company has prepared a preliminary offering memorandum (the "PRELIMINARY MEMORANDUM") and will prepare a final offering memorandum (the "FINAL MEMORANDUM" and, with the Preliminary Memorandum, each a "MEMORANDUM") including or incorporating by reference a description of the terms of the Notes and the Shares, the terms of the offering and a description of the Company. As used herein, the terms "PRELIMINARY MEMORANDUM", "FINAL MEMORANDUM" and "MEMORANDUM" shall include in each case the documents incorporated by reference therein, if any. The terms "SUPPLEMENT", "AMENDMENT" and "AMEND" as used herein with respect to a Memorandum shall include all documents deemed to be incorporated by reference in the Preliminary Memorandum or Final Memorandum, if any, that are filed subsequent to the date of such Memorandum with the Securities and Exchange Commission (the "COMMISSION") pursuant to the Securities Exchange Act of 1934, as amended (the "EXCHANGE ACT").

The Company and the Initial Purchaser agree as follows:

1. SALE AND PURCHASE: Upon the basis of the warranties and representations and subject to the other terms and conditions herein set forth, the Company agrees to sell to the Initial Purchaser, and the Initial Purchaser agrees to purchase from the Company, the Firm Notes at a purchase price of 97% of the principal amount thereof.

In addition, the Company hereby grants to the Initial Purchaser the one-time option to purchase, and upon the basis of the representations and warranties and subject to the other terms and conditions herein set forth, the Initial Purchaser shall have the one-time right to purchase from the Company, all or a portion of the Additional Notes as may be necessary to cover over-allotments made in connection with the offering of the Firm Notes, at a purchase price of 97% of the principal amount thereof, plus accrued interest, if any, from the time of purchase (as hereinafter defined) to the additional time of purchase (as hereinafter defined). This option may be exercised by you at any time (but not more than once) on or before the thirtieth day following the date hereof by written notice to the Company. Such notice shall set forth the aggregate initial principal amount of Additional Notes as to which the option is being exercised and the date and time when the Additional Notes are to be delivered (such date and time being herein referred to as the "ADDITIONAL TIME OF PURCHASE"); PROVIDED, HOWEVER, that the additional time of purchase shall not be earlier than (i) the time of purchase or (ii) the second business day after the date on which the option shall have been exercised nor later than the tenth business day after the date on which the option shall have been exercised. As used herein, "business day" shall mean a day on which the NASDAQ National Market is open for trading.

2. PAYMENT AND DELIVERY: Payment of the purchase price for the Firm Notes shall be made to the Company by Federal (same day) funds, against delivery of the Firm Notes to you, at the offices of Dewey Ballantine LLP in Los Angeles, California, or

at such other place as may be agreed upon by the parties hereto, for the account of the Initial Purchaser. Such payment and delivery shall be made at 10:00 A.M., eastern standard time, on November 26, 2002 (unless another time shall be agreed to by you and the Company). The time at which such payment and delivery are actually made is herein sometimes called the "TIME OF PURCHASE."

Payment of the purchase price for the Additional Notes shall be made at the additional time of purchase in the same manner and at the same office and time of day as the payment for the Firm Notes.

Certificates for the Notes shall be in definitive form or global form, as specified by you, and registered in the names and in such denominations as you shall request in writing not later than two full business days prior to the time of purchase or the additional time of purchase, as the case may be. For the purpose of expediting the checking of the certificates for the Notes by you, the Company agrees to make such certificates available to you for such purpose at

least one full business day preceding the time of purchase or the additional time of purchase, as the case may be.

3. REPRESENTATIONS AND WARRANTIES OF THE COMPANY: The Company represents and warrants to the Initial Purchaser that:

(a) (i) Each document, if any, filed or to be filed pursuant to the Exchange Act and incorporated by reference in either Memorandum complied or will comply when so filed in all material respects with the Exchange Act and the applicable rules and regulations of the Commission thereunder and (ii) the Preliminary Memorandum does not contain and the Final Memorandum, as amended or supplemented, as applicable, will not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, except that the representations and warranties set forth in this paragraph do not apply to statements or omissions in either Memorandum based upon information relating to the Initial Purchaser furnished to the Company in writing by or on behalf of the Initial Purchaser expressly for use therein;

(b) As of September 30, 2002, the Company had an authorized capitalization as set forth under the column heading entitled "Actual" in the section of the Final Memorandum entitled "Capitalization" and, as adjusted to give effect to the offering of the Firm Notes and the application of the net proceeds therefrom as described in the "Use of Proceeds" section of the Final Memorandum, the Company would, as of September 30, 2002, have had an authorized capitalization as set forth under the column heading entitled "As Adjusted" in the section of the Final Memorandum entitled "Capitalization"; all of the issued and outstanding shares of capital stock of the Company have been duly and validly authorized and issued and are fully paid and non-assessable and were not issued in violation of statutory or contractual preemptive rights, resale rights, rights of first refusal and similar rights, and no person has the right to

receive or purchase shares of capital stock of the Company as a result of the prior issuance of outstanding shares of capital stock of the Company;

(c) Set forth on Annex A hereto is a list of all of the Company's subsidiaries, as defined in the Securities Act (such subsidiaries being referred to herein individually as a "SUBSIDIARY" and collectively as the "SUBSIDIARIES"); except for the Subsidiaries, the Company does not control any person or entity and is not under common control with any person or entity; each of the Company and the Subsidiaries has been duly incorporated and is validly existing as a corporation under the laws of the jurisdiction of its incorporation, with all requisite corporate power and authority to own its properties and conduct its business as described in the Final Memorandum; all of the issued shares of capital stock of each Subsidiary of the Company have been duly and validly authorized and issued, are fully paid and non-assessable and are owned directly or indirectly by the Company, free and clear of all liens, encumbrances, equities or claims;

(d) The Company and each of its Subsidiaries are duly qualified or licensed to do business as foreign corporations and are in good standing in each jurisdiction in which the conduct of their respective businesses or their ownership or leasing of property requires such qualification or license, except to the extent that the failure, individually or in the aggregate, to be so qualified or licensed or be in good standing could not reasonably be expected to have a material adverse effect on the operations, business, prospects or condition (financial or otherwise) of the Company and its Subsidiaries, taken as a whole (a "MATERIAL ADVERSE EFFECT"); and the Company and each of its Subsidiaries are in compliance in all respects with the laws, orders, rules, regulations and directives issued or administered by such jurisdictions, except where the failure to be in compliance could not reasonably be expected to have a Material Adverse Effect;

(e) Neither the Company nor any of its Subsidiaries is in violation or

breach of, or in default under (nor has any event occurred which with notice, lapse of time, or both would constitute a violation or breach of, or default under), (A) its charter or by-laws, (B) any license, indenture, mortgage, deed of trust, bank loan or credit agreement or other evidence of indebtedness, or any lease, contract or other agreement or instrument to which the Company or any of its Subsidiaries is a party or by which any of them or their properties may be bound or affected, or (C) any federal, state, local or foreign law, regulation or rule, or under any rule or regulation of any self-regulatory or other non-governmental regulatory authority (including, but not limited to, the Nasdaq Stock Market, Inc. ("NASDAQ")), or any decree, judgment or order applicable to the Company or any of its Subsidiaries, except, in the case of clauses (B) and (C) above, for such violations, breaches or defaults that could not reasonably be expected to result in a Material Adverse Effect; and the execution, delivery and performance of this Agreement, the Registration Rights Agreement, the Indenture, the Pledge Agreement, the Control Agreement and the Notes and consummation of the transactions contemplated hereby and thereby, including the issuance of the Notes and the issuance of the Shares upon conversion of the Notes, will not conflict

with, or result in any violation or breach of or constitute a default under (nor constitute any event which with notice, lapse of time, or both would constitute a violation or breach of, or default under), (X) any provisions of the charter or by-laws of the Company or any of its Subsidiaries, (Y) any provision of any license, indenture, mortgage, deed of trust, bank loan or credit agreement or other evidence of indebtedness, or any lease, contract or other agreement or instrument to which the Company or any of its Subsidiaries is a party or by which any of them or their properties may be bound or affected, or (Z) any federal, state, local or foreign law, regulation or rule, or under any rule or regulation of any self-regulatory or other non-governmental regulatory authority (including, but not limited to, Nasdaq), or any decree, judgment or order applicable to the Company or any of its Subsidiaries, except, in the case of clauses (Y) and (Z) above, for such violations, breaches or defaults that could not reasonably be expected to result in a Material Adverse Effect;

(f) The Indenture has been duly authorized by the Company and when executed and delivered by the Company and the other parties thereto will be a legal, valid and binding agreement of the Company, enforceable in accordance with its terms, except as the enforceability thereof may be limited by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium or similar laws affecting creditors' rights generally and general principles of equity (regardless of whether enforcement is considered in a proceeding in equity or at law) and except to the extent that rights to indemnity may be limited by applicable law;

(g) The Registration Rights Agreement has been duly authorized by the Company and when executed and delivered by the Company and the other parties thereto will be a legal, valid and binding agreement of the Company, enforceable in accordance with its terms, except as the enforceability thereof may be limited by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium or similar laws affecting creditors' rights generally and general principles of equity (regardless of whether enforcement is considered in a proceeding in equity or at law) and except to the extent that rights to indemnity may be limited by applicable law;

(h) The Notes have been duly authorized by the Company and when executed and delivered by the Company and duly authenticated in accordance with the terms of the Indenture and delivered to and paid for by the Initial Purchaser in accordance with the terms hereof will constitute legal, valid and binding obligations of the Company, enforceable in accordance with their terms, except as the enforceability thereof may be limited by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium or similar laws affecting creditors' rights generally and general principles of equity (regardless of whether enforcement is considered in a proceeding in equity or at law) and except to the extent that rights to indemnity may be limited by applicable law, and will be entitled to the benefits of the Indenture, the Registration Rights Agreement, the Pledge Agreement and the Control Agreement; the Shares

initially issuable upon conversion of the Notes have been duly authorized and validly reserved for

issuance upon conversion of the Notes, and upon conversion of the Notes in accordance with their terms and the terms of the Indenture will be issued free of statutory and contractual preemptive rights and are sufficient in number to meet the current conversion requirements, and such Shares, when so issued upon such conversion in accordance with the terms of the Indenture, will be duly and validly issued and fully paid and nonassessable;

(i) This Agreement has been duly authorized, executed and delivered by the Company and is a legal, valid and binding agreement of the Company, enforceable in accordance with its terms, except as the enforceability thereof may be limited by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium or similar laws affecting creditors' rights generally and general principles of equity (regardless of whether enforcement is considered in a proceeding in equity or at law) and except to the extent that rights to indemnity may be limited by applicable law;

(j) The Pledge Agreement has been duly authorized by the Company and when executed and delivered by the Company and the other parties thereto will be a legal, valid and binding agreement of the Company, enforceable in accordance with its terms, except as the enforceability thereof may be limited by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium or similar laws affecting creditors' rights generally and general principles of equity (regardless of whether enforcement is considered in a proceeding in equity or at law) and except to the extent that rights to indemnity may be limited by applicable law;

(k) The Control Agreement has been duly authorized by the Company and when executed and delivered by the Company and the other parties thereto will be a legal, valid and binding agreement of the Company, enforceable in accordance with its terms, except as the enforceability thereof may be limited by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium or similar laws affecting creditors' rights generally and general principles of equity (regardless of whether enforcement is considered in a proceeding in equity or at law) and except to the extent that rights to indemnity may be limited by applicable law;

(l) The terms of the Notes, the Registration Rights Agreement, the Indenture, the Pledge Agreement, the Control Agreement and the capital stock of the Company, including the Shares, conform in all material respects to the description thereof contained in the Final Memorandum;

(m) No approval, authorization, consent or order of or filing with any federal, state, local or foreign governmental or regulatory commission, board, body, authority or agency, or of or with any self-regulatory or other non-governmental regulatory authority (including, but not limited to, Nasdaq), is required to be made or obtained by the Company or any of its Subsidiaries in connection with the issuance and sale by the Company of the Notes and the

Shares as contemplated hereby other than (i) as may be required (A) under the securities or blue sky laws of the various jurisdictions in which the Notes and the Shares are being offered by the Initial Purchaser and (B) by Federal and state securities laws with respect to the Company's obligations under the Registration Rights Agreement, and (ii) as will be made or obtained at or prior to the time of purchase or the additional time of purchase, as the case may be (or, if not required to be made or obtained at or prior to the time of purchase or the additional time of purchase, as the case may be, that will be made or obtained when required);

(n) Each of Deloitte & Touche LLP and Ernst & Young LLP, whose reports on the consolidated financial statements of the Company and its

Subsidiaries are included or incorporated by reference in the Final Memorandum, are independent public accountants with respect to the Company as required by the Securities Act and the applicable published rules and regulations thereunder;

(o) Each of the Company and its Subsidiaries has obtained and possesses all necessary licenses, authorizations, consents and approvals required under any federal, state, local or foreign law or from other persons (collectively, "CONSENTS") and has made all necessary filings required under any federal, state, local or foreign law, regulation or rule ("FILINGS") in order to conduct its business as currently conducted, except where the failure to have any such Consent or to have made any such Filing could not reasonably be expected to have a Material Adverse Effect; neither the Company nor any of its Subsidiaries is in violation of, or in default under, any requirement relating to any such Consent or Filing, except where such violation or default could not reasonably be expected to have a Material Adverse Effect;

(p) Except as described or incorporated by reference in the Final Memorandum, there are no actions, suits or proceedings pending or, to the knowledge of the Company, threatened against the Company or any of its Subsidiaries or any of their respective properties, at law or in equity, or before or by any federal, state, local or foreign governmental or regulatory commission, board, body, authority or agency, or before or by any self-regulatory or other non-governmental regulatory authority (including, but not limited to, Nasdaq), which would result in a judgment, decree or order having a Material Adverse Effect;

(q) Except as could not reasonably be expected to have a Material Adverse Effect, the Company and each Subsidiary have filed on a timely basis all necessary federal, state and foreign income, franchise and other tax returns (other than returns being contested in good faith) and have paid all taxes shown thereon as due (other than those being contested in good faith or which are currently payable without penalty or interest), and the Company has no knowledge of any tax deficiency which has been or might be asserted against the Company or any Subsidiary which would have a Material Adverse Effect; all material tax liabilities are adequately provided for within the financial statements of the Company in accordance with generally accepted accounting principles ("GAAP");

(r) The Company and each Subsidiary maintains insurance of the types and in the amounts reasonably believed to be adequate for their business, all of which insurance is in full force and effect;

(s) Neither the Company nor its Subsidiaries are involved in any labor dispute or disturbance nor, to the knowledge of the Company, is any such dispute or disturbance threatened except, in each case, for disputes or disturbances which could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect;

(t) Except as described or incorporated by reference in the Final Memorandum, the Company and each Subsidiary owns or possesses such licenses or other rights to use all patents, patent applications, trademarks, trademark applications, service marks, service mark applications, trade names, copyrights, manufacturing processes, formulae, trade secrets, know-how, franchises, and other material intangible property and assets (collectively, "INTELLECTUAL PROPERTY") necessary to the conduct of their businesses as described or incorporated by reference in the Final Memorandum without any known infringement of a valid and enforceable Intellectual Property right of others, except where the failure to so own or possess such rights could not reasonably be expected to have a Material Adverse Effect; the Company has no knowledge that it or any Subsidiary lacks or will be unable to obtain any rights or licenses to use any of the Intellectual Property necessary to conduct its business as described or incorporated by reference in the Final Memorandum without any known infringement of a valid and enforceable Intellectual Property right of others, except as described or incorporated by reference in the Final Memorandum and except where the failure to have or obtain such rights or licenses could not reasonably be expected to have a Material Adverse

Effect; the Company has not received any written notice of infringement of valid and enforceable rights or claims of others with respect to any Intellectual Property which infringement could reasonably be expected to have a Material Adverse Effect, except to the extent described or incorporated by reference in the Final Memorandum; the Company is not aware of any valid and enforceable patents of others which are infringed by the Company's or any Subsidiaries' products or which would be infringed upon commercialization of the products under development referred to or incorporated by reference in the Final Memorandum, which infringement could reasonably be expected to have a Material Adverse Effect, except as described or incorporated by reference in the Final Memorandum;

(u) The audited financial statements and related notes thereto of the Company included or incorporated by reference in the Final Memorandum present fairly in all material respects the consolidated financial position of the Company and its Subsidiaries as of the dates indicated and the results of operations and cash flows of the Company and its Subsidiaries for the periods specified; such financial statements have been prepared in conformity with GAAP applied on a consistent basis during the periods involved;

(v) Subsequent to the respective dates as of which information is given in the Final Memorandum, there has not been (A) any material and unfavorable change, financial or otherwise, in the operation, business, prospects or condition (financial or otherwise) of the Company and its Subsidiaries, taken as a whole, (B) any transaction entered into by the Company or any of its Subsidiaries, which is material to the Company and its Subsidiaries, taken as a whole, or (C) any obligation, contingent or otherwise, directly or indirectly, incurred by the Company or any of its Subsidiaries which is material to the Company and its Subsidiaries, taken as a whole;

(w) The Company and its Subsidiaries (i) are in compliance with any and all applicable foreign, federal, state and local laws and regulations relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants ("ENVIRONMENTAL Laws"), (ii) have received and currently possess all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses and (iii) are in compliance with all terms and conditions of any such permit, license or approval, except where such noncompliance with Environmental Laws, failure to receive required permits, licenses or other approvals or failure to comply with the terms and conditions of such permits, licenses or approvals could not reasonably be expected to have a Material Adverse Effect;

(x) When the Notes are issued pursuant to this Agreement, the Notes will not be of the same class (within the meaning of Rule 144A) as securities that are listed on a national securities exchange registered pursuant to Section 6 of the Exchange Act or quoted in a U.S. automated inter-dealer quotation system;

(y) Neither the Company nor any affiliate (as defined in Rule 501(b) of Regulation D under the Securities Act, an "AFFILIATE") of the Company has directly, or through any agent, (i) sold, offered for sale, solicited offers to buy or otherwise negotiated in respect of, any security (as defined in the Securities Act) which is or will be integrated with the sale of the Notes in a manner that would require the registration under the Securities Act of the Notes or (ii) offered, solicited offers to buy or sold the Notes by any form of general solicitation or general advertising (as those terms are used in Regulation D under the Securities Act ("REGULATION D")) or in any manner involving a public offering within the meaning of Section 4(2) of the Securities Act; PROVIDED, HOWEVER, that the Company makes the foregoing representation and warranty with respect to Elan Corporation plc ("ELAN") and its subsidiaries only to the Company's knowledge;

(z) It is not necessary in connection with the offer, sale and delivery of the Notes to the Initial Purchaser pursuant to this Agreement to register the Notes under the Securities Act or to qualify the Indenture

under the Trust Indenture Act of 1939, as amended;

(aa) The Company is not and, after giving effect to the offering and sale of the Notes and the application of the proceeds thereof as described in the Final Memorandum will not be, required to register as an "investment company" as defined in the Investment Company Act of 1940, as amended;

(bb) Except as described or incorporated by reference in the Final Memorandum, there are no contracts, agreements or understandings between the Company and any person granting such person the right to require the Company to register any securities with the Commission;

(cc) The clinical, pre-clinical and other studies and tests conducted by or on behalf of or sponsored by the Company or any of the Subsidiaries or in which the Company, any of the Subsidiaries or its products or product candidates have participated that are described or incorporated by reference in the Final Memorandum or the results of which are referred to or incorporated by reference in the Final Memorandum were and, if still pending, are being conducted in accordance with standard medical and scientific research procedures, except where the failure to so conduct such studies and tests could not reasonably be expected to have a Material Adverse Effect; except to the extent disclosed or incorporated by reference in the Final Memorandum or where the failure to so operate or be in compliance could not reasonably be expected to have a Material Adverse Effect, the Company and each of the Subsidiaries has operated and currently is in compliance in all material respects with all applicable rules, regulations and policies of the U.S. Food and Drug Administration and comparable drug regulatory agencies outside of the United States (collectively, the "REGULATORY AUTHORITIES"); and except to the extent disclosed or incorporated by reference in the Final Memorandum, neither the Company nor any of the Subsidiaries has received any notices or other correspondence from the Regulatory Authorities or any other governmental agency requiring the termination or suspension of any clinical or pre-clinical studies or tests that are described or incorporated by reference in the Final Memorandum or the results of which are referred to or incorporated by reference in the Final Memorandum;

(dd) The chief executive officer of the Company and the chief financial officer of the Company have made all certifications required by the Sarbanes-Oxley Act of 2002 (the "SARBANES-OXLEY ACT") and any related rules and regulations promulgated by the Commission, and the statements contained in any such certification are complete and correct; the Company maintains "disclosure controls and procedures" (as defined in Rule 13a-14(c) under the Exchange Act); and the Company is otherwise in compliance with all applicable provisions of the Sarbanes-Oxley Act;

(ee) The Company and each of the Subsidiaries maintain a system of internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted

accounting principles and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences;

(ff) The Company is a corporation organized solely under the laws of the State of Delaware and not of any other State or jurisdiction, and the State of Delaware must maintain a public record showing the Company to have been so organized. The Company's name, within the meaning of Section 9-503(a)(1) of the UCC, is Ligand Pharmaceuticals Incorporated. The Company is located, within the meaning of Section 9-307 of the UCC, in the State of

Delaware. The Company's organizational identification number in the State of Delaware is 2138989;

(gg) Upon the delivery of the Collateral (as defined in the Pledge Agreement) in accordance with the terms of the Pledge Agreement, all filings and other actions (including, without limitation, (A) actions necessary to obtain control of the Collateral as provided in Sections 9-104, 9-105, 9-106 or 9-107 of the UCC, as applicable; and (B) actions necessary to perfect the Trustee's security interest with respect to the Collateral evidenced by a certificate of ownership) necessary to perfect the security interest in the Collateral created under the Pledge Agreement have been duly made or taken and are in full force and effect, and the Pledge Agreement creates in favor of the Trustee for the ratable benefit of the Holders of the Notes (as defined in the Pledge Agreement) a valid and, together with such filings and other actions, perfected first-priority security interest in the Collateral, securing the payment of the Secured Obligations (as defined in the Pledge Agreement); and

(hh) The Subsidiaries other than Seragen, Inc. do not own or possess any property or assets, or have any obligations or liabilities, or possess any rights (by contract, franchise, permit or otherwise) or engage in any operations that are, individually or in the aggregate, material to the Company or its properties, operations, business, prospects or condition (financial or otherwise).

4. REPRESENTATIONS AND WARRANTIES OF THE INITIAL PURCHASER. The Initial Purchaser proposes to offer the Notes for sale upon the terms and conditions set forth in this Agreement and the Final Memorandum, and the Initial Purchaser hereby represents and warrants to and agrees with the Company that:

(a) It will offer and sell the Notes only to persons whom it reasonably believes are "qualified institutional buyers" ("QIBS") within the meaning of Rule 144A in transactions meeting the requirements of Rule 144A and that, in purchasing such Notes, are deemed to have represented and agreed as provided in the Final Memorandum under the caption "Notice to Investors";

(b) It is a QIB within the meaning of Rule 144A;

(c) It has not and will not, directly or indirectly, solicit offers for, or offer or sell, the Notes by any form of general solicitation, general advertising (as such terms are used in Regulation D) or in any manner involving a public offering within the meaning of Section 4(2) of the Securities Act; and

(d) With respect to offers and sales outside the United States:

(i) It understands that no action has been or will be taken in any jurisdiction by the Company that would permit a public offering of the Notes, or possession or distribution of either Memorandum or any other offering or publicity material relating to the Notes, in any country or jurisdiction where action for that purpose is required; and

(ii) It will comply with all applicable laws and regulations in each jurisdiction in which it acquires, offers, sells or delivers Notes or has in its possession or distributes either Memorandum or any such other material, in all cases at its own expense.

(iii) The Notes have not been registered under the Securities Act and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons except in accordance with Rule 144A or pursuant to another exemption from the registration requirements of the Securities Act.

5. CERTAIN COVENANTS OF THE COMPANY: The Company hereby agrees that:

(a) The Company will prepare the Final Memorandum in a form approved by the Initial Purchaser and will make no amendment or supplement to the Final Memorandum which shall reasonably be disapproved by the Initial

Purchaser promptly after reasonable notice thereof;

(b) The Company will furnish such information and take such other actions as the Initial Purchaser may reasonably request to qualify the Notes and the Shares for offering and sale under the securities or blue sky laws of such jurisdictions as the Initial Purchaser may designate and will maintain such qualifications in effect so long as required for the distribution of the Notes; PROVIDED that in connection therewith the Company shall not be required to qualify as a foreign corporation, to file a general consent to service of process or subject itself to any tax in any such jurisdiction where it is not now so qualified or subject;

(c) The Company will furnish the Initial Purchaser with as many copies of the Final Memorandum, any documents incorporated by reference therein and any amendment or supplement thereto as the Initial Purchaser may from time to time reasonably request, and if, at any time prior to the completion of the resale of the Notes by the Initial Purchaser, any event shall have occurred

as a result of which the Final Memorandum as then amended or supplemented would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made when such Final Memorandum is delivered, not misleading, or, if for any other reason it shall be necessary or desirable during such same period to amend or supplement the Final Memorandum, the Company will notify the Initial Purchaser and upon the request of the Initial Purchaser will prepare and furnish without charge to the Initial Purchaser and to any dealer in securities specified by the Initial Purchaser as many copies as the Initial Purchaser may from time to time reasonably request of an amended Final Memorandum or a supplement to the Final Memorandum which will correct such statement or omission or effect such compliance;

(d) During the period beginning from the date hereof and continuing until the date 90 days after the date of the Final Memorandum (the "LOCK-UP PERIOD"), the Company will not, without the prior written consent of UBS Warburg LLC, issue, offer, sell, contract to sell, pledge or otherwise dispose of, or contract to dispose of, any Shares, any securities substantially similar to the Notes or the Common Stock or any securities that are convertible into or exchangeable for shares of Common Stock (other than (i) the issuance of the Notes; (ii) the issuance of Shares upon conversion of the Notes; (iii) the issuance of shares of Common Stock upon conversion or exercise of convertible or exercisable or exchangeable securities outstanding as of the date of this Agreement or (iv) the issuance of shares of Common Stock or options pursuant to employee stock option or employee stock purchase plans existing on, or upon exercise of warrants outstanding as of, the date of this Agreement). During the first 45 days of the Lock-up Period, the Initial Purchaser may withhold its consent to the actions described in this Section 5(d) for any reason or for no reason. If after the expiration of the first 45 days of the Lock-up Period, the average last reported sales price of the Common Stock on the Nasdaq National Market for any five consecutive trading days equals or exceeds $10.20 per share (adjusted for any stock split, combination or similar transaction), then the Initial Purchaser may not thereafter withhold its consent to such actions unreasonably;

(e) At any time when the Company is not subject to Section 13 or 15(d) of the Exchange Act and so long as any of the Notes (or Shares issued upon conversion thereof) are "restricted securities" within the meaning of Rule 144(a)(3) under the Securities Act, for the benefit of holders from time to time of the Notes, the Company will furnish at its expense, upon request, to holders of Notes and prospective purchasers of Notes information satisfying the requirements of subsection (d)(4)(i) of Rule 144A;

(f) The Company will use its reasonable best efforts to cause the Notes to be eligible for trading in PORTAL;

(g) For so long as the Notes remain outstanding, the Company will furnish to the Initial Purchaser (i) copies of all reports or other

communications

(financial or other) furnished to stockholders of the Company, and will deliver to the Initial Purchaser (ii) as soon as is reasonably practical after they are available, (A) copies of any annual, quarterly or current reports furnished to or filed by the Company with the Commission on Forms 10-K, 10-Q and 8-K or such similar forms as are designated by the Commission, and (B) copies of documents or reports filed with any securities exchange on which the Notes or any class of securities of the Company is listed;

(h) The Company will use the net proceeds received by it from the sale of the Notes pursuant to this Agreement in the manner specified in the Final Memorandum under the caption "Use of Proceeds";

(i) The Company will reserve and keep available at all times, free of preemptive rights, Shares for the purpose of enabling the Company to satisfy any obligations to issue Shares upon conversion of the Notes;

(j) The Company will use its reasonable best efforts to list, as promptly as practicable but in no event later than the time that the registration statement is declared effective in accordance with the Registration Rights Agreement, and subject to notice of issuance, the Shares on the NASDAQ National Market;

(k) Whether or not the transactions contemplated in this Agreement are consummated or this Agreement is terminated, the Company will pay or cause to be paid all expenses incident to the performance of its obligations under this Agreement, including, without limitation, (i) the fees, disbursements and expenses of the Company's counsel and the Company's accountants in connection with the issuance and sale of the Notes and all other fees and expenses in connection with the preparation of each Memorandum and all amendments and supplements thereto, including all printing costs associated therewith, and the furnishing of copies thereof to the Initial Purchaser and to dealers (including costs of mailing and shipment), (ii) all costs related to the preparation, issuance, execution, authentication and delivery of the Notes and the Shares, (iii) all costs related to the transfer and delivery of the Notes to the Initial Purchaser, including any transfer or other taxes payable thereon, (iv) reproduction and/or printing and furnishing copies of this Agreement, the Registration Rights Agreement, the Indenture, the Pledge Agreement and the Control Agreement to the Initial Purchaser and (except closing documents) to dealers (including costs of mailing and shipment), (v) all expenses in connection with the qualification of the Notes and the Shares for offering and sale under state laws and the cost of printing and furnishing of copies of any blue sky or legal investment memorandum to the Initial Purchaser and to dealers (including filing fees and the fees and disbursements of counsel for the Initial Purchaser in connection with such qualification and in connection with such blue sky or legal investment memorandum), (vi) the costs and charges of the Trustee and any transfer agent, registrar or depositary, (vii) the fees and expenses, if any, incurred in connection with the admission of the Notes for trading in PORTAL or any appropriate market

system, (viii) the costs and expenses of the Company relating to investor presentations on any "road show" undertaken in connection with the marketing of the offering of the Notes, including, without limitation, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations with the prior approval of the Company, travel and lodging expenses of the representatives and officers of the Company and any such consultants, and the cost of any aircraft chartered in connection with the road show, and (ix) all other cost and expenses incident to the performance of the Company's obligations hereunder for which provision is

not otherwise made in this Section 5(k);

(l) Neither the Company nor any Affiliate (other than Elan and its subsidiaries) will, and the Company will use its commercially reasonable efforts to cause Elan and its subsidiaries not to, sell, offer for sale or solicit offers to buy or otherwise negotiate in respect of any security (as defined in the Securities Act) which could be integrated with the sale of the Notes in a manner which would require the registration under the Securities Act of the Notes;

(m) The Company will not to solicit any offer to buy or offer or sell the Notes or the Shares by means of any form of general solicitation or general advertising (as those terms are used in Regulation D) or in any manner involving a public offering within the meaning of Section 4(2) of the Securities Act;

(n) During the period of two years after the time of purchase or the additional time of purchase, if later, the Company will not, and will not permit any of its affiliates (as defined in Rule 144 under the Securities Act ("RULE 144")), other than Elan and its subsidiaries, to, and will use its commercially reasonable efforts to cause Elan and its subsidiaries not to, resell any of the Notes or the Shares which constitute "restricted securities" under Rule 144 that have been reacquired by any of them except pursuant to an effective registration statement under the Securities Act;

(o) The Company will not take any action prohibited by Regulation M under the Exchange Act in connection with the distribution of the Notes contemplated hereby;

(p) Without the prior written consent of the Initial Purchaser, the Company will not waive any provision of , and will fully enforce all of the provisions of, Sections 2.7 and 3.6 of the Securities Purchase Agreement by and among the Company, Elan International Services, Ltd. and Elan Corporation plc, dated November 12, 2002; and

(q) The Company will pledge to the Trustee, for the exclusive and ratable benefit of the holders of the Notes, and grant to the Trustee a security interest and continuing lien in all of the Company's right, title and interest in and to the Collateral (as defined in the Pledge Agreement) on the terms and in the manner set forth in the Pledge Agreement.

6. REIMBURSEMENT OF INITIAL PURCHASER'S EXPENSES: If the Firm Notes are not delivered for any reason other than the default by the Initial Purchaser in its obligations hereunder, the Company shall, in addition to paying the amounts described in Section 5(k) hereof, reimburse the Initial Purchaser for all of its out-of-pocket expenses, including the reasonable fees and disbursements of its counsel.

7. CONDITIONS OF INITIAL PURCHASER'S OBLIGATIONS: The obligations of the Initial Purchaser hereunder are subject to the accuracy in all material respects of the representations and warranties on the part of the Company on the date hereof and at the time of purchase. The obligations of the Initial Purchaser at the additional time of purchase are subject to the accuracy in all material respects of the representations and warranties on the part of the Company on the date hereof, at the time of purchase (unless previously waived) and at the additional time of purchase, as the case may be. Additionally, the obligations of the Initial Purchaser hereunder are subject to performance by the Company of its obligations hereunder and to the following conditions:

(a) The Company shall furnish to you at the time of purchase and at the additional time of purchase, as the case may be, an opinion of Clifford Chance US LLP, counsel for the Company, addressed to the Initial Purchaser and dated the date of the time of purchase or the date of the additional time of purchase, as the case may be, and in form reasonably satisfactory to counsel for the Initial Purchaser, substantially in the form of EXHIBIT A hereto;

(b) The Company shall furnish to you at the time of purchase and at the additional time of purchase, as the case may be, one or more opinions

of Brobeck, Phleger & Harrison LLP, patent and litigation counsel for the Company, addressed to the Initial Purchaser and dated the date of the time of purchase or the date of the additional time of purchase, as the case may be, and in form reasonably satisfactory to counsel for the Initial Purchaser, substantially in the form of EXHIBIT B hereto;

(c) The Company shall furnish to you at the time of purchase and at the additional time of purchase, as the case may be, an opinion of Warner R. Broaddus, General Counsel of the Company, addressed to the Initial Purchaser and dated the date of the time of purchase or the date of the additional time of purchase, as the case may be, and in form reasonably satisfactory to counsel for the Initial Purchaser, substantially in the form of EXHIBIT C hereto;

(d) You shall have received on the date of this Agreement from each of Deloitte & Touche LLP and Ernst & Young LLP and at the time of purchase and the additional time of purchase, as the case may be, from Deloitte & Touche LLP customary comfort letters dated as of the date of this Agreement, the date of the time of purchase and the date of the additional time of purchase, as the case may be, and addressed to the Initial Purchaser, in form and substance reasonably satisfactory to counsel for the Initial Purchaser;

(e) You shall have received at the time of purchase and at the additional time of purchase, as the case may be, the opinion of Dewey Ballantine LLP, counsel for the Initial Purchaser, dated the date of the time of purchase or the date of the additional time of purchase, as the case may be, in form and substance reasonably satisfactory to you;

(f) At the time of purchase or the additional time of purchase, as the case may be, the Final Memorandum shall not contain an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(g) Between the time of execution of this Agreement and the time of purchase or the additional time of purchase, as the case may be, (i) no material and unfavorable change, financial or otherwise, in the operations, business, prospects or condition of the Company and its Subsidiaries, taken as a whole, shall occur or become known and (ii) no transaction which is material and unfavorable to the Company shall have been entered into by the Company or any of its Subsidiaries;

(h) The Company shall, at the time of purchase and the additional time of purchase, as the case may be, deliver to you a certificate dated such date of an executive officer of the Company to the effect set forth in Sections 7 (f), (g) and (l), that the representations and warranties of the Company set forth in this Agreement are true and correct as of such date, and that the Company has complied with all of its agreements and satisfied all of the conditions on its part to be performed or satisfied on or before such date.

(i) You shall have received, at the time of purchase, copies, duly executed by the Company and the other parties thereto (other than the Initial Purchaser, if applicable), of the Registration Rights Agreement, Pledge Agreement, Control Agreement and the Indenture and, at the additional time of purchase, if applicable, copies, duly executed by the Company and the other parties thereto, of the Supplemental Pledge Agreement, as described in the Pledge Agreement;

(j) The Company shall have furnished to you such other documents and certificates as to the accuracy and completeness of any statement in the Final Memorandum as of the time of purchase and the additional time of purchase, as the case may be, as you may reasonably request;

(k) The Notes shall have been designated for trading on PORTAL, subject only to notice of issuance at or prior to the time of purchase; and

(l) Between the time of execution of this Agreement and the time of

purchase or additional time of purchase, as the case may be, there shall not have occurred any downgrading, nor shall any notice have been given of (i) any

intended or potential downgrading or (ii) any review or possible change that does not indicate an improvement, in the rating accorded any securities of or guaranteed by the Company or any Subsidiary of the Company by any "nationally recognized statistical rating organization", as that term is defined in Rule 436(g)(2) promulgated under the Securities Act.

8. TERMINATION: The obligations of the Initial Purchaser hereunder shall be subject to termination in your absolute discretion if, since the time of execution of this Agreement or the respective dates as of which information is given in the Final Memorandum, (x) there has been any material and unfavorable change, financial or otherwise, in the operations, business, prospects or condition of the Company and its Subsidiaries, taken as a whole, which would, in your judgment, make it impracticable to market the Notes in the manner and on the terms set forth in the Final Memorandum, or (y) there shall have occurred any downgrading, or any notice shall have been given of (i) any intended or potential downgrading or (ii) any review or possible change that does not indicate an improvement, in the rating accorded any securities of or guaranteed by the Company or any Subsidiary of the Company by any "nationally recognized statistical rating organization", as that term is defined in Rule 436(g)(2) promulgated under the Securities Act or, (z) if, at any time prior to the time of purchase or, with respect to the purchase of any Additional Notes, the additional time of purchase, as the case may be, trading in securities on the New York Stock Exchange, the American Stock Exchange or the Nasdaq National Market shall have been suspended or minimum prices shall have been established on the New York Stock Exchange, the American Stock Exchange or the Nasdaq National Market or if a banking moratorium shall have been declared either by the United States or New York State authorities, or if the United States shall have declared war in accordance with its constitutional processes or there shall have occurred any material outbreak or escalation of hostilities or other national or international calamity or crisis of such magnitude in its effect on the financial markets of the United States as, in your judgment, would make it impracticable to market the Notes in the manner and on the terms set forth in the Final Memorandum.

If you elect to terminate this Agreement as provided in this Section 8, the Company shall be notified as provided for herein.

If the sale to the Initial Purchaser of the Notes, as contemplated by this Agreement, is not carried out by the Initial Purchaser for any reason permitted under this Agreement or if such sale is not carried out because the Company shall be unable to comply and does not comply with any of the terms of this Agreement, the Company shall not be under any obligation or liability under this Agreement (except to the extent provided in Sections 5(k), 6 and 9 hereof), and the Initial Purchaser shall be under no obligation or liability to the Company under this Agreement (except to the extent provided in Section 9 hereof).

9. INDEMNITY BY THE COMPANY AND THE INITIAL PURCHASER:

(a) The Company agrees to indemnify, defend and hold harmless the Initial Purchaser, its directors and officers, and any person who controls the Initial

Purchaser within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act (each, an "INITIAL PURCHASER INDEMNIFIED PARTY"), from and against any loss, damage, expense, liability or claim (including the reasonable cost of investigation) which such Initial Purchaser Indemnified Party may incur under the Securities Act, the Exchange Act or otherwise, insofar as such loss, damage, expense, liability or claim arises out of or is based upon any untrue statement or alleged untrue statement of a material fact contained in any Memorandum, as amended or supplemented, if applicable, or arises out of or is

based upon any omission or alleged omission to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading, except insofar as any such loss, damage, expense, liability or claim arises out of or is based upon any untrue statement or alleged untrue statement of a material fact contained in and in conformity with information relating to the Initial Purchaser furnished in writing by or on behalf of the Initial Purchaser to the Company expressly for use in such Memorandum or arises out of or is based upon any omission or alleged omission to state in such information a material fact required to be stated in such Memorandum or necessary to make such information not misleading. Notwithstanding the foregoing, the indemnity agreement contained in this Section 9(a) as it may relate to any untrue statement in or omission from a Memorandum shall not inure to the benefit of the Initial Purchaser if it shall have been determined by a court of competent jurisdiction by final and nonappealable judgment that (A) the untrue statement in or omission from a Memorandum existed, (B) the Final Memorandum, as amended or supplemented, corrected such alleged untrue statement or omission and (C) the Initial Purchaser failed to send or give a copy of such Final Memorandum, as amended or supplemented, to the person alleging such untrue statement or omission at or prior to the written confirmation of the sale of such Notes to such person, unless the failure to so send or give is the result of noncompliance by the Company with Section 5(c) hereof.

(b) The Initial Purchaser agrees to indemnify, defend and hold harmless the Company, its directors and officers and any person who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act (each, a "COMPANY INDEMNIFIED PARTY") from and against any loss, damage, expense, liability or claim (including the reasonable cost of investigation) which such Company Indemnified Party may incur under the Securities Act, the Exchange Act or otherwise, insofar as any such loss, damage, expense, liability or claim arises out of or is based upon any untrue statement or alleged untrue statement of a material fact contained in and in conformity with information relating to the Initial Purchaser furnished in writing by or on behalf of the Initial Purchaser to the Company expressly for use in such Memorandum, as amended or supplemented, or arises out of or is based upon any omission or alleged omission to state in such information a material fact required to be stated in such Memorandum or necessary to make such information not misleading.

(c) If any action, suit or proceeding (each, a "PROCEEDING") is brought against any person in respect of which indemnity may be sought pursuant to either subsection (a) or (b) of this Section 9, such person (the "INDEMNIFIED PARTY") shall promptly notify the person against whom such indemnity may be sought (the "INDEMNIFYING PARTY") in writing of the institution of such Proceeding and such Indemnifying Party shall assume the defense of such Proceeding, including the

employment of counsel reasonably satisfactory to such Indemnified Party and payment of all fees and expenses; PROVIDED, HOWEVER, that the omission to so notify such Indemnifying Party shall not relieve such Indemnifying Party from any liability which it may have to such Indemnified Party or otherwise, except to the extent the Indemnifying Party is materially prejudiced thereby. Such Indemnified Party shall have the right to employ its own counsel in any such case, but the fees and expenses of such counsel shall be at the expense of such Indemnified Party unless the employment of such counsel shall have been authorized in writing by such Indemnifying Party in connection with the defense of such Proceeding or such Indemnifying Party shall not have employed counsel to have charge of the defense of such Proceeding within 30 days of the receipt of notice thereof or such Indemnified Party shall have reasonably concluded upon written advice of counsel that there may be defenses available to it that are different from, additional to, or in conflict with those available to such Indemnifying Party (in which case such Indemnifying Party shall not have the right to direct that portion of the defense of such Proceeding on behalf of such Indemnified Party, but such Indemnifying Party may employ counsel and participate in the defense thereof but the fees and expenses of such counsel shall be at the expense of such Indemnifying Party), in any of which events such reasonable fees and expenses shall be borne by such Indemnifying Party and paid as incurred (it being understood, however, that such Indemnifying Party shall not be liable for the expenses of more than one separate counsel in any one

Proceeding or series of related Proceedings together with reasonably necessary local counsel representing the Indemnified Parties who are parties to such Proceeding). An Indemnifying Party shall not be liable for any settlement of any such Proceeding effected without its written consent, but if settled with the written consent of such Indemnifying Party, such Indemnifying Party agrees to indemnify and hold harmless an Indemnified Party from and against any loss or liability by reason of such settlement. Notwithstanding the foregoing sentence, if at any time an Indemnified Party shall have requested an Indemnifying Party to reimburse such Indemnified Party for fees and expenses of counsel as contemplated by the second sentence of this paragraph, then such Indemnifying Party agrees that it shall be liable for any settlement of any Proceeding effected without its written consent if (i) such settlement is entered into more than 60 business days after receipt by such Indemnifying Party of the aforesaid request, (ii) such Indemnifying Party shall not have reimbursed such Indemnified Party in accordance with such request prior to the date of such settlement and (iii) such Indemnified Party shall have given such Indemnifying Party at least 30 days' prior notice of its intention to settle. An Indemnifying Party shall not, without the prior written consent of any Indemnified Party, effect any settlement of any pending or threatened Proceeding in respect of which such Indemnified Party is or could have been a party and indemnity could have been sought hereunder by such Indemnified Party, unless such settlement includes an unconditional release of such Indemnified Party from all liability on claims that are the subject matter of such Proceeding and does not include an admission of fault, culpability or a failure to act, by or on behalf of such Indemnified Party.

(d) If the indemnification provided for in this Section 9 is unavailable to an Indemnified Party under subsections (a) and (b) of this Section 9 in respect of any losses, damages, expenses, liabilities or claims referred to therein, then each applicable Indemnifying Party, in lieu of indemnifying such Indemnified Party, shall

contribute to the amount paid or payable by such Indemnified Party as a result of such losses, damages, expenses, liabilities or claims (i) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Initial Purchaser on the other hand from the offering of the Notes or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company on the one hand and of the Initial Purchaser on the other in connection with the statements or omissions which resulted in such losses, damages, expenses, liabilities or claims, as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Initial Purchaser on the other shall be deemed to be in the same proportion as the total proceeds from the offering (net of Initial Purchaser's discounts and commissions but before deducting expenses) received by the Company bear to the discounts and commissions received by the Initial Purchaser. The relative fault of the Company on the one hand and of the Initial Purchaser on the other shall be determined by reference to, among other things, whether the untrue statement or alleged untrue statement of a material fact or omission or alleged omission relates to information supplied by the Company or by the Initial Purchaser and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The amount paid or payable by a party as a result of the losses, damages, expenses, liabilities and claims referred to above shall be deemed to include any reasonable legal or other fees or expenses reasonably incurred by such party in connection with investigating or defending any Proceeding.

(e) The Company and the Initial Purchaser agree that it would not be just and equitable if contribution pursuant to this Section 9 were determined by pro rata allocation or by any other method of allocation which does not take account of the equitable considerations referred to in subsection (d) above. Notwithstanding the provisions of this Section 9, the Initial Purchaser shall not be required to contribute any amount in excess of the amount by which the total price at which the Notes resold by it in the initial placement of such Notes were offered to investors exceeds the amount of any damages which the Initial Purchaser has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the

Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The remedies provided for in this Section 9 are not exclusive and shall not limit any rights or remedies which may otherwise be available to any indemnified party at law or in equity.

(f) The indemnity and contribution agreements contained in this Section 9 and the covenants, warranties and representations of the Company and the Initial Purchaser contained in this Agreement shall remain in full force and effect (regardless, with respect to representations and warranties of the Company, of any investigation made by on behalf of the Initial Purchaser, its directors or officers or any person who controls the Initial Purchaser within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, or by or on behalf of the Company, its directors and officers or any person who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act), and shall survive

any termination of this Agreement or the issuance and delivery of the Notes. The Company and the Initial Purchaser agree promptly to notify the other of the commencement of any litigation or proceeding against it and, in the case of the Company, against any of the Company's officers and directors, in connection with the issuance and sale of the Notes, or in connection with any Memorandum.

10. INFORMATION FURNISHED BY THE UNDERWRITERS. The statements set forth in the last paragraph of the cover of the Memorandum and in the sixth and twelfth paragraphs under the caption "Plan of Distribution" in the Memorandum constitute the only information furnished by or on behalf of the Underwriters as such information is referred to in Sections 3 and 9 hereof.

11. EFFECTIVENESS: This Agreement shall become effective upon the execution and delivery hereof by the parties hereto.

12. NOTICES: Except as otherwise herein provided, all statements, requests, notices and agreements shall be in writing or by facsimile and, if to the Initial Purchaser, shall be sufficient in all respects if delivered or sent to UBS Warburg LLC, 299 Park Avenue, New York, New York 10171, Attention: Syndicate Department, facsimile no. (212) 713-1205, with a copy to (for informational purposes only): UBS Warburg LLC, 677 Washington Boulevard, Stamford, Connecticut 06901, Attention: Legal Affairs - Convertibles, facsimile no. (203) 719-7317 and, if to the Company, shall be sufficient in all respects if delivered or sent to the Company at the offices of the Company at 10275 Science Center Drive, San Diego, California 92121, Attention: General Counsel, facsimile no. (858) 550-7506.

13. GOVERNING LAW AND CONSTRUCTION: THIS AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO CONFLICTS OF LAWS PRINCIPLES. THE SECTION HEADINGS IN THIS AGREEMENT HAVE BEEN INSERTED AS A MATTER OF CONVENIENCE OF REFERENCE AND ARE NOT A PART OF THIS AGREEMENT.

14. PARTIES AT INTEREST: The Agreement herein set forth has been and is made solely for the benefit of the Initial Purchaser and the Company and the controlling persons, directors and officers referred to in Section 9 hereof and their respective successors, assigns, executors and administrators. No other person, partnership, association or corporation (including a purchaser, as such purchaser, from the Initial Purchaser) shall acquire or have any right under or by virtue of this Agreement.

15. COUNTERPARTS: This Agreement may be signed by the parties in counterparts which together shall constitute one and the same agreement among the parties. Delivery of an executed counterpart by facsimile shall be effective as delivery of a manually executed counterpart thereof.

16. SUBMISSION TO JURISDICTION: Except as set forth below, no Proceeding may be commenced, prosecuted or continued in any court other than the courts of the

State of New York located in the City and County of New York or in the United States District Court for the Southern District of New York, which courts shall have jurisdiction over the adjudication of such matters, and the Company hereby consents to the jurisdiction of such courts and personal service with respect thereto. The Company hereby consents to personal jurisdiction, service and venue in any court in which any Proceeding arising out of or in any way relating to this Agreement is brought by any third party against the Initial Purchaser. The Initial Purchaser and the Company hereby waives all right to trial by jury in any Proceeding (whether based upon contract, tort or otherwise) in any way arising out of or relating to this Agreement. The Company agrees that a final judgment in any such Proceeding brought in any such court shall be conclusive and binding upon the Company and may be enforced in any other courts in the jurisdiction of which the Company is or may be subject, by suit upon such judgment.

17. SUCCESSORS AND ASSIGNS: This Agreement shall be binding upon the Initial Purchasers and the Company and their successors and assigns and any successor or assign of the Company's and/or Initial Purchaser's businesses or assets.

If the foregoing correctly sets forth the understanding between the Company and the Initial Purchaser, please so indicate in the space provided below for the purpose, where-upon this letter and your acceptance shall constitute a binding agreement between the Company and the Initial Purchaser.

Very truly yours,

LIGAND PHARMACEUTICALS INCORPORATED

By: /S/ PAUL V. MAIER
Name:
Title:

Accepted and agreed to as of the date first above written:

UBS WARBURG LLC

By: /S/ BENJAMIN LORELLO
Name:
Title:

By: /S/ SAGE KELLY
Name:
Title:

ANNEX A

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 A

OPINION OF COMPANY COUNSEL

1. The Company has been duly incorporated and is validly existing as a corporation under the laws of the State of Delaware with full corporate power and authority to own its properties and conduct its business as described in the Final Memorandum.

2. Each of the Subsidiaries has been duly incorporated and is validly existing as a corporation in good standing under the laws of its respective jurisdiction of incorporation with full corporate power and authority to own its respective properties and to conduct its respective business; all of the issued shares of capital stock of each Subsidiary have been duly and validly authorized and issued, are fully paid and non-assessable and are owned directly or indirectly by the Company, free and clear of any security interest, mortgage, pledge, lien or other encumbrance.

3. The Company has an authorized capital stock as set forth under the caption "Capitalization" in the Final Memorandum (except with respect to the heading "As Adjusted," as to which such counsel need express no opinion); the outstanding shares of capital stock of the Company (A) have been duly authorized and validly issued and are fully paid and non-assessable and (B) were issued in compliance with all preemptive rights, co-sale rights and rights of first refusal under (1) the DGCL, (2) the certificate of incorporation, as amended, and the bylaws, as amended, of the Company and (3) any license, indenture, mortgage, deed of trust, bank loan, credit agreement or other evidence of indebtedness, or any lease, contract or other agreement or instrument to which the Company or any Subsidiary is a party or by which any of them or their properties may be bound or affected that is filed as a "Material Contract" (as such term is defined in Item 601 of Regulation S-K) as an exhibit to any of the Company's periodic reports filed on Form 10-K or 10-Q with the Commission and incorporated by reference into the Final Memorandum or listed on Annex A hereto (collectively, the "Material Agreements");

4. The execution and delivery by the Company of, and the performance by the Company of its obligations under, the Purchase Agreement, the Registration Rights Agreement, the Pledge Agreement, the Control Agreement, the Indenture and the Notes (collectively, the "Transaction Agreements") and the consummation by the Company of the transactions contemplated thereby do not conflict with, or result in any violation or breach of, or constitute a default under (nor constitute any event which with notice, lapse of time or both would constitute a violation, breach or default under) (a) any provisions of the charter or bylaws of the Company or the Subsidiaries or (b) any provision of any Material Agreement, other than such violations, breaches or defaults that could not reasonably be expected to have a material adverse effect on the operations, business or condition (financial or otherwise) of the Company and its Subsidiaries, taken as a whole, or

(c) any federal, state, local or foreign law, regulation or rule (other than applicable state or foreign securities or Blue Sky laws, as to which such counsel need express no opinion), or any rule or regulation of any self-regulatory or other non-governmental regulatory authority (including, without limitation, the Nasdaq Stock Market, Inc. ("Nasdaq")), or any decree, judgment or order known to such counsel and applicable to the Company or any Subsidiary or any of their respective properties.

5. To such counsel's knowledge, neither the Company nor any of its Subsidiaries is in violation or breach of, or default under (nor has any event occurred which with notice, lapse of time, or both would constitute a violation or breach of, or default under), (a) any provisions of the charter or bylaws of the Company or the Subsidiaries, (b) any provision of any Material Agreement, other than violations, breaches or defaults that could not reasonably be expected to have a material adverse effect on the operations, business or condition (financial or otherwise) of the Company and its Subsidiaries, taken as a whole or (c) any federal, state, local or foreign law, regulation or rule (other than applicable state or foreign securities or Blue Sky laws, as to which such counsel need express no opinion) or any rule or regulation of any self-regulatory or other non-governmental regulatory authority (including, without limitation, Nasdaq), or any decree, judgment or order known to such counsel and applicable to the Company or any Subsidiary or any of their respective properties.

6. Except as described or incorporated by reference in the Final Memorandum, to such counsel's knowledge, there are no actions, suits or proceedings pending or threatened against the Company or any of its Subsidiaries or any of their respective properties, at law or in equity, or before or by any federal, state, local or foreign governmental or regulatory commission, board, body, authority or agency, or before or by any self-regulatory or other non-governmental regulatory authority (including, without limitation, the Nasdaq), which are required to be described in the Exchange Act documents incorporated by reference in the Final Memorandum (the "Exchange Act Documents").

7. The Purchase Agreement has been duly authorized, executed and delivered by the Company.

8. The Registration Rights Agreement has been duly authorized, executed and delivered by the Company and constitutes a legal, valid and binding agreement of the Company, enforceable against the Company in accordance with its terms.

9. The Pledge Agreement has been duly authorized, executed and delivered by the Company and (assuming the due authorization, execution and delivery thereof by the Trustee) constitutes a legal, valid and binding agreement of the Company, enforceable against the Company in accordance with its terms.

10. The Control Agreement has been duly authorized, executed and delivered by the Company and (assuming the due authorization, execution and delivery thereof by

the Trustee and the Account Intermediary) constitutes a legal, valid and binding agreement of the Company, enforceable against the Company in accordance with its terms.

11. The Indenture has been duly authorized, executed and delivered by the Company and (assuming the due authorization, execution and delivery thereof by the Trustee) constitutes a legal, valid and binding agreement of the Company, enforceable against the Company in accordance with its terms.

12. The Notes have been duly authorized and executed by the Company and when duly authenticated in accordance with the terms of the Indenture and

delivered to and paid for by the Initial Purchaser in accordance with the terms of the Purchase Agreement will be validly issued and delivered by the Company and constitute legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their terms, and will be entitled to the benefits of the Indenture, the Registration Rights Agreement, the Pledge Agreement and the Control Agreement.

13. The Shares initially issuable upon conversion of the Notes have been duly authorized and reserved for issuance upon conversion of the Notes, and upon conversion of the Notes in accordance with their terms and the terms of the Indenture will be issued free of statutory and contractual preemptive rights of any securityholder of the Company and are initially sufficient in number to meet the conversion requirements of the Notes, and such Shares, when so issued in accordance with the terms of the Indenture, will be duly and validly issued and fully paid and nonassessable.

14. No approval, authorization, consent or order of or filing with any federal, state or local governmental or regulatory commission, board, body, authority or agency, or any self-regulatory or other non-governmental regulatory authority (including, without limitation, Nasdaq), is required on the part of the Company in connection with the issuance and sale by the Company of the Notes and the Shares as contemplated in the Purchase Agreement other than (a) as may be required (i) under the securities or Blue Sky laws of the various jurisdictions in which the Notes and the Shares are being offered by the Initial Purchaser and (ii) by Federal and state securities laws with respect to the Company's obligations under the Registration Rights Agreement; and (b) as have been made or obtained on or prior to the date hereof (or, if not required to be made or obtained on or prior to the date hereof, as will be made or obtained when required).

15. It is not necessary in connection with (i) the offer, sale and delivery of the Notes to the Initial Purchaser pursuant to the Purchase Agreement or (ii) the initial resales of the Notes by the Initial Purchaser in the manner contemplated in the Final Memorandum to register the Notes under the Securities Act, or to qualify the Indenture in respect thereof under the Trust Indenture Act of 1939, as amended, it being understood that no opinion is expressed as to any subsequent resale of any Note or Share.

16. The Company is not, and after giving effect to the offering and sale of the Notes and the application of the proceeds thereof as described in the Final Memorandum will not be, required to register as an "investment company" as defined in the Investment Company Act of 1940, as amended.

17. The terms of the Transaction Agreements and the capital stock of the Company, including the Shares, conform as to legal matters in all material respects to the descriptions thereof contained in the Final Memorandum.

18. The statements in (a) "Risk factors - Risks Related to the Notes - The notes will be subordinated to our senior indebtedness and will be structurally subordinated to all liabilities of our subsidiaries.", "Description of notes," "Description of capital stock," "Plan of distribution" and "Notice to investors" of the Final Memorandum, (b) Exhibit 99.2 of the Company's Current Report on Form 8-K dated November 13, 2002 and (c) Item 1 - Business, "Collaborative Research and Development Programs" of the Company's Annual Report on Form 10-K for the period ended December 31, 2001, insofar as such statements constitute summaries of legal matters, documents or proceedings referred to therein, constitute accurate summaries of such legal matters, documents or proceedings in all material respects.

19. Subject to the limitations discussed therein, the statements of law or legal conclusions with respect thereto made in the Final Memorandum under the caption "Certain US federal income tax consequences" are correct in all material respects.

20. The Company's "location," within the meaning of Section 9-307 of the Uniform Commercial Code, as currently in effect in the State of New York (the "New York UCC"), is in the State of Delaware; upon the filing, pursuant to Section 4(i) of the Pledge Agreement, of a financing statement

(in the form attached as Annex B to such opinion) in the office of the Secretary of State of the State of Delaware, the Trustee will have a perfected security interest in that portion of the Collateral (as defined in the Pledge Agreement) in which a security interest is perfected by filing a financing statement under Article 9 of the Uniform Commercial Code as currently in effect in the State of Delaware; the Pledge Agreement and the Control Agreement, collectively, create in favor of the Trustee, for the ratable benefit of the holders of the Notes, as security for the Company's Obligations (as defined in the Pledge Agreement), a perfected security interest in the security entitlements carried in the Pledge Account (as defined in the Pledge Agreement) maintained by the Account Intermediary pursuant to the Control Agreement that constitute Collateral to which Article 8 and Article 9 of the New York UCC are applicable, and such security interest will be prior to any other security interest therein created under Article 9 of the New York UCC; to the extent that any portion of the Pledge Account constitutes a deposit account (as defined in Section 9-102(a)(29) of the New York UCC), the Pledge Agreement and Control Agreement, collectively, create in favor of the Trustee, for the ratable benefit of

the holders of the Notes, as security for the Company's Obligations, a perfected security interest in such deposit account under Article 9 of the New York UCC.

In addition, such counsel participated in conferences with certain officers and other representatives of the Company and representatives of the Initial Purchaser at which the contents of the Final Memorandum and related matters were discussed. Such counsel did not participate in the preparation of the Exchange Act Documents; however, such counsel discussed the Exchange Act Documents with the Company. Based on such participation, although such counsel is not passing upon, does not assume any responsibility for and has not independently checked or verified the accuracy, completeness or fairness of the statements contained in the Final Memorandum or the Exchange Act Documents (i) such counsel is of the opinion that the Exchange Act Documents complied as to form when filed in all material respect with the requirements of the Exchange Act and the applicable rules and regulations of the Commission thereunder (except for the financial statements, notes and schedules and other financial and statistical data contained or incorporated by reference therein, as to which such counsel need express no belief) and (ii) no facts have come to such counsel's attention which lead such counsel to believe that the Final Memorandum, including the Exchange Act Documents, as of its date or as of the date of such opinion letter (except for the financial statements, notes and schedules and other financial and statistical data contained or incorporated by reference therein, as to which such counsel does not express any belief), contained an untrue statement of a material fact or omitted to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

SCHEDULE A

1. Third Amendment to the Preferred Shares Rights Agreement dated March 3, 1999

2. First Amendment to Sponsored Research and License Agreement between the Company and Baylor College of Medicine dated September 1, 1992

3. Revival, Modification and Extension of Sponsored Research and License Agreement of March 9, 1992, as amended on September 1, 1992 dated April 2, 1997

4. Third Amendment to Sponsored Research and License Agreement between the

Company and Baylor College of Medicine dated October 1, 1999

5. Lease, dated March 7, 1997, between the Company and Nexus Equity VI LLC

6. Securities Purchase Agreement among Ligand Pharmaceuticals Incorporated, Elan International Services, Ltd. and Elan Corporation plc dated November 12, 2002

7. Amendment No. 1 to Amended and Restated Registration Rights Agreement among Ligand Pharmaceuticals Incorporated, Elan International Services, Ltd. and Elan Corporation plc dated November 12, 2002

8. Amended and Restated License and Supply Agreement among Elan Corporation plc, Elan Management, Ltd. and Ligand Pharmaceuticals Incorporated dated November 12, 2002

9. Closing Agreement among Ligand Pharmaceuticals Incorporated, Elan Corporation plc and Elan Management Limited dated November 12, 2002

EXHIBIT B

OPINION OF COMPANY PATENT AND LITIGATION COUNSEL

1. To such counsel's knowledge, except as described or incorporated by reference in the Final Memorandum, (A) the Company (either directly or through its Subsidiaries) has valid license rights or clear title to the Intellectual Property described as owned by or licensed to the Company and referenced or incorporated by reference in the Final Memorandum, and except where in-licensed there are no rights of third parties to any such Intellectual Property; (B) there is no infringement or other violation by third parties of any of the Intellectual Property of the Company referenced or incorporated by reference in the Final Memorandum that would have a material adverse affect on the Company; (C) there is no infringement or other violation by the Company or its Subsidiaries of any Intellectual Property of others nor would there be any such infringement upon commercialization of the Company's products described as under development or incorporated by reference in the Final Memorandum; (D) there is no pending or threatened action, suit, proceeding or claim that the Company or one if its Subsidiaries infringes or otherwise violates any Intellectual Property of others, and such counsel is unaware of any facts which would form a reasonable basis for any such claim; (E) there is no pending or threatened action, suit, proceeding or claim challenging the rights of the Company or its Subsidiaries in or to, or challenging the scope of, any Intellectual Property of the Company referenced or incorporated by reference in the Final Memorandum, and such counsel is unaware of any facts which would form a reasonable basis for any such claim; and (F) there is no prior art or other facts that may render any patent held by the Company invalid or unenforceable;

2. To such counsel's knowledge, the patent applications of the Company and its Subsidiaries presently on file disclose patentable subject matter, and such counsel is not aware of any inventorship challenges, any interference which has been declared or provoked, or any other material fact with respect to the patent applications of the Company presently on file that (A) would preclude the issuance of patents with respect to such applications, or (B) would lead such counsel to conclude that such patents, when issued, would not be valid and enforceable in accordance with applicable regulations;

3. To such counsel's knowledge, the statements contained or incorporated by reference in the Final Memorandum referencing Intellectual Property matters, insofar as such statements constitute summaries of legal matters, contracts, agreements, documents or proceedings referred to or incorporated by reference therein, or refer to or incorporate by reference statements of law or legal conclusions, are in all material respects accurate and complete statements or summaries of the matters set forth or incorporated by reference therein;

4. The statements in the Company's annual report for the year ended December 31, 2001 filed on Form 10-K under the caption "Legal Proceedings", insofar as such

statements constitute summaries of legal matters, documents or proceedings referred to therein, fairly summarize in all material respects the matters referred to therein.

5. Nothing has come to such counsel's attention that causes such counsel to believe that such above described portions of the Final Memorandum, at the date of the Final Memorandum and at all times leading up to and including the time of purchase and the additional time of purchase, as the case may be, contained an untrue statement of material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

EXHIBIT C

OPINION OF WARNER R. BROADDUS,
GENERAL COUNSEL OF THE COMPANY

The Company and each of its Subsidiaries are duly qualified or licensed to do business as foreign corporations and are in good standing in each jurisdiction in which the conduct of their respective businesses or their ownership or leasing of property requires such qualification or license, except to the extent that the failure, individually or in the aggregate, to be so qualified or licensed or be in good standing would not have a Material Adverse Effect.

EXHIBIT 4.2

REGISTRATION RIGHTS AGREEMENT

THIS REGISTRATION RIGHTS AGREEMENT (the "AGREEMENT") is made and entered into as of November 26, 2002, by and between Ligand Pharmaceuticals Incorporated, a Delaware corporation (the "COMPANY"), and UBS Warburg LLC (the "INITIAL PURCHASER") pursuant to that certain Purchase Agreement, dated as of November 21, 2002 (the "PURCHASE AGREEMENT") between the Company and the Initial Purchaser.

In order to induce the Initial Purchaser to enter into the Purchase Agreement, the Company has agreed to provide the registration rights set forth in this Agreement. The execution of this Agreement is a condition to the closing under the Purchase Agreement.

The Company agrees with the Initial Purchaser (i) for its benefit as Initial Purchaser and (ii) for the benefit of the beneficial owners (including the Initial Purchaser) from time to time of the Notes (as defined herein) and the beneficial owners from time to time of the Underlying Common Stock (as defined herein) issued upon conversion of the Notes (each of the foregoing a "HOLDER" and together the "HOLDERS"), as follows:

Section 1. DEFINITIONS. Capitalized terms used herein without definition shall have their respective meanings set forth in the Purchase Agreement. As used in this Agreement, the following terms shall have the following meanings:

"AFFILIATE" means with respect to any specified person, an "affiliate," as defined in Rule 144, of such person.

"AMENDMENT EFFECTIVENESS DEADLINE DATE" has the meaning set forth in Section 2(d) hereof.

"APPLICABLE CONVERSION PRICE" means, as of any date of determination, $1,000 divided by the Conversion Rate then in effect as of the date of determination or, if no Notes are then outstanding, the Conversion Rate that would be in effect were Notes then outstanding.

"BUSINESS DAY" means each day on which the Nasdaq National Market is open for trading.

"COMMON STOCK" means the shares of common stock, par value $.001 per share, of the Company and any other shares of capital stock as may constitute "COMMON STOCK" for purposes of the Indenture, including the Underlying Common Stock.

"CONVERSION RATE" has the meaning assigned to such term in the Indenture.

"DAMAGES ACCRUAL PERIOD" has the meaning set forth in Section 2(e) hereof.

"DAMAGES PAYMENT DATE" means each interest payment date under the Indenture in the case of Notes, and each May 16 and November 16 in the case of the Underlying Common Stock.

"EFFECTIVENESS DEADLINE DATE" has the meaning set forth in Section 2(a) hereof.

"EFFECTIVENESS PERIOD" means a period (subject to extension pursuant to Section 3(i) hereof) of two years after the later of (1) the original issuance of the Notes and (2) the last date that the Company or any of its Affiliates was the owner of such Notes (or any predecessor thereto), or such shorter period of time (x) as permitted by Rule 144(k) under the Securities Act or any successor provisions thereunder or (y) that will terminate when each of the Registrable Securities covered by the Shelf Registration Statement ceases to be a Registrable Security.

"EVENT" has the meaning set forth in Section 2(e) hereof.

"EVENT DATE" has the meaning set forth in Section 2(e) hereof.

"EXCHANGE ACT" means the Securities Exchange Act of 1934, as amended, and the rules and regulations of the SEC promulgated thereunder.

"FILING DEADLINE DATE" has the meaning set forth in Section 2(a) hereof.

"HOLDER" has the meaning set forth in the third paragraph of this Agreement.

"INDENTURE" means the Indenture, dated as of November 26, 2002, between the Company and J.P. Morgan Trust Company, National Association, as trustee, pursuant to which the Notes are being issued.

"INITIAL PURCHASER" has the meaning set forth in the preamble hereto.

"INITIAL SHELF REGISTRATION STATEMENT" has the meaning set forth in Section 2(a) hereof.

"ISSUE DATE" means the first date of original issuance of the Notes.

"LIQUIDATED DAMAGES AMOUNT" has the meaning set forth in Section 2(e) hereof.

"MATERIAL EVENT" has the meaning set forth in Section 3(i) hereof.

"NOTES" means the 6% Convertible Subordinated Notes due 2007 of the Company to be purchased pursuant to the Purchase Agreement.

"NOTICE AND QUESTIONNAIRE" means a written notice and questionnaire delivered to the Company containing substantially the information called for by the Selling Securityholder Notice and Questionnaire attached as Annex A to the Offering Memorandum dated November 21, 2002 relating to the Notes.

"NOTICE HOLDER" means, on any date, any Holder that has delivered a Notice and Questionnaire to the Company on or prior to such date, so long as all of their Registrable Securities that have been registered for resale pursuant to a Notice and Questionnaire have not been sold in accordance with a Shelf Registration Statement.

"PURCHASE AGREEMENT" has the meaning set forth in the preamble hereof.

"PROSPECTUS" means the prospectus included in any Shelf Registration Statement (including, without limitation, a prospectus that discloses information previously omitted from a prospectus filed as part of an effective registration statement in reliance upon Rule 415 promulgated under the Securities Act), as amended or supplemented by any amendment or prospectus supplement, including post-effective amendments, and all materials incorporated by reference or explicitly deemed to be incorporated by reference in such Prospectus.

"RECORD HOLDER" means (i) with respect to any Damages Payment Date relating to any Notes as to which any such Liquidated Damages Amount has accrued, the holder of record of such Note on the record date with respect to the interest payment date under the Indenture on which such Damages Payment Date shall occur and (ii) with respect to any Damages Payment Date relating to the Underlying Common Stock as to which any such Liquidated Damages Amount has accrued, the registered holder of such Underlying Common Stock fifteen (15) days prior to such Damages Payment Date.

"REGISTRABLE SECURITIES" means the Notes until such Notes have been converted into the Underlying Common Stock and, at all times the Underlying Common Stock and any securities into or for which such Underlying Common Stock has been converted, and any security issued with respect thereto upon any stock dividend, split or similar event until, in the case of any such security, the earliest of (x) the date on which such security has been effectively registered under the Securities Act and disposed of, whether or not in accordance with the Shelf Registration Statement and (y) the date that is two years after the later of (1) the original issuance of the Notes and (2) the last date that the Company or any of its Affiliates was the owner of such Notes (or any predecessor thereto), or such shorter period of time as permitted by Rule 144(k) under the Securities Act or any successor provisions thereunder.

"REGISTRATION EXPENSES" has the meaning set forth in Section 5 hereof.

"REGISTRATION STATEMENT" means any registration statement of the Company that covers any of the Registrable Securities pursuant to the provisions

of this Agreement including the Prospectus, amendments and supplements to such registration statement, including post-effective amendments, all exhibits, and all materials incorporated by reference or explicitly deemed to be incorporated by reference in such registration statement.

"RULE 144" means Rule 144 under the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the SEC.

"RULE 144A" means Rule 144A under the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the SEC.

"SEC" means the Securities and Exchange Commission.

"SECURITIES ACT" means the Securities Act of 1933, as amended, and the rules and regulations promulgated by the SEC thereunder.

"SHELF REGISTRATION STATEMENT" has the meaning set forth in Section 2(a) hereof.

"SUBSEQUENT SHELF REGISTRATION STATEMENT" has the meaning set forth in Section 2(b) hereof.

"SUSPENSION NOTICE" has the meaning set forth in Section 3(i) hereof.

"SUSPENSION PERIOD" has the meaning set forth in Section 3(i) hereof.

"TIA" means the Trust Indenture Act of 1939, as amended.

"TRUSTEE" means J.P. Morgan Trust Company, National Association, the Trustee under the Indenture.

"UNDERLYING COMMON STOCK" means the Common Stock into which the Notes are convertible or issued upon any such conversion.

Section 2. SHELF REGISTRATION. The Company shall prepare and file or cause to be prepared and filed with the SEC, as soon as practicable but in any event by the date (the "FILING DEADLINE DATE") that is ninety (90) days after the Issue Date, a Registration Statement for an offering to be made on a delayed or continuous basis pursuant to Rule 415 of the Securities Act (a "SHELF REGISTRATION STATEMENT") registering the resale from time to time by Holders thereof of all of the Registrable Securities (the "INITIAL SHELF REGISTRATION Statement"). The Initial Shelf Registration Statement shall be on Form S-1 or S-3 or another appropriate form permitting registration of such Registrable Securities for resale by such Holders in accordance with the reasonable methods of distribution elected by the Holders, approved by the Company, and set forth in the Initial Shelf Registration Statement. The Company shall use its reasonable best efforts to cause the Initial

Shelf Registration Statement to be declared effective under the Securities Act as promptly as is practicable but in any event by the date (the "EFFECTIVENESS DEADLINE DATE") that is one hundred eighty (180) days after the Issue Date, and to keep the Initial Shelf Registration Statement (or any Subsequent Shelf Registration Statement) continuously effective under the Securities Act until the expiration of the Effectiveness Period. At the time the Initial Shelf Registration Statement is declared effective, each Holder that became a Notice Holder on or prior to the date that is ten (10) Business Days prior to such time of effectiveness shall be named as a selling securityholder in the Initial Shelf Registration Statement and the related Prospectus in such a manner as to permit

such Holder to deliver such Prospectus to purchasers of Registrable Securities in accordance with applicable law.

(b) If the Initial Shelf Registration Statement or any Subsequent Shelf Registration Statement ceases to be effective for any reason at any time during the Effectiveness Period, the Company shall use its reasonable best efforts to obtain the prompt withdrawal of any order suspending the effectiveness thereof, and in any event shall within thirty (30) days of such cessation of effectiveness amend the Shelf Registration Statement in a manner reasonably expected to obtain the withdrawal of the order suspending the effectiveness thereof, or file an additional Shelf Registration Statement covering all of the securities that as of the date of such filing are Registrable Securities (a "SUBSEQUENT SHELF REGISTRATION STATEMENT"). If a Subsequent Shelf Registration Statement is filed, the Company shall use its reasonable best efforts to cause the Subsequent Shelf Registration Statement to become effective as promptly as is practicable after such filing and to keep such Shelf Registration Statement (or subsequent Shelf Registration Statement) continuously effective until the end of the Effectiveness Period.

(c) The Company shall supplement and amend the Shelf Registration Statement if required by the rules, regulations or instructions applicable to the registration form used by the Company for such Shelf Registration Statement, if required by the Securities Act or as reasonably requested by the Initial Purchaser or by the Trustee on behalf of the Holders of the Registrable Securities covered by such Shelf Registration Statement.

(d) Each Holder of Registrable Securities agrees that if such Holder wishes to sell Registrable Securities pursuant to a Shelf Registration Statement and related Prospectus, it will do so only in accordance with this Section 2(d) and Section 3(i). Each Holder of Registrable Securities wishing to sell Registrable Securities pursuant to a Shelf Registration Statement and related Prospectus agrees to deliver a completed and executed Notice and Questionnaire to the Company prior to any attempted or actual distribution of Registrable Securities under the Shelf Registration Statement; PROVIDED that Holders of Registrable Securities shall have at least twenty (20) Business Days from the date on which the Notice and Questionnaire is first sent to such Holders by the Company to complete and return the Notice and Questionnaire to the Company. From and after the date the Initial Shelf Registration Statement is declared effective, the

Company shall, as promptly as practicable after the date a Notice and Questionnaire is delivered, and in any event within the later of (x) five (5) Business Days after such date or (y) five (5) Business Days after the expiration of any Suspension Period (1) in effect when the Notice and Questionnaire is delivered or (2) put into effect within five (5) Business Days of such delivery date, (i) if required by applicable law, file with the SEC a post-effective amendment to the Shelf Registration Statement or, if required by applicable law, prepare and file a supplement to the related Prospectus or a supplement or amendment to any document incorporated therein by reference or file any other required document so that the Holder delivering such Notice and Questionnaire is named as a selling securityholder in the Shelf Registration Statement and the related Prospectus in such a manner as to permit such Holder to deliver such Prospectus to purchasers of the Registrable Securities in accordance with applicable law and, if the Company shall file a post-effective amendment to the Shelf Registration Statement, use its reasonable best efforts to cause such post-effective amendment to be declared effective under the Securities Act as promptly as is practicable, but in any event by the date (the "AMENDMENT EFFECTIVENESS DEADLINE DATE") that is thirty (30) days after the date such post-effective amendment is required by this clause to be filed; (ii) provide such Holder a reasonable number of copies of any documents filed pursuant to Section 2(d)(i); and (iii) notify such Holder as promptly as practicable after the effectiveness under the Securities Act of any post-effective amendment filed pursuant to Section 2(d) (i); PROVIDED that if such Notice and Questionnaire is delivered during a Suspension Period, or a Suspension Period is put into effect within five (5) Business Days after such delivery date, the Company shall so inform the Holder delivering such Notice and Questionnaire and shall take the actions set forth in clauses (i), (ii) and (iii) above within five (5) Business Days after expiration of the Suspension Period in accordance with Section 3(i); PROVIDED FURTHER that if under applicable law, the Company has more than one option as to the type or manner of making any such filing, the Company shall

make the required filing or filings in the manner or of a type that is reasonably expected to result in the earliest availability of the Prospectus for effecting resales of Registrable Securities. Notwithstanding anything contained herein to the contrary, the Company shall be under no obligation to name any Holder that is not a Notice Holder as a selling securityholder in any Shelf Registration Statement or related Prospectus; PROVIDED, HOWEVER, that any Holder that becomes a Notice Holder pursuant to the provisions of this Section 2(d) (whether or not such Holder was a Notice Holder at the time the Shelf Registration Statement was declared effective) shall be named as a selling securityholder in the Shelf Registration Statement or related Prospectus in accordance with the requirements of this Section 2(d).

(e) The parties hereto agree that the Holders of Registrable Securities will suffer damages, and that it would not be feasible to ascertain the extent of such damages with precision, if (i) the Initial Shelf Registration Statement has not been filed on or prior to the Filing Deadline Date, (ii) the Initial Shelf Registration Statement has not been declared effective under the Securities Act on or prior to the Effectiveness Deadline Date or (iii) the Initial Shelf Registration

Statement is filed and declared effective but shall thereafter cease to be effective (without being succeeded immediately by an additional registration statement filed and declared effective) or usable for the offer and sale of Registrable Securities for a period of time (including any Suspension Period) which shall exceed thirty (30) days in the aggregate in any three (3) month period or sixty (60) days in the aggregate in any twelve (12) month period (each of the events of a type described in any of the foregoing clauses (i) through (iii) are individually referred to herein as an "EVENT," and the Filing Deadline Date in the case of clause (i), the Effectiveness Deadline Date in the case of clause (ii), the date on which the duration of the ineffectiveness or unusability of the Initial Shelf Registration Statement in any period exceeds the number of days permitted by clause (iii) hereof in the case of clause (iii), being referred to herein as an "EVENT DATE"). Events shall be deemed to continue until the following dates with respect to the respective types of Events: the date the Initial Shelf Registration Statement is filed in the case of an Event of the type described in clause (i), the date the Initial Shelf Registration Statement is declared effective under the Securities Act in the case of an Event of the type described in clause (ii), and the date the Initial Shelf Registration Statement becomes effective or usable again in the case of an Event of the type described in clause (iii).

Accordingly, commencing on (and including) any Event Date and ending on (but excluding) the next date on which there are no Events that have occurred and are continuing (a "DAMAGES ACCRUAL PERIOD"), the Company agrees to pay, as liquidated damages and not as a penalty, an amount (the "LIQUIDATED DAMAGES AMOUNT") at the rate described below, payable periodically on each Damages Payment Date to Record Holders of Notes that are Registrable Securities and of shares of Underlying Common Stock issued upon conversion of Notes that are Registrable Securities, as the case may be, to the extent of, for each such Damages Payment Date, accrued and unpaid Liquidated Damages Amount to (but excluding) such Damages Payment Date (or, if the Damages Accrual Period shall have ended prior to such Damages Payment Date, the date of the end of the Damages Accrual Period); PROVIDED that any Liquidated Damages Amount accrued with respect to any Note or portion thereof called for redemption on a redemption date or converted into Underlying Common Stock on a conversion date prior to the Damages Payment Date, shall, in any such event, be paid instead to the Holder who submitted such Note or portion thereof for redemption or conversion on the applicable redemption date or conversion date, as the case may be, on such date (or promptly following the conversion date, in the case of conversion). The Liquidated Damages Amount shall accrue at a rate per annum equal to one-quarter of one percent (0.25%) for the first 90-day period from the Event Date, at a rate per annum equal to one-half of one percent (0.50%) for the next 90-day period and thereafter at a rate per annum equal to three-quarters of one percent (0.75%) of (i) the principal amount of such Notes or, without duplication, (ii) in the case of Notes that have been converted into Underlying

Common Stock, the Applicable Conversion Price of such shares of Underlying Common Stock, as the case may be, in each case determined as of the Business Day immediately preceding the next Damages Payment Date. Notwithstanding the foregoing, no Liquidated Damages Amounts shall accrue as to any Registrable Security from and after the earlier of (x) the date such security is no longer a Registrable Security and (y) expiration of the Effectiveness Period. The rate of accrual of the Liquidated Damages Amount with respect to any period shall not exceed the rate provided for in this paragraph notwithstanding the occurrence of multiple concurrent Events. Following the cure of all Events requiring the payment by the Company of Liquidated Damages Amounts to the Holders of Registrable Securities pursuant to this Section, the accrual of Liquidated Damages Amounts shall cease (without in any way limiting the effect of any subsequent Event requiring the payment of Liquidated Damages Amount by the Company).

The Trustee shall be entitled, on behalf of Holders of Notes, to seek any available remedy for the enforcement of this Agreement, including for the payment of any Liquidated Damages Amount. Notwithstanding the foregoing, the parties agree that the sole damages payable for a violation of the terms of this Agreement with respect to which liquidated damages are expressly provided shall be such liquidated damages.

All of the Company's obligations set forth in this Section 2(e) that are outstanding with respect to any Registrable Security at the time such security ceases to be a Registrable Security shall survive until such time as all such obligations with respect to such security have been satisfied in full (notwithstanding termination of this Agreement pursuant to Section 8(k)).

The parties hereto agree that the liquidated damages provided for in this Section 2(e) constitute a reasonable estimate of the damages that may be incurred by Holders of Registrable Securities by reason of the failure of the Shelf Registration Statement to be filed or declared effective or available for effecting resales of Registrable Securities in accordance with the provisions hereof.

Section 3. REGISTRATION PROCEDURES. In connection with the registration obligations of the Company under Section 2 hereof, the Company shall:

(a) Prepare and file with the SEC a Shelf Registration Statement or Shelf Registration Statements on Form S-1 or S-3 or any other appropriate form under the Securities Act available for the sale of the Registrable Securities by the Holders thereof in accordance with the intended method or methods of distribution thereof, and use its reasonable best efforts to cause each such Shelf Registration Statement to become effective and remain effective as provided herein; PROVIDED that before filing any Shelf Registration Statement or Prospectus or any amendments or supplements thereto with the SEC, the Company shall furnish to the Initial Purchaser and counsel for the Holders and for the Initial Purchaser (or, if applicable, separate counsel for the Holders) copies of all such documents proposed to be filed and use its reasonable best efforts to reflect in

each such document when so filed with the SEC such comments as the such counsel reasonably shall propose within three (3) Business Days of the delivery of such copies to the Initial Purchaser and such counsel.

(b) Prepare and file with the SEC such amendments and post-effective amendments to each Shelf Registration Statement as may be necessary to keep such Shelf Registration Statement continuously effective until the expiration of the Effectiveness Period; cause the related Prospectus to be supplemented by any required Prospectus supplement, and as so supplemented to be filed pursuant to Rule 424 (or any similar provisions then in force) under the Securities Act; and use its reasonable best efforts to comply with the provisions of the Securities Act applicable to it with respect to the disposition of all securities covered by such Shelf Registration Statement during the Effectiveness Period in accordance with the intended methods of disposition by the sellers thereof set forth in such Shelf Registration Statement as so amended or such Prospectus as so supplemented.

(c) As promptly as practicable give notice to the Notice Holders and the Initial Purchaser (i) when any Prospectus, Prospectus supplement, Shelf Registration Statement or post-effective amendment to a Shelf Registration Statement has been filed with the SEC and, with respect to a Shelf Registration Statement or any post-effective amendment, when the same has been declared effective, (ii) of any request, following the effectiveness of the Initial Shelf Registration Statement under the Securities Act, by the SEC or any other federal or state governmental authority for amendments or supplements to any Shelf Registration Statement or related Prospectus or for additional information, (iii) of the issuance by the SEC or any other federal or state governmental authority of any stop order suspending the effectiveness of any Shelf Registration Statement or the initiation or threatening of any proceedings for that purpose, (iv) of the receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Registrable Securities for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose and (v) of the determination by the Company that a post-effective amendment to a Shelf Registration Statement will be filed with the SEC, which notice may, at the discretion of the Company (or as required pursuant to Section 3(i)), state that it constitutes a Suspension Notice, in which event the provisions of Section 3(i) shall apply.

(d) Use its reasonable best efforts to prevent the issuance of, and, if issued, to obtain the withdrawal of any order suspending the effectiveness of a Shelf Registration Statement or the lifting of any suspension of the qualification (or exemption from qualification) of any of the Registrable Securities for sale in any jurisdiction in which they have been qualified for sale, in either case at the earliest possible moment, and provide prompt notice to each Notice Holder and the Initial Purchaser of the withdrawal of any such order.

(e) If reasonably requested by the Initial Purchaser or any Notice Holder, as promptly as practicable incorporate in a Prospectus supplement or

post-effective amendment to a Shelf Registration Statement such information as the Initial Purchaser or such Notice Holder shall determine to be required to be included therein by applicable law and make any required filings of such Prospectus supplement or such post-effective amendment; PROVIDED that the Company shall not be required to take any actions under this Section 3(e) that, in the written opinion of counsel for the Company, are not in compliance with applicable law.

(f) As promptly as practicable furnish to each Notice Holder and the Initial Purchaser, without charge, at least one (1) conformed copy of the Shelf Registration Statement and any amendment thereto, including financial statements but excluding schedules, all documents incorporated or deemed to be incorporated therein by reference and all exhibits (unless requested in writing to the Company by such Notice Holder or the Initial Purchaser).

(g) During the Effectiveness Period, deliver to each Notice Holder and the Initial Purchaser, in connection with any sale of Registrable Securities pursuant to a Shelf Registration Statement, without charge, as many copies of the Prospectus or Prospectuses relating to such Registrable Securities (including each preliminary prospectus) and any amendment or supplement thereto as such Notice Holder and the Initial Purchaser may reasonably request; and the Company hereby consents (except during such periods that a Suspension Notice is outstanding and has not been revoked) to the use of such Prospectus or each amendment or supplement thereto by each Notice Holder, in connection with any offering and sale of the Registrable Securities covered by such Prospectus or any amendment or supplement thereto in the manner set forth therein.

(h) Prior to any public offering of the Registrable Securities pursuant to the Shelf Registration Statement, use its reasonable best efforts to register or qualify or cooperate with the Notice Holders in connection with the registration or qualification (or exemption from such registration or qualification) of such Registrable Securities for offer and sale under the securities or Blue Sky laws of such jurisdictions within the United States as any Notice Holder reasonably requests in writing (which request may be included in the Notice and Questionnaire); prior to any public offering of the Registrable Securities pursuant to the Shelf Registration Statement, use its reasonable best efforts to

keep each such registration or qualification (or exemption therefrom) effective during the Effectiveness Period in connection with such Notice Holder's offer and sale of Registrable Securities pursuant to such registration or qualification (or exemption therefrom) and do any and all other acts or things reasonably necessary or advisable to enable the disposition in such jurisdictions of such Registrable Securities in the manner set forth in the relevant Shelf Registration Statement and the related Prospectus; PROVIDED that the Company will not be required to (i) qualify as a foreign corporation or as a dealer in securities in any jurisdiction where it would not otherwise be required to qualify but for this Agreement or (ii) take any action that would subject it to general service of process in suits or to taxation in any such jurisdiction where it is not then so subject.

(i) Upon (A) the issuance by the SEC of a stop order suspending the effectiveness of the Shelf Registration Statement or the initiation of proceedings with respect to the Shelf Registration Statement under Section 8(d) or 8(e) of the Securities Act, (B) the occurrence of any event or the existence of any fact as a result of which any Shelf Registration Statement shall contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading, or any Prospectus shall contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading, or (C) the occurrence or existence of any pending corporate development (a "MATERIAL EVENT") that, in the reasonable discretion of the Company, makes it appropriate to suspend the availability of the Shelf Registration Statement and the related Prospectus, (i) in the case of clause (B) or (C) above, subject to the next sentence, as promptly as practicable, prepare and file, if necessary pursuant to applicable law, a post-effective amendment to such Shelf Registration Statement or a supplement to the related Prospectus or any document incorporated therein by reference or file any other required document that would be incorporated by reference into such Shelf Registration Statement and Prospectus so that such Shelf Registration Statement does not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading, and such Prospectus does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading (it being understood that the Company may rely on information provided by each Notice Holder with respect to such Notice Holder), as thereafter delivered to the purchasers of the Registrable Securities being sold thereunder, and, in the case of a post-effective amendment to a Shelf Registration Statement, subject to the next sentence, use its reasonable best efforts to cause it to be declared effective as promptly as is practicable, and (ii) give prompt notice to the Notice Holders and the Initial Purchaser that the availability of the Shelf Registration Statement is suspended (a "SUSPENSION NOTICE") and, upon receipt of any Suspension Notice, each Notice Holder agrees not to sell any Registrable Securities pursuant to such Shelf Registration Statement until such Notice Holder's receipt of copies of the supplemented or amended Prospectus provided for in clause (i) above, or until it is advised in writing by the Company that the Prospectus may be used, and has received copies of any additional or supplemental filings that are incorporated or deemed incorporated by reference in such Prospectus. The Company will use its reasonable best efforts to ensure that the use of the Prospectus may be resumed (x) in the case of clause (A) above, as promptly as is practicable, (y) in the case of clause (B) above, as soon as, in the reasonable judgment of the Company, the Shelf Registration Statement does not contain any untrue statement of a material fact or omits to state any material fact required to be stated therein or necessary to make the statements therein not misleading and the Prospectus does not contain any untrue statement of a material fact or omits to state any material fact

necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading, and (z) in the case of clause (C) above, as soon as, in the reasonable discretion of the Company, such

suspension is no longer appropriate. The period during which the availability of the Shelf Registration Statement and any Prospectus may be suspended (the "SUSPENSION PERIOD") without the Company incurring any obligation to pay liquidated damages pursuant to Section 2(e) shall not exceed thirty (30) days in any three (3) month period and sixty (60) days in any twelve (12) month period. The Effectiveness Period shall be extended by the number of days from and including the date of the giving of the Suspension Notice to and including the date on which the Notice Holder received copies of the supplemented or amended Prospectus provided in clause (i) above, or the date on which it is advised in writing by the Company that the Prospectus may be used, and has received copies of any additional or supplemental filings that are incorporated or deemed incorporated by reference in such Prospectus.

(j) Make available for inspection during normal business hours by representatives for the Notice Holders of such Registrable Securities, and any broker-dealers, attorneys and accountants retained by such Notice Holders, all relevant financial and other records and pertinent corporate documents and properties of the Company and its subsidiaries, and cause the appropriate officers, directors and employees of the Company and its subsidiaries to make available for inspection during normal business hours all relevant information reasonably requested by such representatives for the Notice Holders, or any such broker-dealers, attorneys or accountants in connection with such disposition, in each case as is customary for similar "due diligence" examinations; PROVIDED, HOWEVER, that such persons shall, at the Company's request, first agree in writing with the Company that any information that is reasonably and in good faith designated by the Company in writing as confidential at the time of delivery of such information shall be kept confidential by such persons and shall be used solely for the purposes of exercising rights under this Agreement, unless (i) disclosure of such information is required by court or administrative order or is necessary to respond to inquiries of regulatory authorities, (ii) disclosure of such information is required by law (including any disclosure requirements pursuant to federal securities laws in connection with the filing of any Shelf Registration Statement or the use of any Prospectus referred to in this Agreement), (iii) such information becomes generally available to the public other than as a result of a disclosure or failure to safeguard by any such person or (iv) such information becomes available to any such person from a source other than the Company and such source is not bound by a confidentiality agreement or is not otherwise under a duty of trust to the Company, and PROVIDED that the foregoing inspection and information gathering shall, to the greatest extent possible, be coordinated on behalf of all the Notice Holders and the other parties entitled thereto by the counsel referred to in Section 5.

(k) Comply with all applicable rules and regulations of the SEC and make generally available to its securityholders earning statements (which need not be audited) satisfying the provisions of Section 11(a) of the Securities Act and Rule 158 thereunder (or any similar rule promulgated under the Securities Act) no later than 45 days after the end of any 12-month period (or 90 days after the end of any 12-month period if such period is a fiscal year) commencing on the first day of the first fiscal quarter of the Company commencing after the effective date of a Shelf Registration Statement, which statements shall cover said 12-month periods.

(l) Cooperate with each Notice Holder to facilitate the timely preparation and delivery of certificates representing Registrable Securities sold pursuant to a Shelf Registration Statement, which certificates shall not bear any restrictive legends, and cause such Registrable Securities to be in such denominations as are permitted by the Indenture and registered in such names as such Notice Holder may request in writing at least (2) Business Days prior to any sale of such Registrable Securities.

(m) Provide a CUSIP number for all Registrable Securities covered by each Shelf Registration Statement not later than the effective date of such Shelf Registration Statement and provide the Trustee and the transfer agent for the Common Stock with certificates for the Registrable Securities that are in a form eligible for deposit with The Depository Trust Company.

(n) Cooperate and assist in any filings required to be made with the National Association of Securities Dealers, Inc.

(o) Upon (i) the filing of the Initial Registration Statement and (ii) the

effectiveness of the Initial Registration Statement, announce the same, in each case by release to Reuters Economic Services and Bloomberg Business News or other equivalent means of dissemination reasonably expected to make such information publicly known.

(p) Enter into such customary agreements and take all such other necessary actions in connection therewith (including those requested by the holders of a majority of the Registrable Securities being sold) in order to expedite or facilitate disposition of such Registrable Securities; provided that the Company shall not be required to take any action in connection with an underwritten offering without its consent, which consent shall not be unreasonably withheld.

(q) Cause the Indenture to be qualified under the TIA not later than the effective date of any Shelf Registration Statement; and in connection therewith, cooperate with the Trustee to effect such changes to the Indenture as may be required for the Indenture to be so qualified in accordance with the terms of the TIA and execute, and use its reasonable best efforts to cause the Trustee to execute, all documents as may be required to effect such changes, and all other

forms and documents required to be filed with the SEC to enable the Indenture to be so qualified in a timely manner.

Section 4. HOLDER'S OBLIGATIONS. Each Holder agrees, by acquisition of the Registrable Securities, that no Holder of Registrable Securities shall be entitled to sell any of such Registrable Securities pursuant to a Shelf Registration Statement or to receive a Prospectus relating thereto, unless such Holder has furnished the Company with a Notice and Questionnaire as required pursuant to Section 2(d) hereof (including the information required to be included in such Notice and Questionnaire) and the information set forth in the next sentence. Each Notice Holder agrees promptly to furnish to the Company all information required to be disclosed in order to make the information previously furnished to the Company by such Notice Holder not misleading and any other information regarding such Notice Holder and the distribution of such Registrable Securities as the Company may from time to time reasonably request. Any sale of any Registrable Securities by any Holder shall constitute a representation and warranty by such Holder that the information relating to such Holder and its plan of distribution is as set forth in the Prospectus delivered by such Holder in connection with such disposition, that such Prospectus does not as of the time of such sale contain any untrue statement of a material fact relating to or provided by such Holder or its plan of distribution and that such Prospectus does not as of the time of such sale omit to state any material fact relating to or provided by such Holder or its plan of distribution necessary in order to make the statements in such Prospectus, in the light of the circumstances under which they were made, not misleading.

SECTION 5. REGISTRATION EXPENSES. The Company shall bear all fees and expenses incurred in connection with the performance by the Company of its obligations under Section 2 and 3 of this Agreement whether or not any of the Shelf Registration Statements are declared effective. Such fees and expenses ("REGISTRATION EXPENSES") shall include, without limitation, (i) all registration and filing fees (including, without limitation, fees and expenses (x) with respect to filings required to be made with the National Association of Securities Dealers, Inc. and (y) of compliance with federal and state securities or Blue Sky laws (including, without limitation, reasonable fees and disbursements of counsel for the Holders in connection with Blue Sky qualifications of the Registrable Securities under the laws of such jurisdictions as the Notice Holders of a majority of the Registrable Securities being sold pursuant to a Shelf Registration Statement may designate), (ii) printing expenses (including, without limitation, expenses of printing certificates for Registrable Securities in a form eligible for deposit with The Depository Trust Company), (iii) duplication and mailing expenses relating to copies of any Shelf Registration Statement or Prospectus delivered to any Holders hereunder, (iv) fees and disbursements of counsel for the Company and the reasonable fees and disbursements of one counsel for the Holders in connection with the Shelf Registration Statement (which counsel shall be nationally recognized counsel experienced in securities law matters), (v) fees and

disbursements of the Trustee and its counsel and of the registrar and transfer agent for the Common Stock and (vi) Securities Act liability insurance obtained by the Company in its sole discretion. In addition, the Company shall pay the internal expenses of the Company (including, without limitation, all salaries and expenses of officers and employees performing legal or accounting duties), the expense of any annual audit, the fees and expenses incurred in connection with the listing by the Company of the Registrable Securities on any securities exchange on which similar securities of the Company are then listed and the fees and expenses of any person, including special experts, retained by the Company. Except as provided for in this Agreement, the Company shall not be obligated to pay for the fees and expenses incurred by the Holders.

SECTION 6. INDEMNIFICATION; CONTRIBUTION.

(a) The Company agrees to indemnify, defend and hold harmless each Holder and each person who controls any Holder within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act (each, a "HOLDER INDEMNIFIED PARTY"), from and against any loss, damage, expense, liability or claim (including the reasonable cost of investigation) which such Holder Indemnified Party may incur under the Securities Act, the Exchange Act or otherwise, insofar as such loss, damage, expense, liability or claim arises out of or is based upon any untrue statement or alleged untrue statement of a material fact contained in any Shelf Registration Statement or Prospectus or in any amendment or supplement thereto or in any preliminary prospectus, or arises out of or is based upon any omission or alleged omission to state a material fact required to be stated in any Shelf Registration Statement or in any amendment or supplement thereto or necessary to make the statements therein not misleading, or arises out of or is based upon any omission or alleged omission to state a material fact necessary in order to make the statements made in any Prospectus or in any amendment or supplement thereto or in any preliminary prospectus, in the light of the circumstances under which they were made, not misleading, except insofar as any such loss, damage, expense, liability or claim arises out of or is based upon any untrue statement or omission or alleged untrue statement or omission of a material fact contained in, or omitted from, and in conformity with information furnished in writing by or on behalf of any Holder to the Company expressly for use therein, including, without limitation, all information, to the extent provided by such Holder, regarding such Holder and its affiliates included in a Notice and Questionnaire provided by such Holder to the Company.

(b) Each Holder, severally and not jointly, agrees to indemnify, defend and hold harmless the Company, its directors and officers and any person who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act (each, a "COMPANY INDEMNIFIED PARTY") from and against any loss, damage, expense, liability or claim (including the reasonable cost of investigation) which such Company Indemnified Party may incur under the Securities Act, the Exchange Act or otherwise, insofar as such loss, damage, expense, liability or claim arises out of or is based upon any untrue statement or

alleged untrue statement of a material fact contained in information furnished in writing by or on behalf of such Holder to the Company expressly for use in any Shelf Registration Statement or Prospectus or in any amendment or supplement thereto or in any preliminary prospectus, including, without limitation, all information, to the extent provided by such Holder, regarding such Holder and its affiliates included in a Notice and Questionnaire provided by such Holder to the Company, or arises out of or is based upon any omission or alleged omission to state a material fact required to be stated in any Shelf Registration Statement or in any amendment or supplement thereto or necessary to make the statements therein not misleading, or arises out of or is based upon any omission or alleged omission to state a material fact necessary in order to make the statements in any Prospectus or in any amendment or supplement thereto or in any preliminary prospectus, in the light of the circumstances under which they were made, not misleading, in connection with such information. In no event shall the liability of any selling Holder of Registrable Securities hereunder be greater in amount than the dollar amount of the proceeds received by such Holder upon the sale of the Registrable Securities pursuant to the Shelf Registration

Statement giving rise to such indemnification obligation.

(c) If any action, suit or proceeding (each, a "PROCEEDING") is brought against any person in respect of which indemnity may be sought pursuant to either subsection (a) or (b) of this Section 6, such person (the "INDEMNIFIED PARTY") shall promptly notify the person against whom such indemnity may be sought (the "INDEMNIFYING PARTY") in writing of the institution of such Proceeding and the Indemnifying Party shall assume the defense of such Proceeding; PROVIDED, HOWEVER, that the omission to notify such Indemnifying Party shall not relieve such Indemnifying Party from any liability which it may have to such Indemnified Party or otherwise. Such Indemnified Party shall have the right to employ its own counsel in any such case, but the fees and expenses of such counsel shall be at the expense of such Indemnified Party unless the employment of such counsel shall have been authorized in writing by such Indemnifying Party in connection with the defense of such Proceeding or such Indemnifying Party shall not have employed counsel to have charge of the defense of such Proceeding within 30 days of the receipt of notice thereof or such Indemnified Party shall have reasonably concluded upon the written advice of counsel that there may be one or more defenses available to it that are different from, additional to or in conflict with those available to such Indemnifying Party (in which case such Indemnifying Party shall not have the right to direct that portion of the defense of such Proceeding on behalf of the Indemnified Party, but such Indemnifying Party may employ counsel and participate in the defense thereof but the fees and expenses of such counsel shall be at the expense of such Indemnifying Party), in any of which events such reasonable fees and expenses shall be borne by such Indemnifying Party and paid as incurred (it being understood, however, that such Indemnifying Party shall not be liable for the expenses of more than one separate counsel in any one Proceeding or series of related Proceedings together with reasonably necessary local counsel representing the Indemnified Parties who are parties to

such action). An Indemnifying Party shall not be liable for any settlement of such Proceeding effected without the written consent of such Indemnifying Party, but if settled with the written consent of such Indemnifying Party, such Indemnifying Party agrees to indemnify and hold harmless an Indemnified Party from and against any loss or liability by reason of such settlement. Notwithstanding the foregoing sentence, if at any time an Indemnified Party shall have requested an Indemnifying Party to reimburse such Indemnified Party for fees and expenses of counsel as contemplated by the second sentence of this paragraph, then such Indemnifying Party agrees that it shall be liable for any settlement of any Proceeding effected without its written consent if (i) such settlement is entered into more than 60 Business Days after receipt by such Indemnifying Party of the aforesaid request, (ii) such Indemnifying Party shall not have reimbursed such Indemnified Party in accordance with such request prior to the date of such settlement and (iii) such Indemnified Party shall have given such Indemnifying Party at least 30 days' prior notice of its intention to settle. No Indemnifying Party shall, without the prior written consent of any Indemnified Party, effect any settlement of any pending or threatened Proceeding in respect of which such Indemnified Party is or could have been a party and indemnity could have been sought hereunder by such Indemnified Party, unless such settlement includes an unconditional release of such Indemnified Party from all liability on claims that are the subject matter of such Proceeding and does not include an admission of fault, culpability or a failure to act, by or on behalf of such Indemnified Party.

(d) If the indemnification provided for in this Section 6 is unavailable to an Indemnified Party under subsections (a) and (b) of this Section 6 in respect of any losses, damages, expenses, liabilities or claims referred to therein, then each applicable Indemnifying Party, in lieu of indemnifying such Indemnified Party, shall contribute to the amount paid or payable by such Indemnified Party as a result of such losses, damages, expenses, liabilities or claims (i) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Holders on the other hand from the offering of the Registrable Securities or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company on the one hand and of the Holders on the other in connection with the statements or omissions which resulted in such losses, damages, expenses, liabilities or claims, as well as

any other relevant equitable considerations. The relative fault of the Company on the one hand and of the Holders on the other shall be determined by reference to, among other things, whether the untrue statement or alleged untrue statement of a material fact or omission or alleged omission relates to information supplied by the Company or by the Holders and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The amount paid or payable by a party as a result of the losses, damages, expenses, liabilities and claims referred to above shall be deemed to include any reasonable legal or

other fees or expenses reasonably incurred by such party in connection with investigating or defending any Proceeding.

(e) The Company and the Holders agree that it would not be just and equitable if contribution pursuant to this Section 6 were determined by pro rata allocation or by any other method of allocation which does not take account of the equitable considerations referred to in subsection (d) above. Notwithstanding the provisions of this Section 6, no Holder shall be required to contribute any amount in excess of the amount by which the total price at which the Registrable Securities sold by it were offered to the public exceeds the amount of any damages which it has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Holders' respective obligations to contribute pursuant to this Section 6 are several in proportion to the respective amount of Registrable Securities they have sold pursuant to a Shelf Registration Statement, and not joint. The remedies provided for in this Section 6 are not exclusive and shall not limit any rights or remedies which may otherwise be available to any indemnified party at law or in equity.

(f) The indemnity and contribution provisions contained in this Section 6 shall remain operative and in full force and effect regardless of (i) any termination of this Agreement, (ii) any investigation made by or on behalf of any Holder or any person controlling any Holder, or the Company, or the Company's officers or directors or any person controlling the Company and (iii) the sale of any Registrable Security by any Holder.

SECTION 7. INFORMATION REQUIREMENTS. (a) The Company covenants that, if at any time before the end of the Effectiveness Period it is not subject to the reporting requirements of the Exchange Act, it will cooperate with any Holder of Registrable Securities and take such further action as any Holder of Registrable Securities may reasonably request in writing (including, without limitation, making such representations as any such Holder may reasonably request in order to facilitate sales by such Holder pursuant to an available exemption from registration under the Securities Act), all to the extent required from time to time to enable such Holder to sell Registrable Securities without registration under the Securities Act within the limitation of the exemptions provided by Rule 144, Rule 144A and Regulation D under the Securities Act and customarily taken in connection with sales pursuant to such exemptions. Upon the written request of any Holder of Registrable Securities, the Company shall deliver to such Holder a written statement as to whether it has complied with such filing requirements, unless such a statement has been included in the Company's most recent report filed with the SEC pursuant to Section 13 or Section 15(d) of Exchange Act. Notwithstanding the foregoing, nothing in this Section 7 shall be deemed to require the Company to register any of its securities (other than the Common Stock) under any section of the Exchange Act.

(b) The Company shall file the reports required to be filed by it under the Exchange Act and shall comply with all other requirements set forth in the instructions to Form S-1 or Form S-3, as the case may be, in order to allow the Company to be eligible to file registration statements on Form S-1 or Form S-3.

SECTION 8. MISCELLANEOUS.

(a) NO CONFLICTING AGREEMENTS. The Company is not, as of the date hereof, a party to, nor shall it, on or after the date of this Agreement, enter into, any agreement with respect to its securities that conflicts with the rights granted to the Holders of Registrable Securities in this Agreement. The Company represents and warrants that the rights granted to the Holders of Registrable Securities hereunder do not in any way conflict with the rights granted to the holders of the Company's securities under any other agreements.

(b) AMENDMENTS AND WAIVERS. The provisions of this Agreement, including the provisions of this sentence, may not be amended, modified or supplemented, and waivers or consents to departures from the provisions hereof may not be given, unless the Company has obtained the written consent of Holders of a majority of the then outstanding Underlying Common Stock constituting Registrable Securities (with Holders of Notes deemed to be the Holders, for purposes of this Section, of the number of outstanding shares of Underlying Common Stock into which such Notes are or would be convertible as of the date on which such consent is requested). Notwithstanding the foregoing, a waiver or consent to depart from the provisions hereof with respect to a matter that relates exclusively to the rights of Holders of Registrable Securities whose securities are being sold pursuant to a Shelf Registration Statement and that does not directly or indirectly affect the rights of other Holders of Registrable Securities may be given by Holders of at least a majority of the Registrable Securities being sold by such Holders pursuant to such Shelf Registration Statement; PROVIDED that the provisions of this sentence may not be amended, modified, or supplemented except in accordance with the provisions of the immediately preceding sentence. Each Holder of Registrable Securities outstanding at the time of any such amendment, modification, supplement, waiver or consent or thereafter shall be bound by any such amendment, modification, supplement, waiver or consent effected pursuant to this Section 8(b), whether or not any notice, writing or marking indicating such amendment, modification, supplement, waiver or consent appears on the Registrable Securities or is delivered to such Holder.

(c) NOTICES. All notices and other communications provided for or permitted hereunder shall be made in writing by hand delivery, by telecopier, by courier guaranteeing overnight delivery or by first-class mail, return receipt requested, and shall be deemed given (i) when made, if made by hand delivery, (ii) upon confirmation, if made by telecopier, (iii) one (1) Business Day after being deposited with such courier, if made by overnight courier or (iv) on the date

indicated on the notice of receipt, if made by first-class mail, to the parties as follows:

(x) if to a Holder of Registrable Securities, at the most current address given by such Holder to the Company in a Notice and Questionnaire or any amendment thereto;

(y) if to the Company, to:

Ligand Pharmaceuticals Incorporated
10275 Science Center Drive
San Diego, California 92121-1117
Attention: David E. Robinson, President and Chief Executive Officer
Telecopy No.: (858) 550-1825

with a copy to (for informational purposes only):

Clifford Chance US LLP
3811 Valley Centre Drive, Second Floor
San Diego, California 92130-3318
Attention: Faye H. Russell
Telecopy No.: (858) 720-3501

(z) if to the Initial Purchaser, to:

UBS Warburg LLC
299 Park Avenue
New York, New York 10171

Attention: Syndicate Department
Telecopy No.: (212) 713-1205

with a copy to (for informational purposes only):

UBS Warburg LLC
677 Washington Boulevard
Stamford, Connecticut 06901
Attention: Legal Affairs--Convertibles
Telecopy No.: (203) 719-7317

or to such other address as such person may have furnished to the other persons identified in this Section 8(c) in writing in accordance herewith.

(d) APPROVAL OF HOLDERS. Whenever the consent or approval of Holders of a specified percentage of Registrable Securities is required hereunder, Registrable Securities held by the Company or its affiliates (as such term is defined in Rule 405 under the Securities Act) (other than the Initial Purchaser or

subsequent Holders of Registrable Securities if such subsequent Holders are deemed to be such affiliates solely by reason of their holdings of such Registrable Securities) shall not be counted in determining whether such consent or approval was given by the Holders of such required percentage.

(e) SUCCESSORS AND ASSIGNS. Any person who purchases any Registrable Securities from the Initial Purchaser or any Holder shall be deemed, for purposes of this Agreement, to be an assignee of the Initial Purchaser or such Holder, as the case may be. This Agreement shall inure to the benefit of and be binding upon the successors and assigns of each of the parties and shall inure to the benefit of and be binding upon each Holder of any Registrable Securities.

(f) COUNTERPARTS. This Agreement may be executed in any number of counterparts and by the parties hereto in separate counterparts, each of which when so executed shall be deemed to be original and all of which taken together shall constitute one and the same agreement.

(g) HEADINGS. The headings in this Agreement are for convenience of reference only and shall not limit or otherwise affect the meaning hereof.

(h) GOVERNING LAW. THIS AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO CONFLICTS OF LAWS PRINCIPLES THEREOF.

(i) SEVERABILITY. If any term, provision, covenant or restriction of this Agreement is held to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated thereby, and the parties hereto shall use its reasonable best efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction, it being intended that all of the rights and privileges of the parties shall be enforceable to the fullest extent permitted by law.

(j) ENTIRE AGREEMENT. This Agreement is intended by the parties as a final expression of their agreement and is intended to be a complete and exclusive statement of the agreement and understanding of the parties hereto in respect of the subject matter contained herein and the registration rights granted by the Company with respect to the Registrable Securities. Except as provided in the Purchase Agreement, there are no restrictions, promises, warranties or undertakings, other than those set forth or referred to herein, with respect to the registration rights granted by the Company with respect to the Registrable Securities. This Agreement supersedes all prior agreements and undertakings among the parties with respect to such registration rights. No party hereto shall have any rights, duties or obligations other than those specifically set forth in this Agreement.

(k) TERMINATION. This Agreement and the obligations of the parties hereunder shall terminate upon the end of the Effectiveness Period, except for any liabilities or obligations under Section 4, 5 or 6 hereof and the obligations to make payments of and provide for liquidated damages under Section 2(e) hereof to the extent such damages accrue prior to the end of the Effectiveness Period, each of which shall remain in effect in accordance with its terms.

(l) SUBMISSION TO JURISDICTION. Except as set forth below, no Proceeding may be commenced, prosecuted or continued in any court other than the courts of the State of New York located in the City and County of New York or in the United States District Court for the Southern District of New York, which courts shall have jurisdiction over the adjudication of such matters, and the Company hereby consents to the jurisdiction of such courts and personal service with respect thereto. The Company hereby consents to personal jurisdiction, service and venue in any court in which any Proceeding arising out of or in any way relating to this Agreement is brought by any third party against the Initial Purchaser. The Company hereby waives all right to trial by jury in any Proceeding (whether based upon contract, tort or otherwise) in any way arising out of or relating to this Agreement. The Company agrees that a final judgment in any such Proceeding brought in any such court shall be conclusive and binding upon the Company and may be enforced in any other courts in the jurisdiction of which the Company is or may be subject, by suit upon such judgment.

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

LIGAND PHARMACEUTICALS INCORPORATED
By: /s/ David E. Robinson

Name:
Title:

Confirmed and accepted as of the date first above written:

UBS WARBURG LLC

By: /s/ Mark Saad
Name:
Title:

By: /s/ Sage Kelly
Name:
Title:

Exhibit 4.3

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LIGAND PHARMACEUTICALS INCORPORATED

and

J.P. MORGAN TRUST COMPANY, NATIONAL ASSOCIATION

as Trustee

INDENTURE

Dated as of November 26, 2002

$135,000,000 Principal Amount

(Plus Over-Allotment Option)

6% CONVERTIBLE SUBORDINATED NOTES DUE 2007

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CROSS-REFERENCE TABLE*

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(a)(2)	7.10
(a)(3)	N.A.
(a)(4)	N.A.
(b)	7.08; 7.10; 13.02
(c)	N.A.
311(a)	7.11
(b)	7.11
(c)	N.A.
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(b)	13.03
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313(a)	7.06
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(d)	7.06
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(b)	12.05
(c)(1)	13.04
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(c)(3)	N.A.
(d)	12.03
(e)	13.05

(f)..... N.A.
315(a)..... 7.01(B)
(b)..... 7.05; 13.02
(c)..... 7.01(A)
(d)..... 7.01(C)
(e)..... 6.11
316(a)(last sentence)..... 2.09
(a)(1)(A)..... 6.05
(a)(1)(B)..... 6.04
(a)(2)..... N.A.
(b)..... 6.07
317(a)(1)..... 6.08
(a)(2)..... 6.09
(b)..... 2.04
318(a)..... 13.01
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* N.A. MEANS NOT APPLICABLE.

NOTE: THIS CROSS REFERENCE TABLE SHALL NOT, FOR ANY PURPOSE, BE DEEMED TO BE PART OF THE INDENTURE.

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<CAPTION>
I. DEFINITIONS AND INCORPORATION BY REFERENCE

INDENTURE, dated as of November 26, 2002 between LIGAND PHARMACEUTICALS INCORPORATED, a Delaware corporation (the "Company"), and J.P. MORGAN TRUST COMPANY, NATIONAL ASSOCIATION, as trustee (the "TRUSTEE").

Each party agrees as follows for the benefit of the other parties and for the equal and ratable benefit of the Holders of the Company's 6% Convertible Subordinated Notes due 2007 (the "SECURITIES").

I. DEFINITIONS AND INCORPORATION BY REFERENCE

1.01 DEFINITIONS.

"AFFILIATE" means any person directly or indirectly controlling or controlled by or under direct or indirect common control with the Company. For this purpose, "control" shall mean the power to direct the management and policies of a person through the ownership of securities, by contract or otherwise.

"AGENT" means any Registrar, Paying Agent, Conversion Agent or co-registrar.

"BOARD OF DIRECTORS" means the Board of Directors of the Company or any committee thereof authorized to act for it hereunder.

"BOARD RESOLUTION" means a copy of a resolution certified by the Secretary or an Assistant Secretary of the Company to have been duly adopted by its Board of Directors and to be in full force and effect on the date of such certification, and delivered to the Trustee.

"CAPITAL STOCK" means any and all shares, interests, participations or other equivalents (however designated) of capital stock of the Company and all warrants or options to acquire such capital stock.

"COMMON STOCK" means the common stock, par value $.001 per share, of the Company, or such other capital stock into which the Company's common stock is reclassified or changed.

"COMPANY" means the party named as such above until a successor replaces it pursuant to the applicable provision hereof and thereafter means the successor.

"COMPANY REQUEST" or "COMPANY ORDER" means a written request or order signed on behalf of the Company by its Chairman of the Board, its Chief Executive Officer, its President, its Chief Operating Officer, its Chief Financial Officer, any Senior Vice President or any Vice President and by its Treasurer or an Assistant Treasurer or its Secretary or an Assistant Secretary, and delivered to the Trustee.

"CONTROL AGREEMENT" means the Control Agreement, dated as of November 26, 2002, by and among the Company, the Trustee and the Account Intermediary (as defined in the Pledge Agreement).

"CORPORATE TRUST OFFICE OF THE TRUSTEE" shall be at the address of the Trustee specified in SECTION 13.02 or such other address as the Trustee may give notice of to the Company.

"DAILY MARKET PRICE" means the price of a share of Common Stock on the

relevant date, determined (a) on the basis of the last reported sale price regular way of the Common Stock as reported on the Nasdaq National Market (the "NNM"), or if the Common Stock is not then listed on the NNM, as reported on such national securities exchange upon which the Common Stock is listed, or (b) if there is no such reported sale on the day in question, on the basis of the average of the closing bid and asked quotations regular way as so reported, or (c) if the Common Stock is not listed on the NNM or on any national securities exchange, on the basis of the average of the high bid and low asked quotations regular way on the day in question in the over-the-counter market as reported by the National Association of Securities Dealers Automated Quotation System, or if not so quoted, as reported by National Quotation Bureau, Incorporated, or a similar organization. If such price is not available, the daily market price per share shall be the fair value of a share of Common Stock as determined by a nationally recognized investment banking firm or a nationally recognized appraisal firm selected by the Board of Directors of the Company (which shall be evidenced by an Officers' Certificate delivered to the Trustee).

"DEFAULT" means any event which is, or after notice or passage of time or both would be, an Event of Default.

"DEPOSITARY" means The Depository Trust Company, its nominees and successors.

"EXCHANGE ACT" means the Securities Exchange Act of 1934, as amended.

"HOLDER" or "SECURITYHOLDER" means a person in whose name a Security is registered on the Registrar's books.

"INDENTURE" means this Indenture as amended or supplemented from time to time.

"INITIAL PURCHASER" means UBS Warburg LLC.

"INTEREST" includes liquidated damages, unless the context otherwise requires.

"LIEN" means, with respect to any asset, any mortgage, lien, pledge, charge, security interest or encumbrance of any kind in respect of such asset given to secure Indebtedness, whether or not filed, recorded or otherwise perfected under applicable law (including any conditional sale or other title retention agreement, any lease in the nature thereof, any option or other agreement to sell or give a security interest in and any filing of or agreement to give any financing statement under the Uniform Commercial Code (or equivalent statutes) of any jurisdiction with respect to any such lien, pledge, charge or security interest).

"LIQUIDATED DAMAGES" has the meaning ascribed to "Liquidated Damages Amount" in the Registration Rights Agreement.

"MATURITY DATE" means November 16, 2007.

"OFFICER" means the Chairman of the Board, the Chief Executive Officer, the President, the Chief Operating Officer, the Chief Financial Officer, any Senior Vice President, any Vice President, the Treasurer or the Secretary of the Company.

"OFFICERS' CERTIFICATE" means a certificate signed by two Officers or by an Officer and an Assistant Treasurer or an Assistant Secretary of the Company.

"OPINION OF COUNSEL" means a written opinion from legal counsel who may be an employee of or counsel for the Company, or other counsel reasonably acceptable to the Trustee.

"PERMITTED PAYMENTS" shall mean payments on the Securities derived from the Pledged Securities which are pledged for the benefit of the Holders of the Securities in accordance with the terms and provisions of the Pledge Agreement.

"PERSON" means any individual, corporation, partnership, limited liability company, joint venture, association, joint-stock company, trust, unincorporated

organization or government or other agency or political subdivision thereof.

"PLEDGE ACCOUNT" means an account established by the Trustee pursuant to the terms of the Pledge Agreement for the deposit of the Pledged Securities purchased by the Company with a portion of the proceeds from the sale of the Securities.

"PLEDGE AGREEMENT" means the Pledge Agreement, dated as of November 26, 2002, made by the Company in favor of the Trustee, governing the disbursement of funds from the Pledge Account.

"PLEDGED SECURITIES" means the government securities to be purchased by the Company and held in the Pledge Account as described in, and in accordance with, the Pledge Agreement.

"PURCHASE AGREEMENT" means the Purchase Agreement dated as of November 21, 2002 between the Company and the Initial Purchaser.

"QIB" means a "qualified institutional buyer" within the meaning of Rule 144A under the Act.

"REDEMPTION PRICE" means, with respect to a Security to be redeemed by the Company in accordance with ARTICLE III, the percentage of the outstanding principal amount of such Security payable by the Company upon such redemption.

"REGISTRATION RIGHTS AGREEMENT" means the Registration Rights Agreement dated as of November 26, 2002 between the Company and the Initial Purchaser.

"REPURCHASE PRICE" means, with respect to a Security duly tendered for purchase by the Company in accordance with SECTION 3.08, 100% of the outstanding principal amount of such Security so tendered.

"RESPONSIBLE OFFICER" shall mean, when used with respect to the Trustee, any officer within the corporate trust department of the Trustee, including any vice president, assistant vice

president, assistant secretary, assistant treasurer, trust officer or any other officer of the Trustee who customarily performs functions similar to those performed by the Persons who at the time shall be such officers, respectively, or to whom any corporate trust matter is referred because of such person's knowledge of and familiarity with the particular subject and who shall have direct responsibility for the administration of this Indenture.

"RESTRICTED SECURITY" means a Security that constitutes a "restricted security" within the meaning of Rule 144(a)(3) under the Securities Act; PROVIDED, HOWEVER, that the Trustee shall be entitled to request and conclusively rely on an Opinion of Counsel with respect to whether any Security constitutes a Restricted Security.

"RULE 144A" means Rule 144A under the Securities Act.

"RULE 144A GLOBAL SECURITY" means a permanent Global Security in registered form representing the aggregate principal amount of Securities sold in reliance on Rule 144A.

"SEC" means the Securities and Exchange Commission.

"SECURITIES" means the 6% Convertible Subordinated Notes due 2007 issued by the Company pursuant to this Indenture.

"SECURITIES ACT" means the Securities Act of 1933, as amended.

"SECURITYHOLDER" has the meaning given to such term in the Registration Rights Agreement.

"SIGNIFICANT SUBSIDIARY" with respect to any person means any subsidiary of such person that constitutes a "significant subsidiary" within the meaning of Rule 1-02 of Regulation S-X under the Securities Act.

"SUBSIDIARY" means (i) a corporation a majority of whose capital stock with voting power, under ordinary circumstances, to elect directors is at the time, directly or indirectly, owned by the Company, by one or more subsidiaries of the Company or by the Company and one or more of its subsidiaries or (ii) any other person (other than a corporation) in which the Company, one or more its subsidiaries or the Company and one or more its subsidiaries, directly or indirectly, at the date of determination thereof, have at least majority ownership interest.

"TIA" means the Trust Indenture Act of 1939 (15 U.S. Code ss.ss. 77aaa-77bbbb) as in effect on the date of this Indenture, except as provided in SECTION 9.03.

"TRUSTEE" means the party named as such in this Indenture until a successor replaces it in accordance with the provisions hereof and thereafter means the successor.

1.02 OTHER DEFINITIONS.

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TERM	DEFINED IN SECTION
<S>	<C>
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1.03 INCORPORATION BY REFERENCE OF TRUST INDENTURE ACT.

Whenever this Indenture refers to a provision of the TIA, the provision is incorporated by reference in and made a part of this Indenture.

The following TIA terms used in this Indenture have the following meanings:

"COMMISSION" means the SEC;
"INDENTURE SECURITIES" means the Securities;
"INDENTURE SECURITY HOLDER" means a Securityholder or a Holder;
"INDENTURE TO BE QUALIFIED" means this Indenture; "INDENTURE TRUSTEE" or "INSTITUTIONAL TRUSTEE" means the Trustee; and
"OBLIGOR" on the indenture securities means the Company or any successor.

All other terms used in this Indenture that are defined by the TIA, defined by TIA reference to another statute or defined by SEC rule under the TIA and not otherwise defined herein have the meanings so assigned to them.

1.04 RULES OF CONSTRUCTION.

Unless the context otherwise requires:

(i) a term has the meaning assigned to it;

(ii) an accounting term not otherwise defined has the meaning assigned to it in accordance with generally accepted accounting principles in effect on the date hereof;

(iii) "or" is not exclusive;

(iv) words in the singular include the plural and in the plural include the singular;

(v) references to agreements and other instruments include subsequent amendments thereto;

(vi) provisions apply to successive events and transactions; and

(vii) "herein," "hereof" and other words of similar import refer to this Indenture as a whole and not to any particular Article, Section or other subdivision.

II. THE SECURITIES

2.01 FORM AND DATING.

The Securities and the Trustee's certificate of authentication shall be substantially in the form set forth in EXHIBIT A, which is incorporated in and forms a part of this Indenture. The Securities may have notations, legends or endorsements required by law, stock exchange rule or usage. Each Security shall be dated the date of its authentication.

The Securities are being offered and sold in reliance on Rule 144A under the Securities Act and shall be issued initially in the form of one or more Global Securities, substantially in the form set forth in EXHIBIT A (the "GLOBAL SECURITY"), deposited with the Trustee, as custodian for the Depositary, duly executed by the Company and authenticated by the Trustee as hereinafter provided and bearing the legends set forth in EXHIBITS B-1 and B-2. The aggregate principal amount of the Global Security may from time to time be increased or decreased by adjustments made on the records of the Trustee, as custodian for the Depositary, as hereinafter provided; PROVIDED, that in no event shall the aggregate principal amount of the Global Security or Securities exceed $135,000,000, or $155,250,000 if the Initial Purchaser elects to purchase

Additional Securities pursuant to the over-allotment option provided for in SECTION 1 of the Purchase Agreement ("ADDITIONAL SECURITIES").

Securities issued in exchange for interests in a Global Security pursuant to SECTION 2.15 may be issued in the form of permanent certificated Securities in registered form in substantially the form set forth in EXHIBIT A (the "PHYSICAL SECURITIES") and, if applicable, bearing any legends required by

SECTION 2.17.

2.02 EXECUTION AND AUTHENTICATION.

One Officer shall sign the Securities for the Company by manual or facsimile signature.

If an Officer whose signature is on a Security no longer holds that office at the time the Security is authenticated, the Security shall nevertheless be valid.

A Security shall not be valid until authenticated by the manual signature of the Trustee. The signature shall be conclusive evidence that the Security has been authenticated under this Indenture.

Upon a written order of the Company signed by one Officer of the Company, the Trustee shall authenticate Securities for original issue in the aggregate principal amount of $135,000,000 and such additional principal amount, if any, as shall be determined pursuant to the next sentence of this SECTION 2.02. Upon receipt by the Trustee of an Officers' Certificate stating that the Initial Purchaser has elected to purchase from the Company a specified principal amount of Additional Securities, not to exceed $20,250,000, pursuant to Section l of the Purchase Agreement, the Trustee shall authenticate and deliver such specified principal amount of Additional Securities to or upon the written order of the Company signed as provided in the immediately preceding sentence. Such Officers' Certificate must be received by the Trustee not later than the proposed date for delivery of such Additional Securities. The aggregate principal amount of Securities outstanding at any time may not exceed $155,250,000 except as provided in SECTION 2.07.

Upon a written order of the Company signed by two Officers or by an Officer and an Assistant Treasurer of the Company, the Trustee shall authenticate Securities not bearing the Private Placement Legend to be issued to the transferee when sold pursuant to an effective registration statement under the Securities Act as set forth in SECTION 2.16(C).

The Trustee shall act as the initial authenticating agent. Thereafter, the Trustee may appoint an authenticating agent acceptable to the Company to authenticate Securities. An authenticating agent may authenticate Securities whenever the Trustee may do so. Each reference in this Indenture to authentication by the Trustee includes authentication by such Agent. An authenticating agent has the same rights as an Agent to deal with the Company and its Affiliates.

The Securities shall be issuable only in registered form without interest coupons and only in denominations of $1,000 principal amount and any positive integral multiple thereof.

2.03 REGISTRAR, PAYING AGENT AND CONVERSION AGENT.

The Company shall maintain an office or agency where Securities may be presented for registration of transfer or for exchange ("REGISTRAR"), an office or agency where Securities may be presented for payment ("PAYING AGENT") and an office or agency where Securities may be presented for conversion ("CONVERSION AGENT"). The Registrar shall keep a register of the Securities and of their transfer and exchange. The Company may appoint or change one or more co-registrars, one or more additional paying agents and one or more additional conversion agents without notice and may act in any such capacity on its own behalf. The term "REGISTRAR" includes any co-registrar; the term "PAYING AGENT" includes any additional paying agent; and the term "CONVERSION AGENT" includes any additional conversion agent.

The Company shall enter into an appropriate agency agreement with any Agent not a party to this Indenture. The agreement shall implement the provisions of this Indenture that relate to such Agent. The Company shall notify the Trustee of the name and address of any Agent not a party to this Indenture. If the Company fails to maintain a Registrar, Paying Agent or Conversion Agent, the Trustee shall act as such. The Company or any Affiliate of the Company may act as Paying Agent.

The Company initially appoints the Trustee as Paying Agent, Registrar and Conversion Agent.

2.04 PAYING AGENT TO HOLD MONEY IN TRUST.

Subject to SECTION 11.04, each Paying Agent shall hold in trust for the benefit of the Securityholders or the Trustee all moneys held by the Paying Agent for the payment of the Securities, and shall notify the Trustee of any default by the Company in making any such payment. While any such default continues, the Trustee may require a Paying Agent to pay all money held by it to the Trustee. The Company at any time may require a Paying Agent to pay all money held by it to the Trustee. Upon payment over to the Trustee, the Paying Agent shall have no further liability for the money. If the Company acts as Paying Agent, it shall segregate and hold as a separate trust fund all money held by it as Paying Agent.

2.05 SECURITYHOLDER LISTS.

The Trustee shall preserve in as current a form as is reasonably practicable the most recent list available to it of the names and addresses of Securityholders. If the Trustee is not the Registrar, the Company shall furnish to the Trustee on or before each interest payment date and at such other times as the Trustee may request in writing a list, in such form and as of such date as the Trustee may reasonably require, of the names and addresses of Securityholders.

2.06 TRANSFER AND EXCHANGE.

Subject to SECTIONS 2.15 and 2.16 hereof, where Securities are presented to the Registrar with a request to register their transfer or to exchange them for an equal principal amount of Securities of other authorized denominations, the Registrar shall register the transfer or make the exchange if its requirements for such transaction are met. To permit registrations of transfer and exchanges, the Trustee shall authenticate Securities at the Registrar's request. The Company or

the Trustee, as the case may be, shall not be required (a) to issue, authenticate, register the transfer of or exchange any Security during a period beginning at the opening of business 15 days before the mailing of a notice of redemption of the Securities selected for redemption under SECTION 3.04 and ending at the close of business on the day of such mailing or (b) to register the transfer of or exchange any Security so selected for redemption in whole or in part, except the unredeemed portion of Securities being redeemed in part.

No service charge shall be made for any transfer, exchange or conversion of Securities, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in connection with any transfer, exchange or conversion of Securities, other than exchanges pursuant to SECTIONS 2.10, 3.07, 3.08, 9.05 or 10.02 not involving any transfer.

2.07 REPLACEMENT SECURITIES.

If the Holder of a Security claims that the Security has been mutilated, lost, destroyed or wrongfully taken, the Company shall issue and the Trustee shall authenticate a replacement Security if the Trustee's requirements are met and, in the case of a mutilated Security, such mutilated Security is surrendered to the Trustee. In the case of lost, destroyed or wrongfully taken Securities, if required by the Trustee, an indemnity bond must be provided by the Holder that is sufficient in the judgment of the Trustee to protect the Company, the Trustee or any Agent from any loss which any of them may suffer if a Security is replaced. The Company may require payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation to replacing a Security and any other reasonable expenses (including the reasonable fees and expenses of the Trustee) in connection therewith.

In case any such mutilated, lost, destroyed or wrongfully taken Security has become or is about to become due and payable, the Company in its discretion may, instead of issuing a new Security, pay such Security when due.

Every replacement Security is an additional obligation of the Company only as provided in SECTION 2.08.

2.08 OUTSTANDING SECURITIES.

Securities outstanding at any time are all the Securities authenticated by the Trustee except for those converted, those cancelled by it, those delivered to it for cancellation and those described in this SECTION 2.08 as not outstanding. Except to the extent provided in SECTION 2.09, a Security does not cease to be outstanding because the Company or one of its subsidiaries or Affiliates holds the Security.

If a Security is replaced pursuant to SECTION 2.07, it ceases to be outstanding unless the Trustee receives proof satisfactory to it, or a court holds, that the replaced Security is held by a protected purchaser, as that term is defined in the New York Uniform Commercial Code.

If the Paying Agent (other than the Company or any Affiliate of the Company) holds on a redemption date, Repurchase Date or maturity date money sufficient to pay Securities payable on that date, then on and after that date, such Securities shall be deemed to be no longer outstanding

and interest on them shall cease to accrue, and such Security shall be deemed paid whether or not the Security is delivered to the Paying Agent. Thereafter, all other rights of the Holders of such Securities shall terminate with respect to such Securities, other than the right to receive the redemption price, Repurchase Price or principal amount, as applicable.

If a Security is converted in accordance with ARTICLE X, then from and after the time of conversion on the conversion date, such Security will cease to be outstanding, and interest, if any, will cease to accrue on such Security.

2.09 SECURITIES HELD BY THE COMPANY OR AN AFFILIATE.

In determining whether the Holders of the required aggregate principal amount of Securities have concurred in any direction, waiver or consent, Securities owned by the Company or any of its subsidiaries or an Affiliate shall be considered as though not outstanding, except that for the purposes of determining whether a Responsible Officer of the Trustee shall be protected in relying on any such direction, waiver or consent, only Securities which the Trustee knows are so owned shall be so disregarded.

2.10 TEMPORARY SECURITIES.

Until definitive Securities are ready for delivery, the Company may prepare and the Trustee shall authenticate temporary Securities. Temporary Securities shall be substantially in the form of definitive Securities but may have variations that the Company considers appropriate for temporary Securities. Without unreasonable delay, the Company shall prepare and the Trustee shall authenticate definitive Securities in exchange for temporary Securities.

2.11 CANCELLATION.

The Company at any time may deliver Securities to the Trustee for cancellation. The Registrar, Paying Agent and Conversion Agent shall forward to the Trustee any Securities surrendered to them for transfer, exchange, payment or conversion. The Trustee shall cancel all Securities surrendered for transfer, exchange, payment, conversion or cancellation in accordance with its customary procedures. The Company may not issue new Securities to replace Securities that it has paid or delivered to the Trustee for cancellation or that any Securityholder has converted pursuant to ARTICLE X.

2.12 DEFAULTED INTEREST.

If and to the extent the Company defaults in a payment of interest on the Securities, the Company shall pay the defaulted interest in any lawful manner plus, to the extent not prohibited by applicable statute or case law, interest payable on the defaulted interest at the rate provided in the Securities. The

Company may pay the defaulted interest to the persons who are Securityholders on a subsequent special record date. The Company shall fix such record date and payment date. At least 15 days before the record date, the Company shall mail to Securityholders a notice that states the record date, payment date and amount of interest to be paid.

2.13 CUSIP NUMBERS.

The Company in issuing the Securities may use one or more "CUSIP" numbers, and if so, the Trustee shall use the CUSIP numbers in notices of redemption or exchange as a convenience to Holders; PROVIDED, HOWEVER, that no representation is hereby deemed to be made by the Trustee as to the correctness or accuracy of the CUSIP numbers printed in the notice or on the Securities, and that reliance may be placed only on the other identification numbers printed on the Securities. The Company shall promptly notify the Trustee of any change in the CUSIP numbers.

2.14 DEPOSIT OF MONEYS.

Prior to 11:00 A.M., New York City time, on each interest payment date, maturity date, redemption date and Repurchase Date, the Company shall have deposited with a Paying Agent in immediately available funds money sufficient to make cash payments, if any, due on such interest payment date, maturity date, redemption date and Repurchase Date, as the case may be, in a timely manner which permits the Paying Agent to remit payment to the Holders on such interest payment date, maturity date, redemption date and Repurchase Date, as the case may be.

2.15 BOOK-ENTRY PROVISIONS FOR GLOBAL SECURITIES.

(A) The Global Securities initially shall (i) be registered in the name of the Depositary or the nominee of such Depositary, (ii) be delivered to the Trustee as custodian for such Depositary and (iii) bear legends as set forth in SECTION 2.17.

Members of, or participants in, the Depositary ("PARTICIPANTS") shall have no rights under this Indenture with respect to any Global Security held on their behalf by the Depositary, or the Trustee as its custodian, or under the Global Security, and the Depositary may be treated by the Company, the Trustee and any agent of the Company or the Trustee as the absolute owner of the Global Security for all purposes whatsoever. Notwithstanding the foregoing, nothing herein shall prevent the Company, the Trustee or any agent of the Company or the Trustee from giving effect to any written certification, proxy or other authorization furnished by the Depositary or impair, as between the Depositary and Participants, the operation of customary practices governing the exercise of the rights of a Holder of any Security.

(B) Transfers of Global Securities shall be limited to transfers in whole, but not in part, to the Depositary, its successors or their respective nominees. In addition, Physical Securities shall be transferred to all beneficial owners in exchange for their beneficial interests in Global Securities if (i) the Depositary notifies the Company that it is unwilling or unable to continue as Depositary for any Global Security and a successor Depositary is not appointed by the Company within 90 days of such notice or (ii) an Event of Default has occurred and is continuing and the Registrar has received a written request from the Depositary to issue Physical Securities.

(C) In connection with the transfer of a Global Security in its entirety to beneficial owners pursuant to Section 2.15(B), such Global Security shall be deemed to be surrendered to the Trustee for cancellation, and the Company shall execute, and the Trustee shall upon written instructions from the Company authenticate and deliver, to each beneficial owner identified by

the Depositary in exchange for its beneficial interest in such Global Security, an equal aggregate principal amount of Physical Securities of authorized

denominations.

(D) Any Physical Security constituting a Restricted Security delivered in exchange for an interest in a Global Security pursuant to SECTION 2.15(B) shall, except as otherwise provided by SECTION 2.16, bear the Private Placement Legend (as defined).

(E) The Holder of any Global Security may grant proxies and otherwise authorize any Person, including Participants and Persons that may hold interests through Participants, to take any action which a Holder is entitled to take under this Indenture or the Securities.

2.16 SPECIAL TRANSFER PROVISIONS.

(A) TRANSFERS TO QIBS. The following provisions shall apply with respect to the registration of any proposed transfer of a Restricted Security to a QIB:

(i) the Registrar shall register the transfer of any Restricted Security, whether or not such Security bears the Private Placement Legend, if (x) the requested transfer is after the second anniversary of the issue date for the Securities; PROVIDED, HOWEVER, that neither the Company nor any of its Affiliates has held any beneficial interest in such Security, or portion thereof, at any time on or prior to the second anniversary of the issue date for the Securities or (y) such transfer is being made by a proposed transferor who has checked the box provided for on the form of Security stating, or has otherwise advised the Company and the Registrar in writing, that the sale has been made in compliance with the provisions of Rule 144A to a transferee who has signed the certification provided for on the form of Security stating, or has otherwise advised the Company and the Registrar in writing, that it is purchasing the Security for its own account or an account with respect to which it exercises sole investment discretion and that it and any such account is a QIB within the meaning of Rule 144A, and is aware that the sale to it is being made in reliance on Rule 144A and acknowledges that it has received such information regarding the Company as it has requested pursuant to Rule 144A or has determined not to request such information and that it is aware that the transferor is relying upon its foregoing representations in order to claim the exemption from registration provided by Rule 144A; and

(ii) if the proposed transferor is a Participant seeking to transfer an interest in one Global Security to a transferee who will hold such interest in another Global Security, upon receipt by the Registrar of (x) written instructions given in accordance with the Depositary's and the Registrar's procedures and (y) the appropriate certificates and other documents, if any, required by clause (y) of paragraph (i) above, the Registrar shall register the transfer and reflect on its books and records the date and (A) a decrease in the aggregate principal amount of the Global Security through which the transferor held such interest in an amount equal to the aggregate principal amount of the Securities to be transferred and (B) an increase in the aggregate principal amount of the Global Security

through which the transferee proposes to hold such interest, in an amount equal to the aggregate principal amount of the Securities to be transferred.

(B) RESTRICTIONS ON TRANSFER AND EXCHANGE OF GLOBAL SECURITIES. Notwithstanding any other provisions of this Indenture, a Global Security may not be transferred except as a whole by the Depositary to a nominee of the Depositary or by a nominee of the Depositary to the Depositary or another nominee of the Depositary or by the Depositary or any such nominee to a successor Depositary or a nominee of such successor Depositary.

(C) PRIVATE PLACEMENT LEGEND. Upon the transfer, exchange or replacement of Securities not bearing the Private Placement Legend, the Registrar or co-Registrar shall deliver Securities that do not bear the Private Placement Legend. Upon the transfer, exchange or replacement of Securities bearing the Private Placement Legend, the Registrar or co-Registrar shall deliver only Securities that bear the Private Placement Legend unless (i) the requested transfer is after the second anniversary of the issue date for the Securities

(PROVIDED, HOWEVER, that neither the Company nor any of its Affiliates has held any beneficial interest in such Security, or portion thereof, at any time prior to or on the second anniversary of the issue date), (ii) there is delivered to the Trustee an Opinion of Counsel reasonably satisfactory to the Company to the effect that neither such legend nor the related restrictions on transfer are required in order to maintain compliance with the provisions of the Securities Act or (iii) such Security has been sold pursuant to an effective registration statement under the Securities Act and the Holder selling such Securities has delivered to the Registrar or co-Registrar a notice in the form of EXHIBIT C hereto. Upon the effectiveness of the Shelf Registration Statement (as defined in the Registration Rights Agreement), the Company shall deliver to the Trustee a notice of effectiveness, a Security or Securities, an authentication order in accordance with SECTION 2.02 and an opinion of counsel in the form of EXHIBIT D hereto and, if required by the Depositary, the Company shall deliver to the Depositary a letter of representations in a form reasonably acceptable to the Depositary.

(D) GENERAL. By its acceptance of any Security bearing the Private Placement Legend, each Holder of such a Security acknowledges the restrictions on transfer of such Security set forth in this Indenture and in the Private Placement Legend and agrees that it will transfer such Security only as provided in this Indenture.

The Registrar shall retain copies of all letters, notices and other written communications received pursuant to SECTION 2.15 or this SECTION 2.16. The Company shall have the right to inspect and make copies of all such letters, notices or other written communications at any reasonable time upon the giving of reasonable written notice to the Registrar.

(E) TRANSFERS OF SECURITIES HELD BY AFFILIATES. Any certificate (i) evidencing a Security that has been transferred to an Affiliate of the Company within two years after the issue date for the Securities, as evidenced by a notation on the Assignment Form for such transfer or in the representation letter delivered in respect thereof or (ii) evidencing a Security that has been acquired from an Affiliate (other than by an Affiliate) in a transaction or a chain of transactions not involving any public offering, shall, until two years after the last date on which the Company or any Affiliate of the Company was an owner of such Security, in each case, bear the Private

Placement Legend, unless otherwise agreed by the Company (with written notice thereof to the Trustee).

2.17 RESTRICTIVE LEGENDS.

Each Global Security and Physical Security that constitutes a Restricted Security shall bear the legend (the "PRIVATE PLACEMENT LEGEND") as set forth in EXHIBIT B-1 on the face thereof until after the second anniversary of the later of (i) the issue date for the Securities, and (ii) the last date on which the Company or any Affiliate of the Company was the owner of such Security (or any predecessor security) (or such shorter period of time as permitted by Rule 144(k) under the Securities Act or any successor provision thereunder) (or such longer period of time as may be required under the Securities Act or applicable state securities laws in the opinion of counsel for the Company, unless otherwise agreed between the Company and the Holder thereof).

Each Global Security shall also bear the legend as set forth in EXHIBIT B-2.

III. REDEMPTION

3.01 RIGHT OF REDEMPTION.

Redemption of the Securities, as permitted by any provision of this Indenture, shall be made in accordance with PARAGRAPHS 6 and 7 of the Securities, and in accordance with this ARTICLE III. The Company will not have the right to redeem any Securities prior to November 22, 2005. On or after November 22, 2005, the Company will have the right to redeem all or any part of the Securities at the Redemption Prices specified in PARAGRAPH 6 therein under the caption "Redemption Price," in each case including accrued and unpaid

interest, if any, to, but excluding, the redemption date.

3.02 NOTICES TO TRUSTEE.

If the Company elects to redeem Securities pursuant to PARAGRAPH 6 of the Securities, it shall notify the Trustee at least 15 days prior to the mailing of the notice of redemption (unless a shorter notice period shall be satisfactory to the Trustee) of the redemption date and the aggregate principal amount of Securities to be redeemed.

3.03 SELECTION OF SECURITIES TO BE REDEEMED.

If less than all the Securities are to be redeemed, the Trustee shall select the Securities to be redeemed on a PRO RATA basis. The Trustee shall make the selection from Securities outstanding not previously called for redemption. The Trustee may select for redemption portions of the principal of Securities that have denominations larger than $1,000 principal amount. Securities and portions of them it selects shall be in amounts of $1,000 principal amount or positive integral multiples of $1,000 principal amount. The Trustee shall promptly notify the Company in writing of the Securities selected for redemption and the principal amount thereof to be redeemed.

The Registrar need not transfer or exchange any Securities selected for redemption, except the unredeemed portion of the Securities redeemed in part. Also, the Registrar need not transfer or exchange any Securities for a period of 15 days before selecting Securities to be redeemed.

3.04 NOTICE OF REDEMPTION.

At least 30 days but not more than 60 days before a redemption date, the Company shall mail by first-class mail a notice of redemption to each Holder whose Securities are to be redeemed.

The notice shall identify the Securities and the aggregate principal amount thereof to be redeemed and shall state:

(i) the redemption date;

(ii) the Redemption Price plus the amount of accrued and unpaid interest to be paid on the Securities called for redemption;

(iii) the then current conversion rate and conversion price;

(iv) the name and address of the Paying Agent and Conversion Agent;

(v) the date on which the right to convert the principal of the Securities called for redemption will terminate and the place or places where such Securities may be surrendered for conversion;

(vi) that Holders who want to convert Securities must satisfy the requirements in ARTICLE X;

(vii) the paragraph of the Securities pursuant to which the Securities are to be redeemed;

(viii) that Securities called for redemption must be surrendered to the Paying Agent to collect the Redemption Price;

(ix) that unless the Company shall default in the payment of the Redemption Price interest on Securities called for redemption ceases to accrue on and after the redemption date and that the Securities will cease to be convertible after the close of business on the business day immediately preceding the redemption date; and

(x) the CUSIP number or numbers, as the case may be, of the Securities.

The date on which the right to convert the principal of the Securities called for redemption will terminate shall be at the close of business on the

business day immediately preceding the redemption date.

At the Company's request, upon reasonable prior notice, the Trustee shall give the notice of redemption in the Company's name and at the Company's expense; PROVIDED that the form and content of such notice shall be prepared by the Company.

3.05 EFFECT OF NOTICE OF REDEMPTION.

Once notice of redemption is mailed, Securities called for redemption become due and payable on the redemption date at the Redemption Price plus accrued and unpaid interest to the date of redemption, and, on and after such date (unless the Company shall default in the payment of the Redemption Price), such Securities shall cease to bear interest. Upon surrender to the Paying Agent, such Securities shall be paid at the Redemption Price plus accrued interest to, but excluding, the redemption date, unless the redemption date is an interest payment date, in which case the accrued interest will be paid in the ordinary course.

3.06 DEPOSIT OF REDEMPTION PRICE.

On or before the redemption date, the Company shall deposit with the Paying Agent money in funds immediately available on the redemption date sufficient to pay the Redemption Price of and accrued interest on all Securities to be redeemed on that date. The Paying Agent shall return to the Company, as soon as practicable, any money not required for that purpose.

3.07 SECURITIES REDEEMED IN PART.

Upon surrender of a Security that is redeemed in part, the Company shall execute and the Trustee shall authenticate for the Holder a new Security or Securities in an aggregate principal amount equal to the unredeemed portion of the Security surrendered.

If any Security selected for partial redemption is converted in part, the converted portion of such Security shall be deemed to be the portion selected for redemption.

3.08 REPURCHASE AT OPTION OF HOLDER UPON A CHANGE IN CONTROL.

Upon any Change in Control (as defined below) with respect to the Company, each Holder of Securities shall have the right (the "REPURCHASE RIGHT"), at the Holder's option, subject to the rights of the holders of Senior Indebtedness under ARTICLE XI of this Indenture, to require the Company to repurchase all of such Holder's Securities, or a portion thereof which is $1,000 in principal amount or any positive integral multiple thereof, on the date (the "REPURCHASE DATE") that is 30 business days after the date of the Change in Control Notice (as defined below) at the Repurchase Price set forth in PARAGRAPH 8 of the Securities, plus accrued and unpaid interest, if any, to, but excluding, the Repurchase Date, subject to the satisfaction by or on behalf of any Holder of the notice requirement to exercise a Repurchase Right set forth in this SECTION 3.08.

Within 30 business days after the occurrence of a Change in Control of the Company, the Company shall mail to all Holders of record of the Securities a notice (the "CHANGE IN CONTROL NOTICE") of the occurrence of such Change in Control and the Repurchase Right arising as a result thereof. The Company shall deliver a copy of the Change in Control Notice to the Trustee and shall cause a copy to be published at the expense of the Company in THE NEW YORK TIMES

or THE WALL STREET JOURNAL or another newspaper of national circulation. To exercise the Repurchase Right, a Holder of Securities must deliver on or before the close of business on the third business day immediately preceding the Repurchase Date written notice to the Company (or an agent designated by the Company for such purpose), and the Trustee of the Holder's exercise of such

right together with the Securities with respect to which the right is being exercised, duly endorsed for transfer.

Each Change in Control Notice shall state:

(i) the events causing the Change in Control;

(ii) the date of such Change in Control;

(iii) the Repurchase Date;

(iv) the date by which the Repurchase Right must be exercised;

(v) the Repurchase Price, plus the amount of accrued interest to be paid on the Securities to be repurchased;

(vi) the name and address of the Paying Agent and the Conversion Agent;

(vii) a description of the procedure which a Holder must follow to exercise a Repurchase Right;

(viii) that, in order to exercise the Repurchase Right, the Securities are to be surrendered for payment of the Repurchase Price;

(ix) that Holders will be entitled to withdraw their election if the Company (if acting as its own Paying Agent), or the Paying Agent receives, not later than the close of business on the business day immediately preceding the Repurchase Date, or such longer period as may be required by law, a letter or telegram, telex or facsimile transmission (receipt of which is confirmed and promptly followed by a letter) setting forth the name of the Holder, the principal amount of Securities the Holder delivered for purchase and a statement that such Holder is withdrawing his election to have such Securities repurchased, the certificate numbers of such Securities being withdrawn, if applicable, and the principal amount, if any, of the Securities that remain subject to a Change in Control Notice and that Securities with respect to which a Change in Control purchase notice is given by the Holder may be converted, if otherwise convertible, only if the Change in Control purchase notice has been withdrawn in accordance with the terms hereof;

(x) the then existing conversion rate, and any adjustment to the conversion rate that will result from the Change in Control;

(xi) the place or places where such Securities may be surrendered for conversion; and

(xii) the CUSIP number or numbers, as the case may be, of the Securities.

No failure of the Company to give the foregoing notice shall limit any Holder's right to exercise a Repurchase Right.

To exercise a Repurchase Right, a Holder shall deliver to the Company (if it is acting as its own Paying Agent), or to a Paying Agent designated by the Company for such purpose in the Change in Control Notice within the period set forth in the second paragraph of this SECTION 3.08, (i) the Option of Holder To Elect Purchase Notice on the back of the Securities with respect to which the Repurchase Right is being exercised, or any other form of written notice substantially similar to the Option of Holder To Elect Purchase Notice, in each case, duly completed and signed, with appropriate signature guarantee, and (ii) such Securities with respect to which the Repurchase Right is being exercised, duly endorsed for transfer to the Company and the Holder of such Securities shall be entitled to receive from the Company (if it is acting as its own Paying Agent), or such Paying Agent a nontransferable receipt of deposit evidencing such deposit.

In the event a Repurchase Right shall be exercised in accordance with the terms hereof, the Company shall pay or cause to be paid the applicable

Repurchase Price (plus accrued and unpaid interest) with respect to the Securities as to which the Repurchase Right shall have been exercised to the Holder on the Repurchase Date.

On or prior to a Repurchase Date, the Company shall deposit with the Trustee or with a Paying Agent (or, if the Company is acting as its own Paying Agent, segregate and hold in trust in accordance with SECTION 2.04) an amount of money (to be available on the Repurchase Date) sufficient to pay the Repurchase Price (plus accrued and unpaid interest) of all of the Securities which are to be repurchased on that date.

Both the Change in Control Notice and the notice of the Holder to exercise a Repurchase Right having been duly given as specified in this SECTION 3.08, the Securities so to be repurchased shall, on the Repurchase Date, become due and payable at the Repurchase Price applicable thereto (plus accrued and unpaid interest) and from and after such date (unless there shall be a default in the payment of the Repurchase Price) such Securities shall cease to bear interest and shall cease to be convertible. Upon surrender of any such Security for repurchase in accordance with said notice, such Security shall be paid by the Company at the Repurchase Price (plus accrued and unpaid interest).

If any Security shall not be paid upon surrender thereof for repurchase, the principal shall, until paid, bear interest from the Repurchase Date at the rate borne by such Security on the principal amount of such Security and shall continue to be convertible.

Any Security which is to be submitted for repurchase only in part shall be delivered pursuant to this SECTION 3.08 (with, if the Company or the Trustee so requires, due endorsement by, or a written instrument of transfer in form satisfactory to the Company and the Trustee duly

executed by the Holder thereof or its attorney duly authorized in writing), and the Company shall execute, and the Trustee shall authenticate and make available for delivery to the Holder of such Security without service charge, a new Security or Securities, of any authorized denomination as requested by such Holder, of the same tenor and in aggregate principal amount equal to the portion of such Security not submitted for repurchase.

Notwithstanding anything herein to the contrary, (i) if the option granted to Securityholders to require the repurchase of the Securities upon the occurrence of a Change in Control is determined to constitute a tender offer, the Company will comply with all applicable tender offer rules under the Exchange Act, including Rules 13e-4 and 14e-1, and file Schedule TO or any other schedules required under the Exchange Act and (ii) the Company may not purchase Securities at the option of Holders upon a Change in Control if there has occurred and is continuing an Event of Default with respect to the Securities, other than a Default in the payment of the Change in Control purchase price with respect to the Securities.

To the extent that the aggregate amount of cash deposited by the Company pursuant to this SECTION 3.08 exceeds the aggregate Repurchase Price (plus accrued and unpaid interest, if any) of the Securities or portions thereof that the Company is obligated to purchase, then promptly after receipt of payment of the aggregate Repurchase Price, the Trustee or a Paying Agent, as the case may be, shall return any such excess cash to the Company.

As used in this SECTION 3.08 of the Indenture and in the Securities:

A "CHANGE IN CONTROL" of the Company shall be deemed to have occurred at such time as:

(i) any "person" or "group" (as such terms are used for purposes of Sections 13(d) and 14(d) of the Exchange Act), is or becomes the "beneficial owner" (as such term is used in Rule 13d-3 under the Exchange Act), directly or indirectly, of 50% or more of the voting power of the Company's Common Stock or other capital stock into which the Company's Common Stock is reclassified or changed; or

(ii) at any time the following persons cease for any reason to

constitute a majority of the Company's board of directors:

(1) individuals who on the issue date of the convertible notes constituted the Company's board of directors and

(2) any new directors whose election by the Company's board of directors or whose nomination for election by the Company's stockholders was approved by at least a majority of the directors then still in office who were either directors on the issue date of the convertible notes or whose election or nomination for election was previously so approved; or

(iii) the sale, lease or transfer of all or substantially all of the assets of the Company to any "person" or "group" (as such terms are used in Sections 13(d) and 14(d) of the Exchange Act).

However, a Change in Control will not be deemed to have occurred if either:

(X) the last sale price of the Company's Common Stock for any five trading days during the ten trading days immediately preceding the Change in Control is at least equal to 105% of the conversion price in effect on such trading day; or

(Y) in the case of a merger or consolidation, all of the consideration (excluding cash payments for fractional shares and cash payments pursuant to dissenters' appraisal rights) in the merger or consolidation constituting the Change in Control consists of common stock traded on a U.S. national securities exchange or quoted on the NNM (or which will be so traded or quoted when issued or exchanged in connection with such Change in Control) and as a result of such transaction or transactions the Securities become convertible solely into such common stock.

3.09 CONVERSION ARRANGEMENT ON CALL FOR REDEMPTION.

In connection with any redemption of Securities, the Company may arrange, in lieu of redemption, for the purchase and conversion of any Securities called for redemption by an agreement with one or more investment bankers or other purchasers to purchase all or a portion of such Securities by paying to the Trustee in trust for the Holders whose Securities are to be so purchased, on or before the close of business on the redemption date, an amount that, together with any amounts deposited with the Trustee by the Company for redemption of such Securities, is not less than the Redemption Price, together with interest, if any, accrued to the redemption date, of such Securities. Notwithstanding anything to the contrary contained in this ARTICLE III, the obligation of the Company to pay the Redemption Price of such Securities, including all accrued interest, if any, shall be deemed to be satisfied and discharged to the extent such amount is so paid by such purchasers, but no such agreement shall relieve the Company of its obligation to pay such Redemption Price and such accrued interest, if any. If such an agreement is entered into, any Securities not duly surrendered for conversion by the Holders thereof may, at the option of the Company, be deemed, to the fullest extent permitted by law, acquired by such purchasers from such Holders and (notwithstanding anything to the contrary contained in ARTICLE X) surrendered by such purchasers for conversion, all as of immediately prior to the close of business on the redemption date, subject to payment of the above amount as aforesaid. The Trustee shall hold and pay to the Holders whose Securities are selected for redemption any such amount paid to it for purchase and conversion in the same manner as it would moneys deposited with it by the Company for the redemption of Securities. Without the Trustee's prior written consent, no arrangement between the Company and such purchasers for the purchase and conversion of any Securities shall increase or otherwise affect any of the powers, duties, rights, immunities, responsibilities or obligations of the Trustee as set forth in this Indenture, and the Company agrees to indemnify the Trustee from, and hold it harmless against, any and all loss, liability or expense arising out of or in connection with any such arrangement for the purchase and conversion of any Securities between the Company and such purchasers, including the costs and expenses (including reasonable counsel fees and expenses) incurred by the Trustee in the

defense of any claim or liability arising out of or in connection with the exercise or performance of any of its powers, duties, responsibilities or obligations under this Indenture except to the extent arising from its bad faith, willful misconduct or negligence.

IV. COVENANTS

4.01 PAYMENT OF SECURITIES.

The Company shall pay all amounts due with respect to the Securities on the dates and in the manner provided in the Securities. All such amounts shall be considered paid on the date due if the Paying Agent holds (or, if the Company is acting as Paying Agent, if the Company has segregated and holds in trust in accordance with SECTION 2.04) on that date money sufficient to pay the amount then due with respect to the Securities.

The Company shall pay interest on any overdue amount (including, to the extent permitted by applicable law, overdue interest) at the rate borne by the Securities.

4.02 MAINTENANCE OF OFFICE OR AGENCY.

The Company will maintain in the Borough of Manhattan, the City of New York, an office or agency (which may be an office of the Trustee or an affiliate of the Trustee, Registrar or co-Registrar) where Securities may be surrendered for registration of transfer or exchange or conversion and where notices and demands to or upon the Company in respect of the Securities and this Indenture may be served. The Company will give prompt written notice to the Trustee of the location, and any change in the location, of such office or agency (other than a change in the location of the office of the Trustee). If at any time the Company shall fail to maintain any such required office or agency or shall fail to furnish the Trustee with the address thereof, such presentations, surrenders, notices and demands may be made or served at the Corporate Trust Office of the Trustee.

The Company may also from time to time designate one or more other offices or agencies where the Securities may be presented or surrendered for any or all such purposes and may from time to time rescind such designations; PROVIDED, HOWEVER, that no such designation or rescission shall in any manner relieve the Company of its obligation to maintain an office or agency in the Borough of Manhattan, the City of New York for such purposes. The Company will give prompt written notice to the Trustee of any such designation or rescission and of any change in the location of any such other office or agency.

The Company hereby designates the office of the Trustee at 4 New York Plaza, 13th Floor, New York, New York 10004, Attention: Institutional Trust Services, as an agency of the Company in accordance with SECTION 2.03.

4.03 REPORTS.

(A) The Company shall, upon request, provide to any Holder or beneficial owner of Securities or prospective purchaser of Securities that so requests the information required to be delivered pursuant to Rule 144A(d)(4) until such time as the Securities and the underlying

Common Stock have been registered by the Company for resale under the Securities Act pursuant to the Registration Rights Agreement. In addition, the Company will furnish such Rule 144A(d)(4) information if, at any time while the Securities or the Common Stock issuable upon conversion of the Securities are restricted securities within the meaning of the Securities Act, the Company is not subject to the informational requirements of the Exchange Act.

(B) The Company will comply with the provisions of TIA ss. 314(a).

(C) The Company (at its own expense) will deliver to the Trustee within 15

days after the filing of the same with the Commission, copies of the quarterly and annual reports and of the information, documents and other financial reports, if any, which the Company may be required to file with the Commission pursuant to Section 13 or 15(d) of the Exchange Act or which the Company furnishes to its stockholders. In the event the Company is at any time no longer subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act, it shall continue to provide the Trustee with such quarterly and annual reports and other financial reports, if any, which the Company furnishes to its stockholders. Delivery of such reports, information and documents to the Trustee is for informational purposes only and the Trustee's receipt of such shall not constitute constructive notice of any information contained therein or determinable from information contained therein, including the Company's compliance with any of its covenants hereunder (as to which the Trustee is entitled to rely exclusively on the Officers' Certificate).

4.04 COMPLIANCE CERTIFICATE.

The Company shall deliver to the Trustee within 120 days after the end of each fiscal year (beginning with the fiscal year ending on December 31, 2002) of the Company an Officers' Certificate stating whether or not the signers know of any Default or Event of Default by the Company in performing any of its obligations under this Indenture or the Securities. If they do know of any such Default or Event of Default, the certificate shall describe the Default or Event of Default and its status.

4.05 STAY, EXTENSION AND USURY LAWS.

The Company covenants (to the extent that it may lawfully do so) that it will not at any time insist upon, plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay, extension or usury law wherever enacted, now or at any time hereafter in force, which may affect the covenants or the performance of this Indenture; and the Company (in each case, to the extent that it may lawfully do so) hereby expressly waives all benefit or advantage of any such law, and covenants that it will not, by resort to any such law, hinder, delay or impede the execution of any power herein granted to the Trustee, but will suffer and permit the execution of every such power as though no such law has been enacted.

4.06 CORPORATE EXISTENCE.

Subject to ARTICLE V, the Company will do or cause to be done all things necessary to preserve and keep in full force and effect its corporate existence and the corporate existence of each of its subsidiaries in accordance with the respective organizational documents of each subsidiary and the rights (charter and statutory), licenses and franchises of the Company and its

subsidiaries; PROVIDED, HOWEVER, that the Company shall not be required to preserve any such right, license or franchise, or the corporate existence of any subsidiary, if in the judgment of the Board of Directors (i) such preservation or existence is not material to the conduct of business of the Company and (ii) the loss of such right, license or franchise or the dissolution of such subsidiary does not have a material adverse impact on the Holders.

4.07 NOTICE OF DEFAULT.

In the event that any Default or Event of Default shall occur, the Company will give prompt written notice of such Default or Event of Default to the Trustee.

V. SUCCESSORS

5.01 WHEN COMPANY MAY MERGE, ETC.

The Company shall not consolidate with or merge into, or transfer or lease all or substantially all of its properties and assets to, another person unless such other person is a corporation organized under the laws of the United States, any State thereof or the District of Columbia or a corporation or comparable legal entity organized under the laws of a foreign jurisdiction and whose equity securities are listed on a national securities exchange in the

United States or authorized for quotation on the NNM prior to or upon giving effect to the transaction (PROVIDED HOWEVER, that in the case of a transaction where the surviving entity is organized under the laws of a foreign jurisdiction, the Company may not consummate the transaction without first (i) making provision for the satisfaction of its obligations to repurchase the Securities following a change in control, if any, and (ii) obtaining an opinion of tax counsel experienced in such matters to the effect that, under then existing United States federal income tax laws, there would be no material adverse tax consequences to Holders of the Securities resulting from such transaction); such person assumes by supplemental indenture all the obligations of the Company, under the Securities and this Indenture; and immediately after giving effect to the transaction, no Default or Event of Default shall exist.

The Company shall deliver to the Trustee prior to the consummation of the proposed transaction an Officers' Certificate to the foregoing effect and an Opinion of Counsel, which may rely upon such Officers' Certificate as to the absence of Defaults and Events of Default, stating that the proposed transaction and such supplemental indenture will, upon consummation of the proposed transaction, comply with this Indenture.

5.02 SUCCESSOR SUBSTITUTED.

Upon any consolidation or merger or transfer or lease of all or substantially all of the assets of the Company in accordance with SECTION 5.01, the successor person formed by such consolidation or into which the Company is merged or to which such transfer or lease is made shall succeed to, and, except in the case of a lease, be substituted for, and may exercise every right and power of, and shall assume every duty and obligation of, the Company under this Indenture with the same effect as if such successor had been named as the Company herein. When the successor assumes all obligations of the Company hereunder, except in the case of a lease, all obligations of the predecessor shall terminate.

VI. DEFAULTS AND REMEDIES

6.01 EVENTS OF DEFAULT.

An "EVENT OF DEFAULT" occurs if:

(i) the Company defaults in the payment of interest or liquidated damages on any Security when the same becomes due and payable and the default continues for a period of 30 days, whether or not such payment shall be prohibited by the provisions of ARTICLE XI hereof; provided that a failure to make any of the first four scheduled interest payments on any Security within three (3) business days after the applicable interest payment dates will constitute an Event of Default with no additional grace or cure period;

(ii) the Company defaults in the payment of the principal or Repurchase Price or Redemption Price of any Security when the same becomes due and payable, whether on the Maturity Date, upon redemption, on the Repurchase Date or otherwise, whether or not such payment shall be prohibited by the provisions of ARTICLE XI hereof;

(iii) the Company fails to comply with any of its other agreements in the Securities or this Indenture and the default continues for the period and after the notice specified below;

(iv) the Company or any of its Significant Subsidiaries defaults in the payment at the final maturity thereof, after the expiration of any applicable grace period, of principal of, or premium, if any, on indebtedness for money borrowed in the aggregate principal amount then outstanding of $15,000,000 or more, or the acceleration of indebtedness for money borrowed in such aggregate principal amount so that it becomes due and payable prior to the date on which it would otherwise become due and payable and such acceleration is not rescinded or such default is not cured within 30 business days after notice to the Company in accordance with this Indenture;

(v) the Company or any of its Significant Subsidiaries pursuant to or within the meaning of any Bankruptcy Law:

(A) commences a voluntary case,

(B) consents to the entry of an order for relief against it in an involuntary case,

(C) consents to the appointment of a Custodian of it or for all or substantially all of its property, or

(D) makes a general assignment for the benefit of its creditors;

(vi) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that:

(A) is for relief against the Company or any of its Significant Subsidiaries in an involuntary case or proceeding, or adjudicates the Company or any Significant Subsidiary insolvent or bankrupt,

(B) appoints a Custodian of the Company or any of its Significant Subsidiaries for all or substantially all of the property of the Company or any such Significant Subsidiary, as the case may be, or

(C) orders the winding up or liquidation of the Company or any of its Significant Subsidiaries,

and the order or decree remains unstayed and in effect for 90 consecutive days; or

(vii) the Pledge Agreement or the Control Agreement shall cease to be in full force and effect or enforceable in accordance with its terms.

The term "BANKRUPTCY LAW" means Title 11, U.S. Code or any similar Federal or State law for the relief of debtors. The term "CUSTODIAN" means any receiver, trustee, assignee, liquidator or similar official under any Bankruptcy Law.

A default under CLAUSE (III) is not an Event of Default until the Trustee or the Holders of at least 25% in aggregate principal amount of the Securities then outstanding notify the Company and the Trustee of the default and the default is not cured within 60 days after receipt of the notice. The notice must specify the default, demand that it be remedied and state that the notice is a "NOTICE OF DEFAULT". If the Holders of 25% in aggregate principal amount of the outstanding Securities request the Trustee to give such notice on their behalf, the Trustee shall do so. When a default is cured, it ceases.

6.02 ACCELERATION.

If an Event of Default (other than an Event of Default specified in SECTION 6.01(V) or (VI) with respect to the Company) as to which the Trustee has received notice pursuant to the provisions of this Indenture occurs and is continuing, the Trustee by notice to the Company or the Holders of at least 25% in principal amount of the Securities then outstanding by notice to the Company and the Trustee may declare the Securities to be due and payable. Upon such declaration such principal and interest shall be due and payable immediately. If an Event of Default specified in SECTION 6.01(V) or (VI) with respect to the Company occurs, the principal of and accrued interest on all the Securities shall IPSO FACTO become and be immediately due and payable without any declaration or other act on the part of the Trustee or any Securityholder. The Holders of a majority in aggregate principal amount of the Securities then outstanding by written notice to the Trustee may rescind an acceleration and its consequences if the rescission would not conflict with any order or decree and if all existing Events of Default have been cured or waived except nonpayment of principal or interest that has become due solely because of the acceleration and if all amounts due to the Trustee under SECTION 7.07 have been paid.

6.03 OTHER REMEDIES.

Notwithstanding any other provision of this Indenture, if an Event of Default occurs and is continuing, the Trustee may pursue any available remedy by proceeding at law or in equity to collect the payment of amounts due with respect to the Securities or to enforce the performance of any provision of the Securities or this Indenture.

The Trustee may maintain a proceeding even if it does not possess any of the Securities or does not produce any of them in the proceeding. A delay or omission by the Trustee or any Securityholder in exercising any right or remedy accruing upon an Event of Default shall not impair the right or remedy or constitute a waiver of or acquiescence in the Event of Default. All remedies are cumulative.

6.04 WAIVER OF PAST DEFAULTS.

Subject to SECTIONS 6.07 and 9.02, the Holders of a majority in aggregate principal amount of the Securities then outstanding by notice to the Trustee may waive any past Default or Event of Default and its consequences. When a Default or an Event of Default is waived, it is cured and ceases for every purpose of this Indenture.

6.05 CONTROL BY MAJORITY.

The Holders of a majority in aggregate principal amount of the Securities then outstanding may direct the time, method and place of conducting any proceeding for any remedy available to the Trustee or exercising any trust or power conferred on it. However, the Trustee may refuse to follow any direction that conflicts with law or this Indenture, is unduly prejudicial to the rights of other Securityholders or would involve the Trustee in personal liability; PROVIDED that the Trustee may take any other action deemed proper by the Trustee which is not inconsistent with such direction.

6.06 LIMITATION ON SUITS.

Except as provided in SECTION 6.07, a Securityholder may pursue a remedy with respect to this Indenture or the Securities only if:

(i) the Holder gives to the Trustee written notice of a continuing Event of Default;

(ii) the Holders of at least 25% in aggregate principal amount of the Securities then outstanding make a written request to the Trustee to pursue the remedy;

(iii) such Holder or Holders offer and, if requested, provide to the Trustee indemnity satisfactory to the Trustee against any loss, liability or expense;

(iv) the Trustee does not comply with the request within 60 days after receipt of the request and the offer of indemnity; and

(v) during such 60-day period, the Holders of a majority in aggregate principal amount of the Securities then outstanding do not give the Trustee a direction inconsistent with the request.

A Securityholder may not use this Indenture to prejudice the rights of another Securityholder or to obtain a preference or priority over another Securityholder.

6.07 RIGHTS OF HOLDERS TO RECEIVE PAYMENT.

Notwithstanding any other provision of this Indenture, the right of any Holder to receive payment of all amounts due with respect to the Securities, on or after the respective due dates expressed in the Securities, or to bring suit for the enforcement of any such payment on or after such respective dates, shall not be impaired or affected without the consent of the Holder.

Notwithstanding any other provision of this Indenture, the right of any Holder to bring suit for the enforcement of the right to convert the Security shall not be impaired or affected without the consent of the Holder.

6.08 COLLECTION SUIT BY TRUSTEE.

If an Event of Default specified in SECTION 6.01(I) or (II) occurs and is continuing, the Trustee may recover judgment in its own name and as trustee of an express trust against the Company for the whole amount due with respect to the Securities, including any unpaid and accrued interest.

6.09 TRUSTEE MAY FILE PROOFS OF CLAIM.

The Trustee may file such proofs of claim and other papers or documents as may be necessary or advisable in order to have the claims of the Trustee, any predecessor Trustee and the Securityholders allowed in any judicial proceedings relative to the Company or its creditors or properties.

The Trustee may collect and receive any moneys or other property payable or deliverable on any such claims and to distribute the same, and any custodian, receiver, assignee, trustee, liquidator, sequestrator or similar official in any judicial proceeding is hereby authorized by each Holder to make such payments to the Trustee and, in the event that the Trustee shall consent to the making of such payments directly to the Holders, to pay the Trustee any amount due it for the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, and any other amounts due the Trustee under SECTION 7.07.

Nothing herein contained shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Holder any plan of reorganization, arrangement, adjustment or composition affecting the Securities or the rights of any Holder thereof, or to authorize the Trustee to vote in respect of the claim of any Holder in any such proceeding.

6.10 PRIORITIES.

Subject to the provisions of the Pledge Account and ARTICLE XII of this Indenture, if the Trustee collects any money pursuant to this ARTICLE VI, it shall pay out the money in the following order:

First : to the Trustee for amounts due under SECTION 7.07;

Second : to holders of Senior Indebtedness to the extent required by ARTICLE XI;

Third : to Securityholders for all amounts due and unpaid on the Securities, without preference or priority of any kind, according to the amounts due and payable on the Securities; and

Fourth : to the Company.

The Trustee, upon prior written notice to the Company may fix a record date and payment date for any payment by it to Securityholders pursuant to this SECTION 6.10.

6.11 UNDERTAKING FOR COSTS.

In any suit for the enforcement of any right or remedy under this Indenture or in any suit against the Trustee for any action taken or omitted by it as Trustee, a court in its discretion may require the filing by any party litigant in the suit other than the Trustee of an undertaking to pay the costs of the suit, and the court in its discretion may assess reasonable costs, including reasonable attorneys' fees, against any party litigant in the suit, having due regard to the merits and good faith of the claims or defenses made by the party litigant. This SECTION 6.11 does not apply to a suit by the Trustee, a suit by a Holder pursuant to SECTION 6.07 or a suit by Holders of more than 10% in aggregate principal amount of the outstanding Securities.

VII. TRUSTEE

7.01 DUTIES OF TRUSTEE.

(A) If an Event of Default has occurred and is continuing, the Trustee shall exercise such of the rights and powers vested in it by this Indenture, and use the same degree of care and skill in their exercise, as a prudent person would exercise or use under the circumstances in the conduct of his or her own affairs.

(B) Except during the continuance of an Event of Default:

(i) the Trustee need perform only those duties that are specifically set forth in this Indenture and no implied covenants or obligations shall be read into this Indenture against the Trustee; and

(ii) in the absence of bad faith, willful misconduct or negligence on its part, the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon certificates or opinions furnished to the Trustee and conforming to the requirements of this Indenture; but in the case of any such certificates or opinions which by any provision hereof are specifically required to be furnished to the Trustee, the Trustee shall examine the certificates and opinions to determine whether or not they conform to the requirements of this Indenture (but need not confirm or investigate the accuracy of mathematical calculations or other facts stated therein).

(C) The Trustee may not be relieved from liability for its own negligent action, its own negligent failure to act or its own willful misconduct, except that:

(i) the Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer, unless it is proved that the Trustee was negligent in ascertaining the pertinent facts; and

(ii) the Trustee shall not be liable with respect to any action it takes or omits to take in good faith in accordance with a direction received by it pursuant to SECTION 6.05.

(D) Every provision of this Indenture that in any way relates to the Trustee in any of its roles hereunder is subject to the provisions of this SECTION 7.01.

(E) The Trustee shall not be liable for interest on any money received by it except as the Trustee may agree in writing with the Company. Money held in trust by the Trustee need not be segregated from other funds except to the extent required by law.

7.02 RIGHTS OF TRUSTEE.

(A) Subject to SECTION 7.01, the Trustee may conclusively rely on any document believed by it to be genuine and to have been signed or presented by the proper person. The Trustee need not investigate any fact or matter stated in the document; if, however, the Trustee shall determine to make such further inquiry or investigation, it shall be entitled during normal business hours to examine the relevant books, records and premises of the Company, personally or by agent or attorney upon reasonable prior notice.

(B) Before the Trustee acts or refrains from acting, it may require an Officers' Certificate and/or an Opinion of Counsel. The Trustee shall not be liable for any action it takes or omits to take in good faith in reliance on such Officers' Certificate or Opinion of Counsel.

(C) Any request or direction of the Company mentioned herein shall be sufficiently evidenced by a Company Request or Company Order and any resolution of the Board of Directors shall be sufficiently evidenced by a Board Resolution.

(D) The Trustee may consult with counsel and the advice of such counsel or any Opinion of Counsel shall be full and complete authorization and protection

in respect of any action taken, suffered or omitted by it hereunder in good faith and in reliance thereon.

(E) The Trustee may act through agents or attorneys and shall not be responsible for the misconduct or negligence of any agent or attorney appointed with due care.

(F) The Trustee shall not be liable for any action it takes or omits to take in good faith which it believes to be authorized or within its discretion, rights or powers conferred upon it by this Indenture.

(G) Except with respect to SECTION 6.01, the Trustee shall have no duty to inquire as to the performance of the Company with respect to the covenants contained in ARTICLE IV. In addition, the Trustee shall not be deemed to have knowledge of an Event of Default except (i) any Default or Event of Default occurring pursuant to SECTIONS 6.01(I) and 6.01(II) or (ii) any Default or Event of Default of which a Responsible Officer of the Trustee shall have received written notification or obtained actual knowledge. Delivery of reports, information and documents to the Trustee under ARTICLE IV (other than SECTIONS 4.04 and 4.07) is for informational purposes only and the Trustee's receipt of the foregoing shall not constitute constructive notice of any information contained therein or determinable from information contained therein, including the Company's compliance with any of its covenants hereunder (as to which the Trustee is entitled to rely exclusively on Officers' Certificates).

(H) The Trustee shall be under no obligation to exercise any of the rights or powers vested by this Indenture at the request or direction of any of the Holders pursuant to this Indenture unless such Holders shall have offered to the Trustee security or indemnity reasonably satisfactory to the Trustee against the costs, expenses and liabilities which might be incurred by it in compliance with such request or direction.

(I) The rights, privileges, protections, immunities and benefits given to the Trustee, including without limitation, its right to be indemnified, are extended to, and shall be enforceable by, the Trustee in each of its capacities hereunder, and each agent, custodian and other Person employed to act hereunder.

(J) The Trustee may request that the Company deliver an Officers' Certificate setting forth the names of individuals and/or titles of officers authorized at such time to take specified actions pursuant to this Indenture, which Officers' Certificate may be signed by any person authorized to sign an Officers' Certificate, including any person specified as so authorized in any such certificate previously delivered and not superseded.

(K) No provision of this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur any financial liability in the performance of its duties hereunder or in the exercise of any of its rights or powers, if it shall have reasonable grounds to believe that repayment of such funds or adequate indemnity against such risk or liability is not reasonably assured to it.

(L) No permissive power, right or remedy conferred upon the Trustee hereunder shall be construed to impose a duty to exercise such power, right or remedy.

7.03 INDIVIDUAL RIGHTS OF TRUSTEE.

The Trustee in its individual or any other capacity may become the owner or pledgee of Securities and may otherwise deal with the Company or any of its Affiliates with the same rights it would have if it were not Trustee. Any Agent may do the same with like rights. The Trustee, however, must comply with SECTIONS 7.10 and 7.11.

7.04 TRUSTEE'S DISCLAIMER.

The Trustee makes no representation as to the validity, priority or adequacy of this Indenture or the Securities; it shall not be accountable for the Company's use of the proceeds from the Securities; and it shall not be responsible for any statement in the Securities other than its certificate of authentication.

7.05 NOTICE OF DEFAULTS.

If a Default or Event of Default occurs and is continuing as to which the Trustee has received notice pursuant to the provisions of this Indenture, the Trustee shall mail to each Securityholder a notice of the Default or Event of Default within 30 days after it occurs unless such Default or Event of Default has been cured or waived. Except in the case of a Default or Event of Default in payment of any amounts due with respect to any Security, the Trustee may withhold the notice if and so long as it in good faith determines that withholding the notice is in the interests of Securityholders.

7.06 REPORTS BY TRUSTEE TO HOLDERS.

Within 60 days after each May 15 beginning with May 15, 2003, the Trustee shall mail to each Securityholder if required by TIA ss. 313(a) a brief report dated as of such May 15 that complies with TIA ss. 313(c). In such event, the Trustee also shall comply with TIA ss. 313(b).

A copy of each report at the time of its mailing to Securityholders shall be mailed to the Company and filed by the Trustee with the SEC and each stock exchange, if any, on which the Securities are listed. The Company shall promptly notify the Trustee when the Securities are listed on any stock exchange.

7.07 COMPENSATION AND INDEMNITY.

The Company shall pay to the Trustee from time to time such compensation for its services as shall be agreed upon in writing. The Trustee's compensation shall not be limited by any law on compensation of a trustee of an express trust. The Company shall reimburse the Trustee upon request for all reasonable out-of-pocket expenses incurred by it. Such expenses shall include the reasonable compensation and out-of-pocket expenses of the Trustee's agents and counsel.

The Company shall indemnify the Trustee against any and all loss, liability, damage, claim or expense (including the reasonable fees and expenses of counsel and taxes other than those based upon the income of the Trustee) incurred by it in connection with the acceptance or administration of this trust and the performance of its duties hereunder, including the reasonable

costs and expenses of defending itself against any claim (whether asserted by the Company, any Holder or any other Person) or liability in connection with the exercise or performance of any of its powers and duties hereunder. The Company need not pay for any settlement made without its consent. The Trustee shall notify the Company promptly of any claim for which it may seek indemnification. The Company need not reimburse any expense or indemnify against any loss or liability incurred by the Trustee through the Trustee's negligence or willful misconduct.

To secure the Company's payment obligations in this SECTION 7.07, the Trustee shall have a lien prior to the Securities on all money or property held or collected by the Trustee, except that held in trust to pay amounts due on particular Securities.

The indemnity obligations of the Company with respect to the Trustee provided for in this SECTION 7.07 shall survive any resignation or removal of the Trustee.

When the Trustee incurs expenses or renders services after an Event of Default specified in SECTION 6.01(V) or (VI) occurs, the expenses and the compensation for the services are intended to constitute expenses of administration under any Bankruptcy Law.

7.08 REPLACEMENT OF TRUSTEE.

A resignation or removal of the Trustee and appointment of a successor Trustee shall become effective only upon the successor Trustee's acceptance of appointment as provided in this SECTION 7.08.

The Trustee may resign by so notifying the Company in writing 30 business days prior to such resignation. The Holders of a majority in aggregate principal amount of the Securities then outstanding may remove the Trustee by so notifying the Trustee and the Company in writing and may appoint a successor Trustee with the Company's consent. The Company may remove the Trustee if:

(i) the Trustee fails to comply with SECTION 7.10;

(ii) the Trustee is adjudged a bankrupt or an insolvent;

(iii) a receiver or other public officer takes charge of the Trustee or its property; or

(iv) the Trustee becomes incapable of acting.

If the Trustee resigns or is removed or if a vacancy exists in the office of Trustee for any reason, the Company shall promptly appoint a successor Trustee.

If a successor Trustee does not take office within 30 days after the retiring Trustee resigns or is removed, the retiring Trustee (at the Company's expense), the Company or the Holders of at least 10% in aggregate principal amount of the outstanding Securities may petition any court of competent jurisdiction for the appointment of a successor Trustee.

If the Trustee fails to comply with SECTION 7.10, any Holder may petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor Trustee.

A successor Trustee shall deliver a written acceptance of its appointment to the retiring Trustee and to the Company. Thereupon the resignation or removal of the retiring Trustee shall become effective, and the successor Trustee shall have all the rights, powers and duties of the Trustee under this Indenture. The successor Trustee shall mail a notice of its succession to Securityholders. The retiring Trustee shall promptly transfer all property held by it as Trustee to the successor Trustee, subject to the lien provided for in SECTION 7.07.

7.09 SUCCESSOR TRUSTEE BY MERGER, ETC.

If the Trustee consolidates with, merges or converts into, or transfers by sale or otherwise all or substantially all of its corporate trust business to, another corporation, the successor corporation without any further act shall be the successor Trustee, if such successor corporation is otherwise eligible hereunder.

7.10 ELIGIBILITY; DISQUALIFICATION.

There shall at all times be a Trustee hereunder that is a corporation organized and doing business under the laws of the United States of America or of any state thereof that is authorized under such laws to exercise corporate trustee power, that is subject to supervision or examination by federal or state authorities and that has a combined capital and surplus of at least $100 million as set forth in its most recent published annual report of condition. The Trustee shall comply with TIA ss. 310(b).

7.11 PREFERENTIAL COLLECTION OF CLAIMS AGAINST COMPANY.

The Trustee shall comply with TIA ss. 311(a), excluding any creditor relationship listed in TIA ss. 311(b). A Trustee who has resigned or been removed shall be subject to TIA ss. 311(a) to the extent indicated.

VIII. DISCHARGE OF INDENTURE

8.01 TERMINATION OF THE OBLIGATIONS OF THE COMPANY.

The Company may terminate all of its obligations under this Indenture if all Securities previously authenticated and delivered (other than mutilated, destroyed, lost or stolen Securities which have been replaced or paid as provided in SECTION 2.07) have been delivered to the Trustee for cancellation or if:

(i) the Securities mature within one year or all of them are to be called for redemption within one year under arrangements satisfactory to the Trustee for giving the notice of redemption;

(ii) the Company irrevocably deposits in trust with the Trustee money or U.S. Government Obligations sufficient to pay the principal or Redemption Price of and any unpaid and accrued interest on the Securities to maturity or

redemption, as the case may be. Immediately after making the deposit, the Company shall give notice of such event to the Securityholders;

(iii) the Company has paid or caused to be paid all sums then payable by the Company to the Trustee hereunder as of the date of such deposit; and

(iv) the Company has delivered to the Trustee an opinion of counsel and an Officers' Certificate stating that all conditions precedent provided for herein relating to the satisfaction and discharge of this Indenture have been complied with. The Company may make the deposit only during the one-year period and only if ARTICLE XI permits it.

However, the Company's obligations in SECTIONS 2.02, 2.03, 2.04, 2.05, 2.06, 2.07, 2.08, 2.15, 2.16, 2.17, 4.01, 4.02, 7.07, 7.08 and 8.03, ARTICLE VIII and ARTICLE X shall survive until the Securities are no longer outstanding. Thereafter the obligations of the Company in SECTIONS 7.07 and 8.03 shall survive.

After a deposit pursuant to this SECTION 8.01, the Trustee upon request shall acknowledge in writing the discharge of the obligations of the Company under the Securities and this Indenture, except for those surviving obligations specified above.

In order to have money available on a payment date to pay the principal or Redemption Price of and any unpaid and accrued interest on the Securities, the U.S. Government Obligations shall be payable as to principal and any unpaid and accrued interest on or before such payment date in such amounts as will provide the necessary money.

"U.S. GOVERNMENT OBLIGATIONS" means securities that are (i) direct obligations of the United States of America for the payment of which its full faith and credit is pledged or (ii) obligations of a Person controlled or supervised by and acting as an agency or instrumentality of the United States of America the payment of which is unconditionally guaranteed as a full faith and credit obligation by the United States of America, which, in either case, are not callable or redeemable at the option of the issuer thereof at any time prior to the Stated Maturity of the Securities, and shall also include depository receipts issued by a bank or trust company as custodian with respect to any such U.S. Government Obligation or a specific payment of interest on or principal of any such U.S. Government Obligation held by such custodian for the account of the holder of a depository receipt; provided that (except as required by law) such custodian is not authorized to make any deduction from the amount payable to the holder of such depository receipt from any amount received by the custodian in respect of the U.S. Government Obligation or the specific payment of interest on or principal of the U.S. Government Obligation evidenced by such depository receipt.

"STATED MATURITY" means, when used with respect to any Security or any installment of interest thereon, the date specified in such Security as the fixed date on which the principal of such Security or such installment of interest is due and payable.

8.02 APPLICATION OF TRUST MONEY.

The Trustee shall hold in trust money or U.S. Government Obligations deposited with it pursuant to SECTION 8.01. It shall apply the deposited money and the money from U.S. Government Obligations through the Paying Agent and in accordance with this Indenture to the payment of the principal or Redemption Price of and any unpaid and accrued interest on the Securities. Money and securities so held in trust are not subject to the subordination provisions of ARTICLE XI.

8.03 REPAYMENT TO COMPANY.

The Trustee and the Paying Agent shall promptly notify the Company of, and pay to the Company upon the request of the Company, any excess money or securities held by them at any time. The Trustee and the Paying Agent shall pay to the Company upon the written request of the Company any money held by them for the payment of the principal or Redemption Price of and any unpaid and accrued interest that remains unclaimed for two years; PROVIDED, HOWEVER, that the Trustee or such Paying Agent, before being required to make any such repayment, may, at the expense and request of the Company, cause to be published once in a newspaper of general circulation in the City of New York or cause to be mailed to each Holder, notice stating that such money remains and that, after a date specified therein, which shall not be less than 30 days from the date of such publication or mailing, any unclaimed balance of such money then remaining will be repaid to the Company. After payment to the Company, Securityholders entitled to the money must look to the Company for payment as general creditors unless an applicable abandoned property law designates another person and all liability of the Trustee and the Paying Agent shall cease.

8.04 REINSTATEMENT.

If the Trustee or Paying Agent is unable to apply any money or U.S. Government Obligations in accordance with SECTIONS 8.01 and 8.02 by reason of any legal proceeding or by reason of any order or judgment of any court or governmental authority enjoining, restraining or otherwise prohibiting such application, the obligations of the Company under this Indenture and the Securities shall be revived and reinstated as though no deposit had occurred pursuant to SECTIONS 8.01 and 8.02 until such time as the Trustee or Paying Agent is permitted to apply all such money or U.S. Government Obligations in accordance with SECTIONS 8.01 and 8.02; PROVIDED, HOWEVER, that if the Company has made any payment of amounts due with respect to any Securities because of the reinstatement of its obligations, the Company shall be subrogated to the rights of the Holders of such Securities to receive such payment from the money or U.S. Government Obligations held by the Trustee or Paying Agent.

IX. AMENDMENTS

9.01 WITHOUT CONSENT OF HOLDERS.

The Company, with the consent of the Trustee, may amend or supplement this Indenture or the Securities without notice to or the consent of any Securityholder:

(i) to cure any ambiguity, inconsistency or other defect in this Indenture;

(ii) to comply with SECTIONS 5.01 and 10.12;

(iii) to make any changes or modifications to this Indenture necessary in connection with the registration of the Securities under the Securities Act and the qualification of the Indenture under the TIA;

(iv) to secure the obligations of the Company in respect of the Securities; or

(v) to add to the covenants of the Company described in this Indenture

for the benefit of Securityholders or to surrender any right or power conferred upon the Company.

Notwithstanding the foregoing, no supplemental indenture pursuant to this SECTION 9.01 may be entered into without the consent of the holders of a majority in principal amount of the Securities if such supplemental indenture would materially and adversely affect the interests of the Holders of the Securities.

9.02 WITH CONSENT OF HOLDERS.

The Company, with the consent of the Trustee, may amend or supplement this Indenture or the Securities without notice to any Securityholder but with the written consent of the Holders of at least a majority in aggregate principal amount of the outstanding Securities. Subject to SECTION 6.07, the Holders of a majority in aggregate principal amount of the outstanding Securities may waive compliance by the Company with any provision of this Indenture or the Securities without notice to any other Securityholder. However, without the consent of each Securityholder affected, an amendment, supplement or waiver, including a waiver pursuant to SECTION 6.04, may not:

(i) reduce the amount of Securities whose Holders must consent to an amendment, supplement or waiver;

(ii) reduce the rate of or change the time for payment of interest (including any liquidated damages) on any Security;

(iii) reduce the principal, Redemption Price or Repurchase Price of or change the stated maturity of any Security;

(iv) make any Security payable in money or securities other than as stated in such Security;

(v) waive a default in the payment of any amount due with respect to any Security; or

(vi) make any change that adversely affects the right to convert, or receive payment with respect to, any Security or the right to institute suit for the

enforcement of any payment with respect to, or conversion of, any Security or the right to require the Company to repurchase any of the Securities upon a Change in Control.

An amendment under this SECTION 9.02 may not make any change that adversely affects the rights under ARTICLE XI of any holder of Senior Indebtedness unless the holders of such Senior Indebtedness pursuant to its terms consent to the change.

Promptly after an amendment under SECTION 9.01 or this SECTION 9.02 becomes effective, the Company shall mail to Securityholders a notice briefly describing the amendment. Any failure of the Company to mail such notice shall not in any way impair or affect the validity of such amendment, supplement or waiver.

It shall not be necessary for the consent of the Holders under this SECTION 9.02 to approve the particular form of any proposed amendment or supplement, but it shall be sufficient if such consent approves the substance thereof.

9.03 COMPLIANCE WITH TRUST INDENTURE ACT.

Every amendment, waiver or supplement to this Indenture or the Securities shall comply with the TIA as then in effect.

9.04 REVOCATION AND EFFECT OF CONSENTS.

Until an amendment, supplement or waiver becomes effective, a consent to it by a Holder is a continuing consent by the Holder and every subsequent Holder of a Security or portion of a Security that evidences the same debt as the consenting Holder's Security, even if notation of the consent is not made on any

Security. However, any such Holder or subsequent Holder may revoke the consent as to its Security or portion of a Security if the Trustee receives the notice of revocation before the date the amendment, supplement or waiver becomes effective. An amendment, supplement or waiver becomes effective in accordance with its terms and thereafter binds every Securityholder.

After an amendment, supplement or waiver becomes effective with respect to the Securities, it shall bind every Securityholder unless it makes a change described in SECTION 9.02. In that case, the amendment, supplement or waiver shall bind each Holder of a Security who has consented to it and, provided that notice of such amendment, supplement or waiver is reflected on a Security that evidences the same debt as the consenting Holder's Security, every subsequent Holder of a Security or portion of a Security that evidences the same debt as the consenting Holder's Security.

9.05 NOTATION ON OR EXCHANGE OF SECURITIES.

If an amendment, supplement or waiver changes the terms of a Security, the Trustee may require the Holder of the Security to deliver it to the Trustee. The Trustee may place an appropriate notation on the Security as directed and prepared by the Company about the changed terms and return it to the Holder. Alternatively, if the Company so determines, the Company in

exchange for the Security shall issue and the Trustee shall authenticate a new Security that reflects the changed terms.

9.06 TRUSTEE PROTECTED.

The Trustee need not sign any amendment, supplement or waiver authorized pursuant to this ARTICLE IX that adversely affects the Trustee's rights, duties, liabilities or immunities. The Trustee shall be entitled to receive and conclusively rely upon an Opinion of Counsel and an Officers' Certificate that any supplemental indenture, amendment or waiver is permitted or authorized pursuant to the Indenture.

X. CONVERSION

10.01 CONVERSION PRIVILEGE; RESTRICTIVE LEGENDS.

A Holder of a Security may convert such Security into Common Stock at any time during the period stated in PARAGRAPH 9 of the Securities. The initial conversion rate is stated in PARAGRAPH 9 of the Securities. The conversion rate is subject to adjustment in accordance with SECTIONS 10.06 through 10.12.

A Holder may convert a portion of the principal of such Security if the portion is $1,000 principal amount or a positive integral multiple of $1,000 principal amount. Provisions of this Indenture that apply to conversion of all of a Security also apply to conversion of a portion of it.

Any shares issued upon conversion of a Security shall bear the Private Placement Legend until after the second anniversary of the later of the issue date for the Securities and the last date on which the Company or any Affiliate of the Company was the owner of such shares or the Security (or any predecessor security) from which such shares were converted (or such shorter period of time as permitted by Rule 144(k) under the Securities Act or any successor provision thereunder) (or such longer period of time as may be required under the Securities Act or applicable state securities laws in the Opinion of Counsel for the Company, unless otherwise agreed by the Company and the Holder thereof).

10.02 CONVERSION PROCEDURE.

To convert a Security, a Holder must satisfy the requirements in PARAGRAPH 9 of the Securities. The date on which the Holder satisfies all those requirements is the conversion date. As soon as practicable following the conversion date, the Company shall deliver to the Holder through the Conversion Agent a certificate for the number of full shares of Common Stock issuable upon the conversion and a check in lieu of any fractional share. The person in whose name the certificate is registered shall be treated as a stockholder of record on and after the conversion date.

Except as described below and in the Registration Rights Agreement with respect to the Liquidated Damages Amount (as defined therein), no payment or adjustment will be made for accrued interest on, or liquidated damages with respect to, a converted Security or for dividends on any Common Stock issued on or prior to conversion. If any Holder surrenders a Security for

conversion after the close of business on the record date for the payment of an installment of interest and prior to the opening of business on the next interest payment date, then, notwithstanding such conversion, the interest payable on such interest payment date shall be paid to the Holder of such Security on such record date; PROVIDED, HOWEVER, that such Security, when surrendered for conversion, must be accompanied by payment to the Trustee on behalf of the Company of an amount equal to the interest payable on such interest payment date on the portion so converted; PROVIDED, FURTHER, HOWEVER, that such payment to the Trustee described in the immediately preceding proviso shall not be required in connection with any conversion of a Security called for redemption pursuant to SECTION 3.04 hereof on a redemption date that is after a record date for the payment of interest and on or before the day that is one business day following the corresponding interest payment date.

If a Holder converts more than one Security at the same time, the number of full shares issuable upon the conversion shall be based on the total principal amount of the Securities converted.

Upon surrender of a Security that is converted in part the Trustee shall authenticate for the Holder a new Security equal in principal amount to the unconverted portion of the Security surrendered.

If the last day on which a Security may be converted is a Legal Holiday in a place where a Conversion Agent is located, the Security may be surrendered to that Conversion Agent on the next succeeding day that is not a Legal Holiday.

10.03 FRACTIONAL SHARES.

The Company will not issue fractional shares of Common Stock upon conversion of Securities and instead will deliver a check in an amount equal to the value of such fraction computed on the basis of the last sale price regular way of the Common Stock as reported on the NNM (or if not listed for trading thereon, as reported on such national securities exchange or on the principal automated quotation system on which the Common Stock is listed or admitted to trading) at the close of business on the date of conversion or if there is no such reported sale on the day in question, on the basis of the average of the closing bid and asked quotations regular way as so reported on the NNM (or if not listed for trading thereon, on the national securities exchange or on the principal automated quotation system on which the Common Stock is listed or admitted to trading) for such day. If on the date of conversion, the Common Stock is not listed on the NNM or on any national securities exchange, the amount shall be computed on the basis of the average of the high bid and low asked quotations regular way on the day in question in the over-the-counter market as reported by the National Association of Securities Dealers Automated Quotation System, or if not so quoted, as reported by National Quotation Bureau, Incorporated, or a similar organization. If on the date of conversion, the Common Stock is not quoted by any such organization, the fair value of such Common Stock on such day, as reasonably determined in good faith by the Board of Directors shall be used.

10.04 TAXES ON CONVERSION.

If a Holder converts its Security, the Company shall pay any documentary, stamp or similar issue or transfer tax due on the issue of shares of Common Stock upon the conversion. However, the Holder shall pay any such tax which is due because the shares are issued in a name other than the Holder's name. The Conversion Agent may refuse to deliver the certificate representing the Common Stock being issued in a name other than the Holder's name until the Conversion

Agent receives a sum sufficient to pay any tax which will be due because the shares are to be issued in a name other than the Holder's name. Nothing herein shall preclude any tax withholding required by law or regulation.

10.05 COMPANY TO PROVIDE STOCK.

The Company shall reserve out of its authorized but unissued Common Stock or Common Stock held in its treasury enough shares of Common Stock to permit the conversion of all of the Securities.

All shares of Common Stock which may be issued upon conversion of the Securities shall be validly issued, fully paid and non-assessable.

The Company will endeavor to comply with all securities laws regulating the offer and delivery of shares of Common Stock upon conversion of Securities and will endeavor to list such shares on each national securities exchange or automated quotation system on which the Common Stock is listed.

10.06 ADJUSTMENT OF CONVERSION RATE.

The conversion rate shall be subject to adjustment from time to time as follows:

(a) In case the Company shall (1) pay a dividend in shares of Common Stock to all holders of Common Stock, (2) make a distribution in shares of Common Stock to all holders of Common Stock, (3) subdivide the outstanding shares of Common Stock into a greater number of shares of Common Stock or (4) combine the outstanding shares of Common Stock into a smaller number of shares of Common Stock, the conversion rate in effect immediately prior to such action shall be adjusted so that the holder of any Security thereafter surrendered for conversion shall be entitled to receive the number of shares of Common Stock which he would have owned immediately following such action had such Securities been converted immediately prior thereto. Any adjustment made pursuant to this SECTION 10.06(A) shall become effective immediately after the record date in the case of a dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision or combination.

(b) In case the Company shall issue rights or warrants to all or substantially all holders of Common Stock, as the case may be, entitling them (for a period commencing no earlier than the record date for the determination of Holders of Common Stock entitled to receive such rights or warrants and expiring not more than 60 days after such record date) to subscribe for or purchase shares

of Common Stock (or securities convertible into Common Stock), at a price per share less than the then current market price (as determined pursuant to SECTION 10.06(G) below) of Common Stock on such record date, the conversion rate shall be increased by multiplying the conversion rate in effect immediately prior to such record date by a fraction of which the numerator shall be the number of shares of Common Stock outstanding on such record date, plus the number of shares of Common Stock so offered for subscription or purchase, and the denominator of which shall be the number of shares of Common Stock outstanding at the close of business on such record date plus the number of shares of Common Stock which the aggregate of the offering price of the total number of shares of Common Stock so offered for subscription or purchase would purchase at such current market price. Such adjustments shall become effective immediately after such record date.

(c) In case the Company shall distribute to all or substantially all holders of Common Stock shares of capital stock of the Company other than Common Stock, evidences of indebtedness or other assets (other than cash dividends out of current or retained earnings), or shall distribute to all or substantially all holders of Common Stock rights or warrants to subscribe for securities (other than those referred to in SECTION 10.06(B) above), then in each such case the conversion rate shall be increased by multiplying the conversion rate in effect immediately prior to the close of business on the record date for the determination of shareholders entitled

to such distribution by a fraction of which the numerator shall be the current market price of Common Stock (determined as provided in SUBSECTION (G) below), on such date and the denominator shall be such current market price less the fair market value (as determined by the Board of Directors whose determination shall be conclusive and described in a Board Resolution) on such date of the portion of the evidences of indebtedness, shares of capital stock, cash and other assets to be distributed or of such subscription rights or warrants applicable to one share of Common Stock, such increase to become effective immediately prior to the opening of business on the day following such record date. Notwithstanding the foregoing, in the event that the Company shall distribute rights or warrants (other than those referred to in SECTION 10.06(B) above) ("RIGHTS") PRO RATA to holders of Common Stock, the Company may, in lieu of making any adjustment pursuant to this SECTION 10.06(C), make proper provision so that each Holder of a Security who converts such Security (or any portion thereof) after the record date for such distribution and prior to the expiration or redemption of the Rights shall be entitled to receive upon such conversion, in addition to the shares of Common Stock issuable upon such conversion (the "CONVERSION SHARES"), a number of Rights to be determined as follows: (i) if such conversion occurs on or prior to the date for the distribution to the holders of Rights of separate certificates evidencing such Rights (the "DISTRIBUTION DATE"), the same number of Rights to which a holder of a number of shares of Common Stock equal to the number of shares of Conversion Shares is entitled at the time of such conversion in accordance with the terms and provisions of and applicable to the Rights; and (ii) if such conversion occurs after the Distribution Date, the same number of Rights to which a holder of the number

of shares of Common Stock into which the principal amount of the Security so converted was convertible immediately prior to the Distribution Date would have been entitled on the Distribution Date in accordance with the terms and provisions of and applicable to the Rights.

In the event that the Company has a stockholders' rights plan in effect ("RIGHTS PLAN"), upon conversion of the Securities into Common Stock, the Holders will receive, in addition to the Common Stock, the rights described therein (whether or not the rights have separated from the Common Stock at the time of conversion), subject to the limitations set forth in the Rights Plan. In the event that the Company implements a Rights Plan after the date hereof, the Company shall provide that the Holders will receive, in addition to the Common Stock, the rights described therein upon conversion of the Securities (whether or not the rights have separated from the Common Stock prior to the time of conversion), subject to the limitations set forth in the Rights Plan. Any distribution of rights or warrants pursuant to a Rights Plan complying with the requirements set forth in the two preceding sentences of this paragraph shall not constitute a distribution of rights or warrants pursuant to this SECTION 10.06(C).

(d) In case the Company shall, by dividend or otherwise, at any time make a distribution (the "TRIGGERING DISTRIBUTION," and the amount of the Triggering Distribution, together with the sum of (w) and (x) below, the "COMBINED AMOUNT") to all or substantially all holders of its Common Stock of cash (including any distributions of cash out of current or retained earnings of the Company, but excluding any cash that is distributed as part of a distribution requiring a conversion rate adjustment pursuant to SUBSECTION (C) above or SUBSECTION (E) below) in an aggregate amount that, together with the sum of (w) the aggregate amount of any cash and the fair market value (as determined in good faith by the Board of Directors, whose determination shall be conclusive thereof and described in a Board Resolution), as of the expiration of the tender or exchange offer referred to below, of any other consideration payable in respect of any tender or exchange offer by the Company or a subsidiary of the Company for all or any portion of the Common Stock consummated within the 12 months preceding the date of payment of the Triggering Distribution and in respect of which no conversion rate adjustment has been made pursuant to this SECTION 10.06, and (x) the aggregate amount of all other cash distributions to all or substantially all holders of Common Stock made within the 12 months preceding the date of payment of the Triggering Distribution and in respect of which no conversion rate adjustment has been made pursuant to this

SECTION 10.06, exceeds 10% of the product of the current market price per share (as determined in accordance with SUBSECTION (G) of this SECTION 10.06) of the Common Stock on the close of business, New York City time, on the business day (the "DISTRIBUTION DECLARATION DATE") immediately preceding the day on which the Triggering Distribution is declared by the Company and the number of shares of Common Stock outstanding on the Distribution Declaration Date (excluding shares held in the treasury of the Company), the conversion rate shall be adjusted by multiplying the conversion rate in effect immediately prior to the effectiveness of the conversion rate adjustment contemplated by this SUBSECTION (D) by a fraction (y) the numerator of which shall be such current market price per share of Common

Stock and (z) the denominator of which shall be (I) such current market price per share of Common Stock less (II) the number obtained by dividing the Combined Amount by such number of shares of Common Stock outstanding. Such adjustment shall become effective immediately prior to the opening of business on the day following the Distribution Declaration Date.

(e) In case a tender offer or exchange offer made by the Company or any of its subsidiaries for all or any portion of the Common Stock shall expire and such tender offer or exchange offer (as amended upon the expiration thereof) shall require the payment to stockholders (based on the acceptance (up to any maximum specified in the terms of the tender offer or exchange offer) of Purchased Shares (as defined below)) of an aggregate consideration having a fair market value (as determined by the Board of Directors, whose determination shall be conclusive and set forth in a Board Resolution) that combined together with:

(1) the aggregate of the cash plus the fair market value (as determined by the Board of Directors, whose determination shall be conclusive and set forth in a Board Resolution), as of the expiration of such tender offer or exchange offer, of consideration payable in respect of any other tender offers or exchange offers, by the Company or any of its subsidiaries for all or any portion of the Common Stock expiring within the 12 months preceding the expiration of such tender offer or exchange offer and in respect of which no adjustment pursuant to this SECTION 10.06 has been made, and

(2) the aggregate amount of any distributions to all or substantially all holders of the Company's Common Stock made exclusively in cash within the 12 months preceding the expiration of such tender offer or exchange offer and in respect of which no adjustment pursuant to this SECTION 10.06 has been made,

exceeds 10% of the product of the current market price per share (as determined in accordance with subsection (g) of this SECTION 10.06) as of the last time (the "EXPIRATION TIME") tenders or exchanges could have been made pursuant to such tender offer or exchange offer (as it may be amended) times the number of shares of Common Stock outstanding (including any tendered shares or exchanged shares) at the Expiration Time,

then, and in each such case, immediately prior to the opening of business on the day after the date of the Expiration Time, the conversion rate shall be adjusted by multiplying the conversion rate in effect immediately prior to the close of business on the date of the Expiration Time by a fraction:

(i) the numerator of which shall be the sum of (x) the fair market value (determined as aforesaid) of the aggregate consideration payable to stockholders based on the acceptance (up to any

maximum specified in the terms of the tender offer or exchange offer)

of all shares validly tendered or exchanged and not withdrawn as of the Expiration Time (the shares deemed so accepted, up to any such maximum, being referred to as the "PURCHASED SHARES") and (y) the product of the number of shares of Common Stock outstanding (less any Purchased Shares) at the Expiration Time and the current market price of the Common Stock as of the Expiration Time; and

(ii) the denominator of which shall be the number of shares of Common Stock outstanding (including any tendered or exchanged shares) at the Expiration Time multiplied by the current market price of the Common Stock as of the Expiration Time.

Such adjustment (if any) shall become effective immediately prior to the opening of business on the day following the Expiration Time. In the event that the Company is obligated to purchase shares pursuant to any such tender offer or exchange offer, but the Company is permanently prevented by applicable law from effecting any such purchases or all such purchases are rescinded, the conversion rate shall again be adjusted to be the conversion rate which would then be in effect if such tender offer or exchange offer had not been made. If the application of this SECTION 10.06(E) to any tender offer or exchange offer would result in a decrease in the conversion rate, no adjustment shall be made for such tender offer or exchange offer under this SECTION 10.06(E).

(f) In addition to the foregoing adjustments in subsections (a), (b), (c), (d) and (e) above, the Company, from time to time and to the extent permitted by law, may increase the conversion rate by any amount for at least 20 days or such longer period as may be required by law, if the Board of Directors of the Company has made a determination, which determination shall be conclusive, that such increase would be in the best interests of the Company, provided that the effective conversion price is not less than the par value of a share of Common Stock. The Company shall give notice to the Trustee and cause notice of such increase to be mailed to each Holder of Securities at such Holder's address as the same appears on the registry books of the Registrar, at least 15 days prior to the date on which such increase commences. Such conversion rate increase shall be irrevocable during such period.

(g) For the purpose of any computation under subsections (a), (b), (c), (d) and (e) above of this SECTION 10.06, the current market price per share of Common Stock on the date fixed for determination of the stockholders entitled to receive the issuance or distribution requiring such computation (the "DETERMINATION DATE") shall be deemed to be the average of the Daily Market Prices for the ten consecutive trading days immediately preceding the Determination Date; PROVIDED, HOWEVER, that (i) if the "ex" date for any event (other than the issuance or distribution requiring such computation) that requires an adjustment to the conversion rate pursuant to subsection (a), (b), (c), (d) or (e)

above occurs on or after the tenth trading day prior to the Determination Date and prior to the "ex" date for the issuance or distribution requiring such computation, the Daily Market Price for each trading day prior to the "ex" date for such other event shall be adjusted by multiplying such Daily Market Price by the reciprocal of the fraction by which the conversion rate is so required to be adjusted as a result of such other event, (ii) if the "ex" date for any event (other than the issuance or distribution requiring such computation) that requires an adjustment to the conversion rate pursuant to subsection (a), (b), (c), (d) or (e) above occurs on or after the "ex" date for the issuance or distribution requiring such computation and on or prior to the Determination Date, the Daily Market Price for each business day on and after the "ex" date for such other event shall be adjusted by multiplying such Daily Market Price by the same fraction by which the conversion rate is so required to be adjusted as a result of such other event, and (iii) if the "ex" date for the issuance or distribution requiring such computation is on or prior to the Determination Date, after taking into account any adjustment required pursuant to clause (i) or (ii) of this proviso, the Daily Market Price for each trading day on and after the "ex" date shall be adjusted by adding thereto the amount of any cash and the fair market value (as determined by

the Board of Directors in a manner consistent with any determination of such value for the purposes of this SECTION 10.06, whose determination shall be conclusive and described in a Resolution of the Board of Directors) of the evidences of indebtedness, shares of capital stock or other securities or assets being distributed (in the distribution requiring such computation) applicable to one share of Common Stock as of the close of business on the day before such "ex" date. For the purpose of any computation under SUBSECTION (E) of this SECTION 10.06, the current market price per share of Common Stock at the expiration time for the tender offer requiring such computation shall be deemed to be the average of the Daily Market Price for the ten consecutive trading days commencing on the business day immediately following the expiration time of such tender offer (the "COMMENCEMENT DATE"); PROVIDED, HOWEVER, that if the "ex" date for any event (other than the tender offer requiring such computation) that requires an adjustment to the conversion rate pursuant to subsection (a), (b), (c), (d) or (e) above occurs on or after the expiration time for the tender offer requiring such computation and prior to the day in question, the Daily Market Price for each trading day on or after to the "ex" date for such other event shall be adjusted by multiplying such Daily Market Price by the same fraction by which the conversion rate is so required to be adjusted as a result of such other event. For purposes of this subsection, the term "ex" date, (i) when used with respect to any issuance or distribution, means the first date on which the Common Stock trades regular way on the relevant exchange or in the relevant market from which the Daily Market Price was obtained without the right to receive such issuance or distribution, (ii) when used with respect to any subdivision or combination of shares of Common Stock, means the first date on which the Common Stock trades regular way on such exchange or in such market after the time at which such subdivision or combination becomes effective, and (iii) when used with respect to any tender offer means the first date on which the Common Stock trades regular

way on such exchange or in such market after the expiration time of such tender offer (as it may be amended or extended).

10.07 NO ADJUSTMENT.

No adjustment in the conversion rate shall be required until cumulative adjustments amount to 1% or more of the conversion rate as last adjusted; PROVIDED, HOWEVER, that any adjustments which by reason of this SECTION 10.07 are not required to be made shall be carried forward and taken into account in any subsequent adjustment. All calculations under this ARTICLE X shall be made to the nearest cent or to the nearest one-hundredth of a share, as the case may be. No adjustment need be made for rights to purchase Common Stock pursuant to a Company plan for reinvestment of dividends or interest. No adjustment need be made for a change in the par value of the Common Stock.

If any rights, options or warrants issued by the Company as described in SECTION 10.06 are only exercisable upon the occurrence of certain triggering events, then the conversion rate will not be adjusted as provided in SECTION 10.06 until the earliest of such triggering event occurs. Upon the expiration or termination of any rights, options or warrants without the exercise of such rights, options or warrants, the conversion rate then in effect shall be adjusted immediately to the conversion rate which would have been in effect at the time of such expiration or termination had such rights, options or warrants, to the extent outstanding immediately prior to such expiration or termination, never been issued.

No adjustment need be made for a transaction referred to in this ARTICLE X if Securityholders are to participate in the transaction without conversion on a basis and with notice that the Board of Directors determines to be fair and appropriate in light of the basis and notice on which holders of Common Stock participate in the transaction.

10.08 OTHER ADJUSTMENTS.

In the event that, as a result of an adjustment made pursuant to SECTION 10.06 hereof, the Holder of any Security thereafter surrendered for conversion shall become entitled to receive any shares of Capital Stock other than shares

of Common Stock, thereafter the conversion rate of such other shares so receivable upon conversion of any Security shall be subject to adjustment from time to time in a manner and on terms as nearly equivalent as practicable to the provisions with respect to Common Stock contained in this ARTICLE X.

10.09 ADJUSTMENTS FOR TAX PURPOSES.

The Company may make such increases in the conversion rate, in addition to those required by SECTION 10.06 hereof, as it determines to be advisable in order that any stock dividend, subdivision of shares, distribution or rights to purchase stock or securities or distribution of securities convertible into or exchangeable for stock made by the Company or to its stockholders will not be taxable to the recipients thereof.

10.10 NOTICE OF ADJUSTMENT.

Whenever the conversion rate is adjusted, the Company shall promptly mail to Holders at the addresses appearing on the Registrar's books a notice of the adjustment and file with the Trustee an Officers' Certificate briefly stating the facts requiring the adjustment and the manner of computing it. The certificate shall be conclusive evidence of the correctness of such adjustment.

10.11 NOTICE OF CERTAIN TRANSACTIONS.

In the event that:

(1) the Company takes any action which would require an adjustment in the conversion rate;

(2) the Company takes any action that would require a supplemental indenture pursuant to SECTION 10.12; or

(3) there is a dissolution or liquidation of the Company;

a Holder of a Security may wish to convert such Security into shares of Common Stock prior to the record date for or the effective date of the transaction so that he may receive the rights, warrants, securities or assets which a holder of shares of Common Stock on that date may receive. Therefore, the Company shall mail to Holders at the addresses appearing on the Registrar's books and the Trustee a notice stating the proposed record or effective date, as the case may be, of any transaction referred to in CLAUSE (1), (2) or (3) of this SECTION 10.11. The Company shall mail such notice at least 15 days before such date; however, failure to mail such notice or any defect therein shall not affect the validity of any transaction referred to in CLAUSE (1), (2) or (3) of this SECTION 10.11.

10.12 EFFECT OF RECLASSIFICATIONS, CONSOLIDATIONS, MERGERS, BINDING SHARE EXCHANGES OR SALES ON CONVERSION PRIVILEGE.

If any of the following shall occur, namely: (i) any reclassification or change in the Common Stock issuable upon conversion of Securities (other than a change in par value, or from par value to no par value, or from no par value to par value, or as a result of a subdivision or combination), (ii) any consolidation, merger or binding share exchange to which the Company is a party other than a merger in which the Company is the continuing corporation and which does not result in any reclassification of, or change (other than a change in name, or par value, or from par value to no par value, or from no par value to par value or as a result of a subdivision or combination) in, the Common Stock, or (iii) any sale or conveyance of all or substantially all of the property or business of the Company as an entirety, then the Company or such successor or purchasing corporation, as the case may be, shall, as a condition precedent to such reclassification, change, consolidation, merger, binding share exchange, sale or conveyance, execute and deliver to the Trustee a supplemental indenture in form reasonably satisfactory to the Trustee providing that the Holder of each Security then outstanding shall have the right to convert such Security into the kind and amount of shares of stock and other securities and property (including cash) receivable upon such reclassification, change, consolidation, merger,

binding share exchange, sale or conveyance by a holder of the number of shares of Common Stock, deliverable upon conversion of such Security immediately prior to such reclassification, change, consolidation, merger, binding share exchange, sale or conveyance. Such supplemental indenture shall provide for adjustments of the conversion rate which shall be as nearly equivalent as may be practicable to the adjustments of the conversion rate provided for in this ARTICLE X. The foregoing, however, shall not in any way affect the right a Holder of a Security may otherwise have, pursuant to CLAUSE (II) of the last sentence of SUBSECTION (C) of SECTION 10.06 hereof, to receive Rights upon conversion of a Security. If, in the case of any such consolidation, merger, binding share exchange, sale or conveyance, the stock or other securities and property (including cash) receivable thereupon by a holder of Common Stock includes shares of stock or other securities and property of a corporation other than the successor or purchasing corporation, as the case may be, in such consolidation, merger, binding share exchange, sale or conveyance, then such supplemental indenture shall also be executed by such other corporation and shall contain such additional provisions to protect the interests of the Holders of the Securities as the Board of Directors shall reasonably consider necessary by reason of the foregoing. The provision of this SECTION 10.12 shall similarly apply to successive consolidations, mergers, binding share exchanges, sales or conveyances.

In the event the Company shall execute a supplemental indenture pursuant to this SECTION 10.12, the Company shall promptly file with the Trustee an Officers' Certificate briefly stating the reasons therefor, the kind or amount of shares of stock or securities or property (including cash) receivable by Holders of the Securities upon the conversion of their Securities after any such reclassification, change, consolidation, merger, binding share exchange, sale or conveyance and any adjustment to be made with respect thereto.

10.13 TRUSTEE'S DISCLAIMER.

The Trustee has no duty to determine when an adjustment under this ARTICLE X should be made, how it should be made or what such adjustment should be, but may accept as conclusive evidence of the correctness of any such adjustment, and shall be protected in relying upon the Officers' Certificate with respect thereto which the Company is obligated to file with the Trustee pursuant to SECTION 10.10 hereof. The Trustee makes no representation as to the validity or value of any securities or assets issued upon conversion of Securities, and the Trustee shall not be responsible for the failure by the Company to comply with any provisions of this ARTICLE X.

The Trustee shall not be under any responsibility to determine the correctness of any provisions contained in any supplemental indenture executed pursuant to SECTION 10.12, but may accept as conclusive evidence of the correctness thereof, and shall be protected in relying upon, the Officers' Certificate with respect thereto which the Company is obligated to file with the Trustee pursuant to SECTION 10.12 hereof.

XI. SUBORDINATION

11.01 AGREEMENT TO SUBORDINATE.

The Company agrees, and each Securityholder by accepting a Security agrees, that the payment of all amounts due with respect to the Securities is subordinated in right of payment

(except as set forth in this ARTICLE XI with respect to Permitted Payments), to the extent and in the manner provided in this ARTICLE XI, to the prior payment in full of all Senior Indebtedness and that the subordination is for the benefit of the holders of Senior Indebtedness.

Money and securities held in trust pursuant to ARTICLE VIII are not subject to the subordination provisions of this ARTICLE XI.

11.02 CERTAIN DEFINITIONS.

"INDEBTEDNESS" means, with respect to any person, the principal of, and premium, if any, and interest on (a) all indebtedness of such person for borrowed money (including all indebtedness evidenced by notes, bonds, debentures or other securities sold by such person for money), (b) all obligations incurred by such person in the acquisition (whether by way of purchase, merger, consolidation or otherwise and whether by such person or another person) of any business, real property or other assets (except inventory and related items acquired in the ordinary course of the conduct of the acquiror's usual business), (c) guarantees by such person of indebtedness described in clause (a) or (b) of another person, (d) all renewals, extensions, refundings, deferrals, restructurings, amendments and modifications of any such indebtedness, obligation or guarantee, (e) all reimbursement obligations of such person with respect to letters of credit, bankers' acceptances or similar facilities issued for the account of such person, (f) all capital lease obligations of such person, (g) all net obligations of such person under interest rate swap, currency exchange or similar agreements of such person and (h) all obligations and other liabilities, contingent or otherwise, under any lease or related document, including a purchase agreement, conditional sale or other title retention agreement, in connection with the lease of real property or improvements thereon (or any personal property included as part of any such lease) which provides that such person is contractually obligated to purchase or cause a third party to purchase the leased property or pay an agreed upon residual value of the leased property, including such person's obligations under such lease or related document to purchase or cause a third party to purchase such leased property or pay an agreed upon residual value of the leased property to the lessor.

"REPRESENTATIVE" means the indenture trustee or other trustee, agent or representative for an issue of Senior Indebtedness.

"SENIOR INDEBTEDNESS" means all Indebtedness of the Company outstanding at any time, except the Securities, Indebtedness that by its terms provides that it shall not be "senior" in right of payment to the Securities or Indebtedness that by its terms provides that it shall be "pari passu" or "junior" in right of payment to the Securities. Senior Indebtedness does not include Indebtedness of the Company to any of its subsidiaries.

11.03 LIQUIDATION; DISSOLUTION; BANKRUPTCY.

Upon any distribution of assets to creditors of the Company in a liquidation, winding up or dissolution of the Company, or in a bankruptcy, reorganization, insolvency, receivership or similar proceeding relating to the Company or its property:

(i) holders of Senior Indebtedness shall be entitled to receive payment in full of the principal of and interest (including interest accruing after the

commencement of any such proceeding) to the date of payment on the Senior Indebtedness before Securityholders shall be entitled to receive any payment from the Company of amounts due with respect to the Securities (other than cash payments due upon conversion of Securities in lieu of fractional shares and except for Permitted Payments); and

(ii) until the Senior Indebtedness is paid in full, any distribution to which Securityholders would be entitled from the Company but for this ARTICLE XI (except for Permitted Payments) shall be made to holders of Senior Indebtedness, as their interests may appear, except the Securityholders may receive securities that are subordinated to Senior Indebtedness to at least the same extent as the Securities and payments made pursuant to SECTIONS 8.01 and 8.02.

11.04 COMPANY NOT TO MAKE PAYMENTS WITH RESPECT TO SECURITIES IN CERTAIN CIRCUMSTANCES.

No payment of amounts due may be made by the Company, directly or indirectly, with respect to the Securities (including any repurchase pursuant to the exercise of the Repurchase Right, but excluding cash payments due upon

conversion in lieu of fractional shares and except for Permitted Payments) or to acquire any of the Securities at any time if a default in payment of the principal of or premium, if any, or interest on Senior Indebtedness exists beyond any applicable grace period, unless and until such default shall have been cured or waived or shall have ceased to exist. During the continuance of any default with respect to any Senior Indebtedness pursuant to which any Senior Indebtedness has been issued (other than default in payment of the principal of or premium, if any, or interest on any Senior Indebtedness), permitting the holders thereof to accelerate the maturity thereof, no payment (except for Permitted Payments) may be made by the Company, directly or indirectly, of any amount due with respect to the Securities (a "PAYMENT BLOCKAGE") until the earlier of (i) the date on which such default has been cured or waived, (ii) 180 days following receipt of written notice (a "PAYMENT BLOCKAGE NOTICE") to the Company from any holder or holders thereof or its Representative or Representatives or the trustee or trustees under any indenture under which any instrument evidencing any such Senior Indebtedness may have been issued, that such a default has occurred and is continuing, (iii) the date on which such Senior Indebtedness is discharged or paid in full or (iv) the date of which the imposition of such Payment Blockage shall have been terminated by written notice to such trustee or the Company from such trustee or other representative initiating such Payment Blockage. Notwithstanding the foregoing, no new Payment Blockage period shall commence until a period of at least 365 consecutive days shall have elapsed since the beginning of the prior Payment Blockage period. No default (other than a default in payment) that existed or was continuing on the date of delivery of any Payment Blockage Notice shall be the basis for any subsequent Payment Blockage Notice, unless such default has been cured or waived for a period of not less than 90 consecutive days. However, if the maturity of such Senior Indebtedness is accelerated, no payment may be made by the Company on the Securities until such Senior Indebtedness that has matured has been paid or such acceleration has been cured or waived.

Regardless of anything to the contrary herein, nothing shall prevent (a) any payment by the Trustee to the Securityholders of amounts deposited with it pursuant to ARTICLE VIII or (b)

any payment by the Trustee or the Paying Agent as permitted by SECTION 11.12 and ARTICLE XI. Nothing contained in this ARTICLE XI will limit the right of the Trustee or the Securityholders to take any action to accelerate the maturity of the Securities pursuant to SECTION 6.02 or to pursue any rights or remedies hereunder.

11.05 ACCELERATION OF SECURITIES.

If payment of the Securities is accelerated because of an Event of Default, the Company shall promptly notify holders of Senior Indebtedness of the acceleration.

11.06 WHEN DISTRIBUTION MUST BE PAID OVER.

In the event that the Company shall make any payment to the Trustee with respect to the Securities at a time when such payment is prohibited by SECTION 11.03 or 11.04, such payment shall be held by the Trustee, in trust for the benefit of, and shall be paid forthwith over and delivered to, the holders of Senior Indebtedness (PRO RATA as to each of such holders on the basis of the respective amounts of Senior Indebtedness held by them) or their Representative or the trustee under the indenture or other agreement (if any) pursuant to which Senior Indebtedness may have been issued, as their respective interests may appear, for application to the payment of all Senior Indebtedness remaining unpaid to the extent necessary to pay all Senior Indebtedness in full in accordance with its terms, after giving effect to any concurrent payment or distribution to or for the holders of Senior Indebtedness.

If a distribution is made to Securityholders, that because of this ARTICLE XI should not have been made to them, the Securityholders who receive the distribution shall hold it in trust for holders of Senior Indebtedness and pay it over to them as their interests may appear.

11.07 NOTICE BY COMPANY.

The Company shall promptly notify the Trustee and the Paying Agent in writing of any facts known to the Company that would cause a payment of any amount due with respect to the Securities to violate this ARTICLE XI, but failure to give such notice shall not affect the subordination of the Securities to the Senior Indebtedness provided in this ARTICLE XI.

11.08 SUBROGATION.

After all Senior Indebtedness is paid in full and until the Securities are paid in full, Securityholders shall be subrogated (equally and ratably with all other Indebtedness of the Company ranking PARI PASSU with the Securities) to the rights of holders of Senior Indebtedness to receive distributions applicable to Senior Indebtedness to the extent that distributions otherwise payable to the Securityholders have been applied to the payment of Senior Indebtedness. A distribution made under this ARTICLE XI to holders of Senior Indebtedness which otherwise would have been made to Securityholders is not, as between the Company and Securityholders, a payment by the Company on Senior Indebtedness.

11.09 RELATIVE RIGHTS.

This ARTICLE XI defines the relative rights of Securityholders and holders of Senior Indebtedness. Nothing in this Indenture shall:

(i) impair, as between the Company, on the one hand, and Securityholders, on the other hand, the obligation of the Company, which is absolute and unconditional, to pay all amounts due with respect to the Securities in accordance with their terms;

(ii) affect the relative rights of Securityholders and creditors of the Company other than holders of Senior Indebtedness; or

(iii) prevent the Trustee or any Securityholder from exercising its available remedies upon a Default or Event of Default, subject to the rights of holders of Senior Indebtedness to receive distributions otherwise payable to Securityholders.

Upon any distribution of assets of the Company referred to in this ARTICLE XI, the Trustee, subject to the provisions of SECTIONS 7.01 and 7.02, and the Holders of the Securities shall be entitled to rely upon any order or decree by any court of competent jurisdiction in which such dissolution, winding up, liquidation or reorganization proceedings are pending, or a certificate of the liquidating trustee or agent or other person making any distribution to the Trustee or the Holders of the Securities, for the purpose of ascertaining the persons entitled to participate in such distribution, the holders of the Senior Indebtedness and other indebtedness of the Company, the amount thereof or payable thereon, the amount or amounts paid or distributed thereon and all other facts pertinent thereto or to this ARTICLE XI. Nothing contained in this ARTICLE XI or elsewhere in this Indenture or in any Security is intended to or shall affect the obligation of the Company to make, or prevent the Company from making, at any time except during the pendency of any dissolution, winding up, liquidation or reorganization proceeding, and except during the continuance of any default specified in SECTION 11.04 (not cured or waived), payments at any time of all amounts due with respect to the Securities.

11.10 SUBORDINATION MAY NOT BE IMPAIRED BY COMPANY.

No right of any holder of Senior Indebtedness to enforce the subordination of the indebtedness evidenced by the Securities shall be impaired by any act or failure to act by the Company or by the failure of the Company to comply with this Indenture.

11.11 DISTRIBUTION OR NOTICE TO REPRESENTATIVE.

Whenever a distribution is to be made or a notice given to holders of Senior Indebtedness, the distribution may be made and the notice given to their Representatives.

11.12 RIGHTS OF TRUSTEE AND PAYING AGENT.

The Trustee or Paying Agent may continue to make payments on the Securities until it receives written notice of facts that would cause a payment of amounts due with respect to the

Securities to violate this ARTICLE XI. Only the Company or a Representative or a holder of an issue of Senior Indebtedness that has no Representative may give the notice.

The Trustee shall be entitled to conclusively rely on the delivery to it of a written notice by a person representing himself to be a holder of Senior Indebtedness (or a Representative on behalf of such holder) to establish that such notice has been given by a holder of Senior Indebtedness or a Representative on behalf of any such holder. In the event that the Trustee determines in good faith that further evidence is required with respect to the right of any person who is a holder of Senior Indebtedness to participate in any payment or distribution pursuant to this ARTICLE XI, the Trustee may request such person to furnish evidence to the reasonable satisfaction of the Trustee as to the amount of Senior Indebtedness held by such person, the extent to which such person is entitled to participate in such payment or distribution and any other facts pertinent to the rights of such person under this ARTICLE XI, and if such evidence is not furnished the Trustee may defer any payment to such person pending judicial determination as to the right of such person to receive such payment or until such time as the Trustee shall be otherwise satisfied as to the right of such person to receive such payment.

The Trustee in its individual or any other capacity may hold Senior Indebtedness with the same rights it would have if it were not Trustee. Any Agent may do the same with like rights.

The Trustee shall not be deemed to owe any fiduciary duty to the holders of Senior Indebtedness and shall not be liable to any such holder if it shall mistakenly pay over or distribute to Securityholders or the Company or any other person money or assets to which any holders of Senior Indebtedness shall be entitled by virtue of this ARTICLE XI or otherwise.

11.13 OFFICERS' CERTIFICATE.

If there occurs an event referred to in SECTION 11.03 or 11.04, the Company shall promptly give to the Trustee an Officers' Certificate (on which the Trustee may conclusively rely) identifying all holders of Senior Indebtedness or their Representatives and the principal amount of Senior Indebtedness then outstanding held by each such holder and stating the reasons why such Officers' Certificate is being delivered to the Trustee.

11.14 NOT TO PREVENT EVENTS OF DEFAULT.

The failure to make any payment due with respect to the Securities by reason of any provision of this ARTICLE XI shall not be construed as preventing the occurrence of an Event of Default under SECTION 6.01.

XII. SECURITY

12.01 SECURITY.

On the Closing Date, the Company shall (i) enter into the Pledge Agreement and the Control Agreement and comply with the terms and provisions thereof and (ii) purchase the Pledged Securities to be pledged to the Trustee for the benefit of the Holders in such amount as will be sufficient upon receipt of scheduled interest and/or principal payments of such Pledged

Securities to provide for payment in full of the first four scheduled interest payments due on the Securities. The Pledged Securities shall be pledged by the Company to the Trustee for the benefit of the Holders and shall be held by the Trustee in the Pledge Account pending disposition pursuant to the Pledge Agreement.

12.02 PLEDGE AGREEMENT.

Each Holder, by its acceptance of a Security, consents and agrees to the terms of the Pledge Agreement and the Control Agreement (including, without limitation, the provisions providing for foreclosure and release of the Pledged Securities) as the same may be in effect or may be amended from time to time in accordance with its terms, and authorizes and directs the Trustee to enter into the Pledge Agreement and the Control Agreement and to perform its respective obligations and exercise its respective rights thereunder in accordance therewith. The Company will do or cause to be done all such acts and things as may be necessary or reasonably requested by the Trustee, or as may be required by the provisions of the Pledge Agreement or the Control Agreement, to assure and confirm to the Trustee the security interest in the Pledged Securities contemplated hereby, by the Pledge Agreement or any part thereof or the Control Agreement or any part thereof, as from time to time constituted, so as to render the same available for the security and benefit of this Indenture and of the Securities secured hereby, according to the intent and purposes herein and therein expressed. The Company shall take, or shall cause to be taken, upon request of the Trustee, any and all actions reasonably required to cause the Pledge Agreement and the Control Agreement to create and maintain, as security for the obligations of the Company under this Indenture and the Securities, valid and enforceable first priority Liens in and on all the Pledged Securities, in favor of the Trustee, superior to and prior to the rights of third Persons and subject to no other Liens.

12.03 RELEASE OF PLEDGED SECURITIES.

The release of any Pledged Securities pursuant to the Pledge Agreement will not be deemed to impair the security under this Indenture in contravention of the provisions hereof if and to the extent the Pledged Securities are released pursuant to this Indenture and the Pledge Agreement and the Control Agreement. To the extent applicable, the Company shall cause TIA ss. 314(d) relating to the release of property or securities from the Lien and security interest of the Pledge Agreement and relating to the substitution therefor of any property or securities to be subjected to the Lien and security interest of the Pledge Agreement to be complied with. Any certificate or opinion required by TIA ss. 314(d) may be made by an Officer of the Company, except in cases where TIA ss. 314(d) requires that such certificate or opinion be made by an independent Person, which Person shall be an independent engineer, appraiser or other expert selected by the Company.

12.04 DISBURSEMENTS FROM PLEDGE ACCOUNT UPON CONVERSION OR REPURCHASE.

If, prior to the payment of the fourth scheduled interest payment due on the Securities, any Security converted in accordance with this Indenture or any Security repurchased by the Company, then, upon the written request of the Company to the Trustee and satisfaction of the conditions precedent specified in this SECTION 12.04, the Trustee shall promptly liquidate the Collateral (as defined in the Pledge Agreement) to the extent (but only to the extent) necessary to

generate an amount of cash proceeds equal to the Release Amount (as defined below) and shall distribute to the Company (such distribution, a "RELEASE DISTRIBUTION") such amount in immediately available funds. Upon each Release Distribution, the Trustee shall release the security interest and continuing lien in that portion of the Collateral, and proceeds derived therefrom, distributed to the Company pursuant to such Release Distribution, and shall execute such documents as the Company may reasonably request to evidence such release. No Release Distribution or liquidation to facilitate a Release Distribution shall occur unless all of the following shall have been satisfied:

(i) the Company has delivered to the Trustee an opinion of counsel to the effect that (A) the Securities referred to in the above paragraph have been duly converted or repurchased by the Company and (B) all conditions precedent to the Release Distribution have been satisfied;

(ii) the Company has delivered to the Trustee an officers' certificate that (A) identifies the Securities that have been so converted or so

repurchased, (B) affirms that such Securities have been duly converted or repurchased, (C) states that all conditions precedent relating to the Release Distribution have been satisfied and (D) states the Release Amount;

(iii) the Company has delivered to the Trustee a Written Independent Accountant Report (as defined in the Pledge Agreement) stating that the Collateral to be remaining after the proposed Release Distribution and related liquidation of Collateral will be sufficient, upon receipt of the scheduled interest and principal payments on the remaining Pledged Financial Assets (as defined in the Pledge Agreement), to provide for payment in full of the remaining first four scheduled interest payments on the Remaining Securities when due;

(iv) no Event of Default (as defined in Section 13 of the Pledge Agreement) has occurred and is continuing;

(v) no Event (as defined in the Registration Rights Agreement) has occurred and is continuing; and

(vi) no Securities that have been repurchased by the Company have subsequently been resold.

"RELEASE AMOUNT" means an amount equal to the net proceeds (after deducting expenses related in any way to the related Release Distribution and liquidation of Collateral) from the liquidation of that portion of the Collateral not necessary to remain in the Pledge Account in order to provide, from the receipt of the scheduled interest and principal payments on the remaining Pledged Financial Assets, for payment in full of the remaining first four scheduled interest payments on the Remaining Notes when due.

"REMAINING SECURITIES" means the Securities other than the Securities specified in the officer's certificate referred to in this SECTION 12.04 as having been converted or repurchased.

12.05 OPINIONS OF COUNSEL.

The Company shall cause TIA ss. 314(b), relating to opinions of counsel regarding the Lien under the Pledge Agreement, to be complied with. The Trustee may accept, to the extent permitted by SECTIONS 4.04 and 7.06 as conclusive evidence of compliance with the foregoing provisions, the appropriate statements contained in such instruments.

12.06 AUTHORIZATION OF ACTIONS TO BE TAKEN BY THE TRUSTEE UNDER THE PLEDGE AGREEMENT.

The Trustee may, in its sole discretion and without the consent of the Holders, on behalf of the Holders, take all reasonable actions in accordance with the Pledge Agreement necessary or appropriate in order to (i) enforce any of the terms of the Pledge Agreement or (ii) collect and receive any and all amounts payable in respect of the obligations of the Company thereunder. The Trustee shall have power to institute and to maintain such suits and proceedings as the Trustee may reasonably deem expedient to preserve or protect its interests and the interests of the Holders in the Pledged Securities (including power to institute and maintain suits or proceedings to restrain the enforcement of or compliance with any legislative or other governmental enactment, rule or order that may be unconstitutional or otherwise invalid if the enforcement of, or compliance with, such enactment, rule or order would impair the security interest hereunder or be prejudicial to the interests of the Holders or of the Trustee).

XIII. MISCELLANEOUS

13.01 TRUST INDENTURE ACT CONTROLS.

If any provision of this Indenture limits, qualifies or conflicts with another provision which is required to be included in this Indenture by the TIA, the required provision of the TIA shall control.

13.02 NOTICES.

Any notice or communication by the Company or the Trustee to one or both of the others is duly given if in writing and delivered in person, mailed by first-class mail or by express delivery to the other parties' addresses stated in this SECTION 13.02. The Company or the Trustee by notice to the others may designate additional or different addresses for subsequent notices or communications.

Any notice or communication to a Securityholder shall be mailed to its address shown on the register kept by the Registrar. Failure to mail a notice or communication to a Securityholder or any defect in it shall not affect its sufficiency with respect to other Securityholders.

If a notice or communication is mailed in the manner provided above, it is duly given, whether or not the addressee receives it.

If the Company mails a notice or communication to Securityholders, it shall mail a copy to the other and to the Trustee and each Agent at the same time.

All notices or communications shall be in writing.

The Company's address is:

Ligand Pharmaceuticals Incorporated
10275 Science Center Drive
San Diego, California 92121-1117
Facsimile: (858) 550-1825
Attention: President & Chief Executive Officer

The Trustee's address is:

J.P. Morgan Trust Company, National Association
560 Mission Street, 13th Floor
San Francisco, California 94105
Facsimile: (415) 315-7585
Attention: Mitch Gardner

13.03 COMMUNICATION BY HOLDERS WITH OTHER HOLDERS.

Securityholders may communicate pursuant to TIA ss. 312(b) with other Securityholders with respect to their rights under this Indenture or the Securities. The Company, the Trustee, the Registrar and anyone else shall have the protection of TIA ss. 312(c).

13.04 CERTIFICATE AND OPINION AS TO CONDITIONS PRECEDENT.

Upon any request or application by the Company to the Trustee to take any action under this Indenture, the Company shall furnish to the Trustee:

(i) an Officers' Certificate stating that, in the opinion of the signers, all conditions precedent, if any, provided for in this Indenture relating to the proposed action have been complied with; and

(ii) an Opinion of Counsel stating that, in the opinion of such counsel, all such conditions precedent have been complied with.

Each signer of an Officers' Certificate or an Opinion of Counsel may (if so stated) rely, effectively, upon an Opinion of Counsel as to legal matters and an Officers' Certificate as to factual matters if such signer reasonably and in good faith believes in the accuracy of the document relied upon.

13.05 STATEMENTS REQUIRED IN CERTIFICATE OR OPINION.

Each Officers' Certificate or Opinion of Counsel with respect to compliance with a condition or covenant provided for in this Indenture shall include:

(i) a statement that the person making such certificate or opinion has read such covenant or condition;

(ii) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based;

(iii) a statement that, in the opinion of such person, he or she has made such examination or investigation as is necessary to enable him or her to express an informed opinion as to whether or not such covenant or condition has been complied with; and

(iv) a statement as to whether or not, in the opinion of such person, such condition or covenant has been complied with.

13.06 RULES BY TRUSTEE AND AGENTS.

The Trustee may make reasonable rules for action by or at a meeting of Securityholders. The Registrar, Paying Agent or Conversion Agent may make reasonable rules and set reasonable requirements for their respective functions.

13.07 LEGAL HOLIDAYS.

A "LEGAL HOLIDAY" is a Saturday, a Sunday or a day on which banking institutions are not required to be open in the City of New York, in the State of New York or in the city in which the Trustee administers its corporate trust business. If a payment date is a Legal Holiday at a place of payment, payment may be made at that place on the next succeeding day that is not a Legal Holiday, and no interest shall accrue on that payment for the intervening period.

A "BUSINESS DAY" is a day other than a Legal Holiday.

13.08 NO RECOURSE AGAINST OTHERS.

No past, present or future director, officer, employee, incorporator or stockholder of the Company, as such, shall have any liability for any obligations of the Company under the Securities or this Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder by accepting a Security waives and releases all such liability. The waiver and release are part of the consideration for the issuance of the Securities.

13.09 DUPLICATE ORIGINALS.

The parties may sign any number of copies of this Indenture. Each signed copy shall be an original, but all of them together represent the same agreement. Delivery of an executed counterpart by facsimile shall be effective as delivery of a manually executed counterpart thereof.

13.10 GOVERNING LAW.

The laws of the State of New York, without regard to principles of conflicts of law, shall govern this Indenture and the Securities.

13.11 NO ADVERSE INTERPRETATION OF OTHER AGREEMENTS.

This Indenture may not be used to interpret another indenture, loan or debt agreement of the Company or any of its subsidiaries. Any such indenture, loan or debt agreement may not be used to interpret this Indenture.

13.12 SUCCESSORS.

All agreements of the Company in this Indenture and the Securities shall bind their respective successors. All agreements of the Trustee in this Indenture shall bind its successors.

13.13 SEPARABILITY.

In case any provision in this Indenture or in the Securities shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby and a Holder shall have no claim therefor against any party hereto.

13.14 TABLE OF CONTENTS, HEADINGS, ETC.

The Table of Contents, Cross-Reference Table and headings of the Articles and Sections of this Indenture have been inserted for convenience of reference only, are not to be considered a part hereof and shall in no way modify or restrict any of the terms or provisions hereof.

IN WITNESS WHEREOF, the parties hereto have caused this Indenture to be duly executed as of the date first above written.

LIGAND PHARMACEUTICALS INCORPORATED

By: /S/ DAVID E. ROBINSON

Name:

Title:

J.P. MORGAN TRUST COMPANY, N.A., as Trustee

By: /S/ MITCH GARDNER

Name:

Title:

EXHIBIT A

[Face of Security]

LIGAND PHARMACEUTICALS INCORPORATED

[Certificate No. _____]

[INSERT PRIVATE PLACEMENT LEGEND AND GLOBAL SECURITY LEGEND AS REQUIRED]

6% CONVERTIBLE SUBORDINATED NOTE DUE 2007

CUSIP NO. _____

LIGAND PHARMACEUTICALS INCORPORATED, a Delaware corporation (herein called the "COMPANY"), for value received, hereby promises to pay to Cede & Co. or registered assigns, the principal sum of One Hundred Thirty-Five Million Dollars ($135,000,000) on November 16, 2007 and to pay interest thereon, as provided on the reverse hereof, until the principal and any unpaid and accrued interest is paid or duly provided for. The right to payment of the principal and all other amounts due with respect hereto is subordinated to the rights of Senior

Indebtedness as set forth in the Indenture referred to on the reverse side hereof.

Interest Payment Dates: May 16 and November 16, with the first payment to be made on May 16, 2003.

Record Dates: May 1 and November 1.

The provisions on the back of this certificate are incorporated as if set forth on the face hereof.

IN WITNESS WHEREOF, LIGAND PHARMACEUTICALS INCORPORATED has caused this instrument to be duly signed.

LIGAND PHARMACEUTICALS INCORPORATED

By:

Name:
Title:

Dated: _____

TRUSTEE'S CERTIFICATE OF AUTHENTICATION

This is one of the Securities referred to in the within-mentioned Indenture.

J.P. MORGAN TRUST COMPANY, NATIONAL ASSOCIATION, as Trustee

By:

Authorized Signatory

Dated: _____

[REVERSE OF SECURITY]

LIGAND PHARMACEUTICALS INCORPORATED

6% CONVERTIBLE SUBORDINATED NOTE DUE 2007

1. INTEREST. LIGAND PHARMACEUTICALS INCORPORATED, a Delaware corporation (the "COMPANY"), promises to pay interest on the principal amount of this Security at the rate PER ANNUM shown above. The Company will pay interest semi-annually on May 16 and November 16 of each year, with the first payment to be made on May 16, 2003. Interest on the Securities will accrue on the principal amount from the most recent date to which interest has been paid or provided for or, if no interest has been paid, from November 26, 2002. Interest will be computed on the basis of a 360-day year of twelve 30-day months.

The Holder of this Security is entitled to the benefits of the Pledge Agreement, dated November 26, 2002, between the Company and the Trustee,

pursuant to which the Company has placed in the Pledge Account cash or Pledged Financial Assets sufficient to provide for the payment of the first four interest payments on this Security. The terms capitalized but undefined in this paragraph have the meanings given to them in the Pledge Agreement.

2. MATURITY. The Notes will mature on November 16, 2007.

3. METHOD OF PAYMENT. The Company will pay interest on the Securities (except defaulted interest) to the persons who are registered Holders of Securities at the close of business on the record date set forth on the face of this Security next preceding the applicable interest payment date. Holders must surrender Securities to a Paying Agent to collect the principal, Redemption Price or Repurchase Price of the Securities. The Company will pay all amounts due with respect to the Securities in money of the United States that at the time of payment is legal tender for payment of public and private debts. If this Security is in global form, the Company will pay interest on the Securities by wire transfer of immediately available funds to the account specified by the Holder. With respect to securities held other than in global form, the Company will make payments by wire transfer of immediately available funds to the account specified by the Holders thereof or, if no such account is specified with respect to a Holder, by mailing a check to the Holder's registered address.

4. PAYING AGENT, REGISTRAR, CONVERSION AGENT. Initially, J.P. Morgan Trust Company, National Association, (the "TRUSTEE") will act as Paying Agent, Registrar and Conversion Agent. The Company may change any Paying Agent, Registrar or Conversion Agent without notice. The Company or any Affiliate of the Company may act as Paying Agent.

5. INDENTURE. The Company issued the Securities under an Indenture dated as of November 26, 2002 (the "INDENTURE") between the Company and the Trustee. The terms of the Securities include those stated in the Indenture and those made part of the Indenture by reference to the Trust Indenture Act of 1939 (15 U.S. Code ss.ss. 77aaa-77bbbb) (the "ACT") as in effect on the date of the Indenture. The Securities are subject to all such terms, and Securityholders are referred to the Indenture and the Act for a statement of such terms. The Securities are general

unsecured senior subordinated obligations of the Company limited to $135,000,000 aggregate principal amount ($155,250,000 if the Initial Purchaser (as defined in the Indenture) has elected to exercise its over-allotment option to purchase an additional $20,250,000 of the Securities), except as otherwise provided in the Indenture (except for Securities issued in substitution for destroyed, mutilated, lost or stolen Securities). Terms used herein which are defined in the Indenture have the meanings assigned to them in the Indenture.

6. OPTIONAL REDEMPTION. The Securities will be redeemable prior to maturity at the option of the Company, in whole or in part, at any time on or after November 22, 2005, at the following redemption prices (expressed as percentages of the principal amount thereof), if redeemed during the periods commencing on the dates set forth below, in each case together with accrued and unpaid interest to, but excluding, the redemption date:

<TABLE>
<CAPTION>

Date	Redemption Price
<S>	<C>
November 22, 2005	102.40%
November 16, 2006 and thereafter	101.20%

</TABLE>

7. NOTICE OF REDEMPTION. Notice of redemption will be mailed at least 30 days but not more than 60 days before the redemption date to each Holder of

Securities to be redeemed at its registered address. Securities in denominations larger than $1,000 principal amount may be redeemed in part but only in positive integral multiples of $1,000 principal amount. On and after the redemption date interest ceases to accrue on Securities or portions of them called for redemption.

8. REPURCHASE AT OPTION OF HOLDER. In the event of a Change in Control with respect to the Company, then each Holder of the Securities shall have the right, at the Holder's option, subject to the rights of the holders of Senior Indebtedness under ARTICLE XI of the Indenture, to require the Company to repurchase such Holder's Securities including any portion thereof which is $1,000 in principal amount or any positive integral multiple thereof on a day (the "REPURCHASE DATE") that is 30 business days after the date of the Change in Control Notice, unless otherwise required by applicable law, at a price equal to 100% of the outstanding principal amount of such Security, plus accrued and unpaid interest to, but excluding, the Repurchase Date.

Within 30 business days after the occurrence of the Change in Control, the Company is obligated to give notice of the occurrence of such Change in Control to each Holder. Such notice shall include, among other things, the date by which Holder must notify the Company of such Holder's intention to exercise the Repurchase Right and of the procedure which such Holder must follow to exercise such right. To exercise the Repurchase Right, a Holder of Securities must deliver on or before the close of business on the third business day immediately preceding the Repurchase Date written notice to the Company (or an agent designated by the Company for

such purpose) and the Trustee of the Holder's exercise of such right together with the Securities with respect to which the right is being exercised, duly endorsed for transfer in accordance with the provisions of the Indenture.

A "CHANGE IN CONTROL" of the Company shall be deemed to have occurred at such time as:

(i) any "person" or "group" (as such terms are used for purposes of Sections 13(d) and 14(d) of the Exchange Act), is or becomes the "beneficial owner" (as such term is used in Rule 13d-3 under the Exchange Act), directly or indirectly, of 50% or more of the voting power of the Company's Common Stock or other capital stock into which our common stock is reclassified or changed; or

(ii) at any time the following persons cease for any reason to constitute a majority of our board of directors:

(1) individuals who on the issue date of the convertible notes constituted our board of directors and

(2) any new directors whose election by our board of directors or whose nomination for election by our stockholders was approved by at least a majority of the directors then still in office who were either directors on the issue date of the convertible notes or whose election or nomination for election was previously so approved; or

(iii) the sale, lease or transfer of all or substantially all of the assets of the Company to any "person" or "group" (as such terms are used in Sections 13(d) and 14(d) of the Exchange Act).

However, a Change in Control will not be deemed to have occurred if either:

(X) the last sale price of the Company's Common Stock for any five trading days during the ten trading days immediately preceding the Change in Control is at least equal to 105% of the then effective conversion price on the date of such trading day; or

(Y) in the case of a merger or consolidation, all of the consideration (excluding cash payments for fractional shares and cash payments pursuant to dissenters' appraisal rights) in the merger or consolidation constituting the Change in Control consists of common

stock traded on a U.S. national securities exchange or quoted on the NNM (or which will be so traded or quoted when issued or exchanged in connection with such Change in Control) and as a result of such transaction or transactions the Securities become convertible solely into such common stock.

9. CONVERSION. A Holder may convert his or her Security into Common Stock of the Company at any time prior to the close of business on November 16, 2007, or, (x) if the Security is called for redemption by the Company, the Holder may convert it at any time before the close of business on the business day immediately preceding the date fixed for such redemption, or (y) if the Security is to be repurchased by the Company pursuant to PARAGRAPH 8

hereof, the Holder may convert it at any time before the close of business on the business day immediately preceding the Repurchase Date. The initial conversion rate is 161.9905 shares of Common Stock per $1,000 principal amount of Securities, or an effective initial conversion price of approximately $6.17 per share, subject to adjustment in the event of certain circumstances as specified in the Indenture. The Company will deliver a check in lieu of any fractional share. On conversion no payment or adjustment for any unpaid and accrued interest, or liquidated damages with respect to, the Securities will be made. If a Holder surrenders a Security for conversion between the record date for the payment of interest and the next interest payment date, such Security, when surrendered for conversion, must be accompanied by payment of an amount equal to the interest thereon which the registered Holder on such record date is to receive, unless the Securities have been called for redemption as described in the Indenture.

To convert a Security, a Holder must (1) complete and sign the Conversion Notice, with appropriate signature guarantee, on the back of the Security, (2) surrender the Security to a Conversion Agent, (3) furnish appropriate endorsements and transfer documents if required by the Registrar or Conversion Agent, (4) pay the amount of interest, if any, the Holder may be paid as provided in the last sentence of the above paragraph and (5) pay any transfer or similar tax if required. A Holder may convert a portion of a Security if the portion is $1,000 principal amount or a positive integral multiple of $1,000 principal amount.

Any shares issued upon conversion of a Security shall bear the Private Placement Legend until after the second anniversary of the later of the issue date for the Securities and the last date on which the Company or any Affiliate of the Company was the owner of such shares or the Security (or any predecessor security) from which such shares were converted (or such shorter period of time as permitted by Rule 144(k) under the Securities Act or any successor provision thereunder) (or such longer period of time as may be required under the Securities Act or applicable state securities laws in the Opinion of Counsel for the Company, unless otherwise agreed by the Company and the Holder thereof).

10. SUBORDINATION. The Securities are subordinated in right of payment, in the manner and to the extent set forth in the Indenture, to the prior payment in full of all Senior Indebtedness. Each Holder by accepting a Security agrees to such subordination and authorizes the Trustee to give it effect.

11. DENOMINATIONS, TRANSFER, EXCHANGE. The Securities are in registered form without coupons in denominations of $1,000 principal amount and positive integral multiples of $1,000 principal amount. The transfer of Securities may be registered and Securities may be exchanged as provided in the Indenture. The Registrar may require a Holder, among other things, to furnish appropriate endorsements and transfer documents. No service charge shall be made for any such registration of transfer or exchange, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge payable in connection therewith. The Registrar need not exchange or register the transfer of any Security selected for redemption in whole or in part, except the unredeemed portion of Securities to be redeemed in part. Also, it need not exchange or register the transfer of any Securities for a period of 15 days before the mailing of a notice of redemption of the Securities selected to be redeemed and in certain other circumstances provided in the Indenture.

12. PERSONS DEEMED OWNERS. The registered Holder of a Security may be treated as the owner of such Security for all purposes.

13. MERGER OR CONSOLIDATION. The Company shall not consolidate with or merge into, or transfer or lease all or substantially all of its properties and assets to, another person unless such other person is a corporation organized under the laws of the United States, any State thereof or the District of Columbia or a corporation or comparable legal entity organized under the laws of a foreign jurisdiction and whose equity securities are listed on a national securities exchange in the United States or authorized for quotation on the NNM prior to or upon giving effect to the transaction (PROVIDED HOWEVER, that in the case of a transaction where the surviving entity is organized under the laws of a foreign jurisdiction, the Company may not consummate the transaction without first (i) making provision for the satisfaction of its obligations to repurchase Securities following a Change in Control, if any, and (ii) obtaining an opinion of tax counsel experienced in such matters to the effect that, under then existing United States federal income tax laws, there would be no material adverse tax consequences to holders of the Securities resulting from such transaction); such person assumes by supplemental indenture all the obligations of the Company, under the Securities and this Indenture; and immediately after giving effect to the transaction, no Default or Event of Default shall exist.

14. AMENDMENTS, SUPPLEMENTS AND WAIVERS. Subject to certain exceptions, the Indenture or the Securities may be amended or supplemented with the consent of the Holders of at least a majority in aggregate principal amount of the Securities then outstanding, and any existing Default or Event of Default may be waived with the consent of the Holders of a majority in aggregate principal amount of the Securities then outstanding. Without notice to or the consent of any Securityholder, the Indenture or the Securities may be amended or supplemented to cure any ambiguity or inconsistency, to comply with SECTIONS 5.01 and 10.12 of the Indenture, to make any changes or modifications to the Indenture necessary in connection with the registration of the Securities under the Securities Act and the qualification of the Indenture under the TIA, to secure the obligations of the Company in respect of the Securities, or to add to covenants of the Company described in the Indenture for the benefit of Securityholders or to surrender any right or power conferred upon the Company.

15. DEFAULTS AND REMEDIES. An Event of Default includes the occurrence of any of the following: default in payment of principal at maturity, upon redemption or exercise of a Repurchase Right or otherwise; default for 30 days in payment of interest or other amounts due, provided that a failure to make any of the first four scheduled interest payments on any Security within three (3) business days after the applicable interest payment dates will constitute an Event of Default with no additional grace or cure period; failure by the Company for 60 days after notice to it to comply with any of its other agreements in the Indenture or the Securities; certain payment defaults or the acceleration of other Indebtedness of the Company and its subsidiaries; certain events of bankruptcy or insolvency involving the Company or its Significant Subsidiaries; the Pledge Agreement cease to be in full force and effect or enforceable in accordance with its terms; and default by the Company or failure by the Company to comply with the Pledge Agreement or the Control Agreement, with no additional grace or cure period. If any Event of Default occurs and is continuing, the Trustee or the Holders of at least 25% in aggregate principal amount of the Securities then outstanding may declare all the Securities to be due and payable immediately, except as provided in the Indenture. If an Event of Default

specified in SECTION 6.01(V) or (VI) of the Indenture with respect to the Company occurs, the principal of and accrued interest on all the Securities shall IPSO FACTO become and be immediately due and payable without any declaration or other act on the part of the Trustee or any Securityholder. Securityholders may not enforce the Indenture or the Securities except as provided in the Indenture. The Trustee may require indemnity satisfactory to it before it enforces the Indenture or the Securities. Subject to certain limitations, Holders of a majority in principal amount of the Securities then outstanding may direct the Trustee in its exercise of any trust or power. The Trustee may withhold from Securityholders notice of any continuing Default or

Event of Default (except a Default or Event of Default in payment) if it determines that withholding notice is in the interests of the Securityholders. The Company must furnish an annual compliance certificate to the Trustee.

16. REGISTRATION RIGHTS. The Holders are entitled to registration rights as set forth in the Registration Rights Agreement (as defined in the Indenture). The Holders shall be entitled to receive liquidated damages in certain circumstances, all as set forth in the Registration Rights Agreement.

17. TRUSTEE DEALINGS WITH THE COMPANY. The Trustee under the Indenture, or any banking institution serving as successor Trustee thereunder, in its individual or any other capacity, may make loans to, accept deposits from, and perform services for the Company or its Affiliates, and may otherwise deal with the Company or its Affiliates, as if it were not Trustee.

18. NO RECOURSE AGAINST OTHERS. No past, present or future director, officer, employee or stockholder, as such, of the Company shall have any liability for any obligations of the Company under the Securities or the Indenture or for any claim based on, in respect of or by reason of such obligations or their creation. Each Securityholder by accepting a Security waives and releases all such liability. The waiver and release are part of the consideration for the issue of the Securities.

19. AUTHENTICATION. This Security shall not be valid until authenticated by the manual signature of the Trustee or an authenticating agent.

20. ABBREVIATIONS. Customary abbreviations may be used in the name of a Securityholder or an assignee, such as: TEN COM (= tenants in common), TEN ENT (= tenants by the entirety), JT TEN (= joint tenants with right of survivorship and not as tenants in common), CUST (= Custodian), and U/G/M/A (Uniform Gifts to Minors Act).

THE COMPANY WILL FURNISH TO ANY SECURITYHOLDER UPON WRITTEN REQUEST AND WITHOUT CHARGE A COPY OF THE INDENTURE. REQUESTS MAY BE MADE TO:

Ligand Pharmaceuticals Incorporated
10275 Science Center Drive
San Diego, California 92121-1117
Facsimile: (858) 550-1825
Attention: President & Chief Executive Officer

[FORM OF ASSIGNMENT]

I or we assign to

PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER

- ----------

- ----------
(please print or type name and address)

- ----------

- ----------
the within Security and all rights thereunder, and hereby irrevocably constitutes and appoints

- ----------
Attorney to transfer the Security on the books of the Company with full power of substitution in the premises.

Dated:
---------- ----------

NOTICE: The signature on this assignment must correspond with the name as it appears upon the face of the within Security in every particular without alteration or enlargement or any change whatsoever and be guaranteed by a guarantor institution participating in the Securities Transfer Agents Medallion Program or in such other guarantee program acceptable to the Trustee.

Signature Guarantee:

- ----------

In connection with any transfer of this Security occurring prior to the date which is the earlier of (i) the date of the declaration by the Commission of the effectiveness of a registration statement under the Securities Act of 1933, as amended (the "SECURITIES ACT") covering resales of this Security (which effectiveness shall not have been suspended or terminated at the date of the transfer) and (ii) the Resale Restriction Termination Date, the undersigned confirms that it has not utilized any general solicitation or general advertising in connection with transfer:

[Check One]

(1) ____ to the Company or any subsidiary thereof; or

(2) ____ pursuant to and in compliance with Rule 144A under the Securities Act of 1933, as amended; or

(3) ____ pursuant to the exemption from registration provided by Rule 144 under the Securities Act of 1933, as amended; or

(4) ____ pursuant to an effective registration statement under the Securities Act of 1933, as amended.

and unless the box below is checked, the undersigned confirms that such Security is not being transferred to an "affiliate" of the Company as defined in Rule 144 under the Securities Act of 1933, as amended (an "AFFILIATE"):

_____The transferee is an Affiliate of the Company. (If the Security is transferred to an Affiliate, the restrictive legend must remain on the Security for two years following the date of the transfer).

Unless one of the items is checked, the Trustee will refuse to register any of the Securities evidenced by this certificate in the name of any person other than the registered Holder thereof; PROVIDED, HOWEVER, that if item (3) or (4) is checked, the Company or the Trustee may require, prior to registering any such transfer of the Securities, in their sole discretion, such written legal opinions, certifications and other information as the Trustee or the Company have reasonably requested to confirm that such transfer is being made pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act of 1933, as amended.

If none of the foregoing items are checked, the Trustee or Registrar shall not be obligated to register this Security in the name of any person other than the Holder hereof unless and until the conditions to any such transfer of registration set forth herein and in SECTION 2.16 of the Indenture shall have been satisfied.

Dated: Signed:
---------- ----------
(Sign exactly as name appears on the other side of this Security)

Signature Guarantee:

TO BE COMPLETED BY PURCHASER IF (2) ABOVE IS CHECKED

The undersigned represents and warrants that it is purchasing this Security for its own account or an account with respect to which it exercises sole investment discretion and that it and any such account is a "qualified institutional buyer" within the meaning of Rule 144A under the Securities Act of 1933, as amended, and is aware that the sale to it is being made in reliance on Rule 144A and acknowledges that it has received such information regarding the Company as the undersigned has requested pursuant to Rule 144A or has determined transferor is relying upon the undersigned's foregoing representations in order to claim the exemption from registration provided by Rule 144A.

Dated:
--- ---
NOTICE: To be executed by an executive officer

CONVERSION NOTICE

To convert this Security into Common Stock of the Company, check the box:_____

To convert only part of this Security, state the principal amount to be converted (must be in multiples of $1,000):

$_____

If you want the stock certificate made out in another person's name, fill in the form below:

- ---
(Insert other person's soc. sec. or tax I.D. no.)

- ---

- ---

- ---

- ---
(Print or type other person's name, address and zip code)

- ---

Date:_____ Signature(s):

(Sign exactly as your name(s) appear(s) on the other side of this Security)

Signature(s) guaranteed by:

(All signatures must be guaranteed by a guarantor institution participating in the Securities Transfer Agents Medallion Program or in such other guarantee program acceptable to the Trustee.)

OPTION OF HOLDER TO ELECT PURCHASE NOTICE

Certificate No. of Security: _____

If you want to elect to have this Security purchased by the Company pursuant to SECTION 3.08 of the Indenture, check the box:_____

If you want to elect to have only part of this Security purchased by the Company pursuant to SECTION 3.08 of the Indenture, state the principal amount:

$ ----------
(in an integral multiple of $1,000)

Date:_____ Signature(s):

(Sign exactly as your name(s) appear(s) on the other side of this Security)

Signature(s) guaranteed by:

(All signatures must be guaranteed by a guarantor institution participating in the Securities Transfer Agents Medallion Program or in such other guarantee program acceptable to the Trustee.)

SCHEDULE A

SCHEDULE OF EXCHANGES OF INTERESTS IN THE GLOBAL SECURITYa.

The following exchanges of a part of this Global Security for an interest in another Global Security or for Securities in certificated form, have been made:

<TABLE>
<CAPTION>

Date of Exchange	Amount of decrease in Principal amount of this Global Security	Amount of increase in Principal amount of this Global Security	Principal amount of this Global Security following such decrease (or increase)	Signature or authorized signatory of Trustee or Note Custodian
<S>	<C>	<C>	<C>	<C>

</TABLE>

- ----------
a This is included in Global Notes only.

EXHIBIT B-1

FORM OF PRIVATE PLACEMENT LEGEND

THIS SECURITY AND THE COMMON STOCK ISSUABLE UPON CONVERSION OF THIS SECURITY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY APPLICABLE STATE SECURITIES LAWS, AND MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT IN ACCORDANCE WITH THE FOLLOWING SENTENCE. BY ITS ACQUISITION HEREOF OR OF A BENEFICIAL INTEREST HEREIN, THE ACQUIRER:

(1) REPRESENTS THAT:

(A) IT AND ANY ACCOUNT FOR WHICH IT IS ACTING IS A "QUALIFIED INSTITUTIONAL BUYER" (WITHIN THE MEANING OF RULE 144A UNDER THE SECURITIES ACT) AND THAT IT EXERCISES SOLE INVESTMENT DISCRETION WITH RESPECT TO EACH SUCH ACCOUNT, AND

(2) AGREES THAT IT WILL NOT DIRECTLY OR INDIRECTLY ENGAGE IN ANY HEDGING TRANSACTIONS INVOLVING THIS SECURITY OR THE COMMON STOCK ISSUABLE UPON CONVERSION OF THIS SECURITY UNLESS IN COMPLIANCE WITH THE SECURITIES ACT, AND

(3) AGREES FOR THE BENEFIT OF THE COMPANY THAT IT WILL NOT OFFER, SELL, PLEDGE OR OTHERWISE TRANSFER THIS SECURITY OR ANY BENEFICIAL INTEREST HEREIN, PRIOR TO THE DATE THAT IS THE LATER OF (X) TWO YEARS AFTER THE LATER OF THE ORIGINAL ISSUE DATE HEREOF AND THE LAST DATE ON WHICH THE COMPANY OR ANY AFFILIATE OF THE COMPANY WAS THE OWNER OF THIS SECURITY (OR ANY PREDECESSOR OF THIS SECURITY) OR SUCH SHORTER PERIOD OF TIME AS PERMITTED BY RULE 144(K) UNDER THE SECURITIES ACT OR ANY SUCCESSOR PROVISION THEREUNDER, AND (Y) SUCH LATER DATE, IF ANY, AS MAY BE REQUIRED BY APPLICABLE LAW, EXCEPT ONLY:

(A) TO THE COMPANY OR ANY SUBSIDIARY THEREOF;

(B) PURSUANT TO A REGISTRATION STATEMENT WHICH HAS BECOME EFFECTIVE UNDER THE SECURITIES ACT AND WHICH CONTINUES TO BE EFFECTIVE AT THE TIME OF TRANSFER;

(C) TO A QUALIFIED INSTITUTIONAL BUYER IN COMPLIANCE WITH RULE 144A UNDER THE SECURITIES ACT; OR

(D) PURSUANT TO AN EXEMPTION FROM REGISTRATION PROVIDED BY RULE 144 UNDER THE SECURITIES ACT (IF AVAILABLE).

PRIOR TO THE REGISTRATION OF ANY TRANSFER IN ACCORDANCE WITH (3)(C) ABOVE, A DULY COMPLETED AND SIGNED CERTIFICATE (THE FORM OF WHICH MAY BE OBTAINED FROM THE TRUSTEE) MUST BE DELIVERED TO THE TRUSTEE. PRIOR TO THE REGISTRATION OF ANY TRANSFER IN ACCORDANCE

WITH (3)(D) ABOVE, THE COMPANY AND THE TRUSTEE RESERVE THE RIGHT TO REQUIRE THE DELIVERY OF SUCH LEGAL OPINIONS, CERTIFICATIONS OR OTHER EVIDENCE AS MAY REASONABLY BE REQUIRED IN ORDER TO DETERMINE THAT THE PROPOSED TRANSFER IS BEING MADE IN COMPLIANCE WITH THE SECURITIES ACT AND APPLICABLE STATE SECURITIES LAWS. NO REPRESENTATION IS MADE AS TO THE AVAILABILITY OF ANY EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT.

EXHIBIT B-2

FORM OF LEGEND FOR GLOBAL SECURITY

Any Global Security authenticated and delivered hereunder shall bear a legend (which would be in addition to any other legends required in the case of a Restricted Security) in substantially the following form:

THIS SECURITY IS A GLOBAL SECURITY WITHIN THE MEANING OF THE INDENTURE HEREINAFTER REFERRED TO AND IS REGISTERED IN THE NAME OF A DEPOSITARY OR A NOMINEE OF A DEPOSITARY OR A SUCCESSOR DEPOSITARY. THIS SECURITY IS NOT EXCHANGEABLE FOR SECURITIES REGISTERED IN THE NAME OF A PERSON OTHER THAN THE DEPOSITARY OR ITS NOMINEE EXCEPT IN THE LIMITED CIRCUMSTANCES DESCRIBED IN THE INDENTURE, AND NO TRANSFER OF THIS SECURITY (OTHER THAN A TRANSFER OF THIS SECURITY AS A WHOLE BY THE DEPOSITARY TO A NOMINEE OF THE DEPOSITARY OR BY A NOMINEE OF THE DEPOSITARY TO THE DEPOSITARY OR ANOTHER NOMINEE OF THE DEPOSITARY) MAY BE REGISTERED EXCEPT IN THE LIMITED CIRCUMSTANCES DESCRIBED IN THE INDENTURE.

UNLESS THIS CERTIFICATE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY, A NEW YORK CORPORATION ("DTC"), TO THE COMPANY OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE, OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR IN SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO. OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.

TRANSFERS OF THIS GLOBAL SECURITY SHALL BE LIMITED TO TRANSFERS IN WHOLE, BUT NOT IN PART, TO NOMINEES OF CEDE & CO. OR TO A SUCCESSOR THEREOF OR SUCH SUCCESSOR'S NOMINEE AND TRANSFERS OF PORTIONS OF THIS GLOBAL SECURITY SHALL BE LIMITED TO TRANSFERS MADE IN ACCORDANCE WITH THE RESTRICTIONS SET FORTH IN SECTION 2.16 OF THE INDENTURE.

EXHIBIT C

FORM OF NOTICE OF TRANSFER PURSUANT TO REGISTRATION STATEMENT

LIGAND PHARMACEUTICALS INCORPORATED
10275 Science Center Drive
San Diego, California 92121

[Trustee]
[Address]

Attention:

Re: LIGAND PHARMACEUTICALS INCORPORATED (the "COMPANY") 6% Convertible Subordinated Notes due 2007 (the "SECURITIES")

Ladies and Gentlemen:

Please be advised that _____ has transferred $_____ aggregate principal amount of the Securities or __ shares of the Common Stock, $.001 par value per share, of the Company issuable on conversion of the Securities ("STOCK") pursuant to an effective Shelf Registration Statement on Form S-3 (File No. 333-_____).

We hereby certify that the prospectus delivery requirements, if any, of the

Securities Act of 1933 as amended, have been satisfied with respect to the transfer described above and that the above-named beneficial owner of the Securities or Stock is named as a "SELLING SECURITY HOLDER" in the Prospectus dated _____, or in amendments or supplements thereto, and that the aggregate principal amount of the Securities, or number of shares of Stock transferred are [a portion of] the Securities or Stock listed in such Prospectus, as amended or supplemented, opposite such owner's name.

Very truly yours,

(Name)

EXHIBIT D

FORM OF OPINION OF COUNSEL IN CONNECTION WITH REGISTRATION OF SECURITIES

[Name]
[Address]

Re: LIGAND PHARMACEUTICALS INCORPORATED (the "COMPANY") 6% Convertible Subordinated Notes due 2007 (the "SECURITIES")

Ladies and Gentlemen:

Reference is made to the Securities issued pursuant to a certain indenture dated as of November 26, 2002 by and between the Company and J.P. Morgan Trust Company, N.A., as trustee (the "TRUSTEE"). The Company issued $135,000,000 principal amount of Securities on November 26, 2002 (and an additional $20,250,000 on [_____], 2002 if the initial purchaser's over-allotment option is exercised) in transactions exempt from registration under the Securities Act of 1933, as amended (the "SECURITIES ACT"). The Company has filed with the Securities and Exchange Commission (the "SEC") a registration statement on Form S-3 (File No. 333-____) (the "REGISTRATION STATEMENT") relating to the registration under the Securities Act of $_____ principal amount of the Securities and the shares of Common Stock of the Company (the "SHARES") issuable upon conversion of the Securities being registered. The Registration Statement was declared effective by order of the SEC dated [_____].

We have acted as counsel for the Company in connection with the issuance of the Securities and the preparation and filing of the Registration Statement and are familiar with the Securities, the Indenture, the Registration Statement, the above-mentioned SEC order and such other documents as are necessary to render this opinion.

Based on the foregoing, it is our opinion that (1) the Registration Statement has become effective under the Securities Act and, to our knowledge, no stop order suspending the effectiveness of the Registration Statement has been issued, (2) assuming that the Securities covered by the Registration Statement and the Shares issuable upon conversion of such Securities are sold by a relevant Holder specified in the Registration Statement in a manner specified in the Registration Statement, such sale of the Securities and Shares issuable upon conversion of the Securities will have been duly registered under the Securities Act and (3) the Indenture has been duly qualified under the Trust Indenture Act of 1939, as amended.

Yours truly,

EXHIBIT 4.4

LIGAND PHARMACEUTICALS INCORPORATED

THIS SECURITY AND THE COMMON STOCK ISSUABLE UPON CONVERSION OF THIS SECURITY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY APPLICABLE STATE SECURITIES LAWS, AND MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT IN ACCORDANCE WITH THE FOLLOWING SENTENCE. BY ITS ACQUISITION HEREOF OR OF A BENEFICIAL INTEREST HEREIN, THE ACQUIRER:

(1) REPRESENTS THAT IT AND ANY ACCOUNT FOR WHICH IT IS ACTING IS A "QUALIFIED INSTITUTIONAL BUYER" (WITHIN THE MEANING OF RULE 144A UNDER THE SECURITIES ACT) AND THAT IT EXERCISES SOLE INVESTMENT DISCRETION WITH RESPECT TO EACH SUCH ACCOUNT, AND

(2) AGREES THAT IT WILL NOT DIRECTLY OR INDIRECTLY ENGAGE IN ANY HEDGING TRANSACTIONS INVOLVING THIS SECURITY OR THE COMMON STOCK ISSUABLE UPON CONVERSION OF THIS SECURITY UNLESS IN COMPLIANCE WITH THE SECURITIES ACT, AND

(3) AGREES FOR THE BENEFIT OF THE COMPANY THAT IT WILL NOT OFFER, SELL, PLEDGE OR OTHERWISE TRANSFER THIS SECURITY OR ANY BENEFICIAL INTEREST HEREIN, PRIOR TO THE DATE THAT IS THE LATER OF (X) TWO YEARS AFTER THE LATER OF THE ORIGINAL ISSUE DATE HEREOF AND THE LAST DATE ON WHICH THE COMPANY OR ANY AFFILIATE OF THE COMPANY WAS THE OWNER OF THIS SECURITY (OR ANY PREDECESSOR OF THIS SECURITY) OR SUCH SHORTER PERIOD OF TIME AS PERMITTED BY RULE 144(K) UNDER THE SECURITIES ACT OR ANY SUCCESSOR PROVISION THEREUNDER, AND (Y) SUCH LATER DATE, IF ANY, AS MAY BE REQUIRED BY APPLICABLE LAW, EXCEPT ONLY:

(A) TO THE COMPANY OR ANY SUBSIDIARY THEREOF;

(B) PURSUANT TO A REGISTRATION STATEMENT WHICH HAS BECOME EFFECTIVE UNDER THE SECURITIES ACT AND WHICH CONTINUES TO BE EFFECTIVE AT THE TIME OF TRANSFER;

(C) TO A QUALIFIED INSTITUTIONAL BUYER IN COMPLIANCE WITH RULE 144A UNDER THE SECURITIES ACT; OR

(D) PURSUANT TO AN EXEMPTION FROM REGISTRATION PROVIDED BY RULE 144 UNDER THE SECURITIES ACT (IF AVAILABLE).

PRIOR TO THE REGISTRATION OF ANY TRANSFER IN ACCORDANCE WITH (3)(C) ABOVE, A DULY COMPLETED AND SIGNED CERTIFICATE (THE FORM OF WHICH MAY BE OBTAINED FROM THE TRUSTEE) MUST BE DELIVERED TO THE TRUSTEE. PRIOR TO THE REGISTRATION OF ANY TRANSFER IN ACCORDANCE WITH (3)(D) ABOVE, THE COMPANY AND THE TRUSTEE RESERVE THE RIGHT TO REQUIRE THE DELIVERY OF SUCH LEGAL OPINIONS, CERTIFICATIONS OR OTHER EVIDENCE AS MAY REASONABLY BE REQUIRED IN ORDER TO DETERMINE THAT THE PROPOSED TRANSFER IS BEING MADE IN COMPLIANCE WITH THE SECURITIES ACT AND APPLICABLE STATE SECURITIES LAWS. NO REPRESENTATION IS MADE AS TO THE AVAILABILITY OF ANY EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT.

THIS SECURITY IS A GLOBAL SECURITY WITHIN THE MEANING OF THE INDENTURE HEREINAFTER REFERRED TO AND IS REGISTERED IN THE NAME OF A DEPOSITARY OR A NOMINEE OF A DEPOSITARY OR A SUCCESSOR DEPOSITARY. THIS SECURITY IS NOT EXCHANGEABLE FOR SECURITIES REGISTERED IN THE NAME OF A PERSON OTHER THAN THE DEPOSITARY OR ITS NOMINEE EXCEPT IN THE LIMITED CIRCUMSTANCES DESCRIBED IN THE INDENTURE, AND NO TRANSFER OF THIS SECURITY (OTHER THAN A TRANSFER OF THIS SECURITY AS A WHOLE BY THE DEPOSITARY TO A NOMINEE OF THE DEPOSITARY OR BY A NOMINEE OF THE DEPOSITARY TO THE DEPOSITARY OR ANOTHER NOMINEE OF THE DEPOSITARY) MAY BE REGISTERED EXCEPT IN THE LIMITED CIRCUMSTANCES DESCRIBED IN THE INDENTURE.

UNLESS THIS CERTIFICATE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY, A NEW YORK CORPORATION ("DTC"), TO THE COMPANY OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE, OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR IN SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO. OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.

TRANSFERS OF THIS GLOBAL SECURITY SHALL BE LIMITED TO TRANSFERS IN WHOLE,

BUT NOT IN PART, TO NOMINEES OF CEDE & CO. OR TO A SUCCESSOR THEREOF OR SUCH SUCCESSOR'S NOMINEE AND TRANSFERS OF PORTIONS OF THIS GLOBAL SECURITY SHALL BE LIMITED TO TRANSFERS MADE IN ACCORDANCE WITH THE RESTRICTIONS SET FORTH IN SECTION 2.16 OF THE INDENTURE.

Certificate No. N-1

6% CONVERTIBLE SUBORDINATED NOTE DUE 2007
CUSIP NO. 53220KAA6

LIGAND PHARMACEUTICALS INCORPORATED, a Delaware corporation (herein called the "COMPANY"), for value received, hereby promises to pay to Cede & Co. or registered assigns, the principal sum of _____ ($_____) on November 16, 2007, and to pay interest thereon, as provided on the reverse hereof, until the principal and any unpaid and accrued interest is paid or duly provided for. The right to payment of the principal and all other amounts due with respect hereto is subordinated to the rights of Senior Indebtedness as set forth in the Indenture referred to on the reverse side hereof.

Interest Payment Dates: May 16 and November 16, with the first payment to be made on May 16, 2003.

Record Dates: May 1 and November 1.

The provisions on the back of this certificate are incorporated as if set forth on the face hereof.

IN WITNESS WHEREOF, LIGAND PHARMACEUTICALS INCORPORATED has caused this instrument to be duly signed.

LIGAND PHARMACEUTICALS INCORPORATED

By:

Name: Paul V. Maier
Title: Senior Vice President and Chief Financial Officer

Dated: November 26, 2002

TRUSTEE'S CERTIFICATE OF AUTHENTICATION

This is one of the Securities referred to in the within-mentioned Indenture.

J.P. MORGAN TRUST COMPANY, NATIONAL ASSOCIATION, as Trustee

By:

Authorized Signatory

Dated: _____

[REVERSE OF SECURITY]

LIGAND PHARMACEUTICALS INCORPORATED

6% CONVERTIBLE SUBORDINATED NOTE DUE 2007

1. INTEREST. LIGAND PHARMACEUTICALS INCORPORATED, a Delaware corporation (the "COMPANY"), promises to pay interest on the principal amount of this Security at the rate PER ANNUM shown above. The Company will pay interest semi-annually on May 16 and November 16 of each year, with the first payment to be made on May 16, 2003. Interest on the Securities will accrue on the principal amount from the most recent date to which interest has been paid or provided for or, if no interest has been paid, from November 26, 2002. Interest will be computed on the basis of a 360-day year of twelve 30-day months.

The Holder of this Security is entitled to the benefits of the Pledge Agreement, dated November 26, 2002, between the Company and the Trustee, pursuant to which the Company has placed in the Pledge Account cash or Pledged Financial Assets sufficient to provide for the payment of the first four interest payments on this Security. The terms capitalized but undefined in this paragraph have the meanings given to them in the Pledge Agreement.

2. MATURITY. The Notes will mature on November 16, 2007.

3. METHOD OF PAYMENT. The Company will pay interest on the Securities (except defaulted interest) to the persons who are registered Holders of Securities at the close of business on the record date set forth on the face of this Security next preceding the applicable interest payment date. Holders must surrender Securities to a Paying Agent to collect the principal, Redemption Price or Repurchase Price of the Securities. The Company will pay all amounts due with respect to the Securities in money of the United States that at the time of payment is legal tender for payment of public and private debts. If this Security is in global form, the Company will pay interest on the Securities by wire transfer of immediately available funds to the account specified by the Holder. With respect to securities held other than in global form, the Company will make payments by wire transfer of immediately available funds to the account specified by the Holders thereof or, if no such account is specified with respect to a Holder, by mailing a check to the Holder's registered address.

4. PAYING AGENT, REGISTRAR, CONVERSION AGENT. Initially, J.P. Morgan Trust Company, National Association, (the "TRUSTEE") will act as Paying Agent, Registrar and Conversion Agent. The Company may change any Paying Agent, Registrar or Conversion Agent without notice. The Company or any Affiliate of the Company may act as Paying Agent.

5. INDENTURE. The Company issued the Securities under an Indenture dated as of November 26, 2002 (the "INDENTURE") between the Company and the Trustee. The terms of the Securities include those stated in the Indenture and those made part of the Indenture by reference to the Trust Indenture Act of 1939 (15 U.S. Code ss.ss. 77aaa-77bbbb) (the "ACT") as in effect on the date of the Indenture. The Securities are subject to all such terms, and Securityholders are

referred to the Indenture and the Act for a statement of such terms. The Securities are general unsecured senior subordinated obligations of the Company limited to $135,000,000 aggregate principal amount ($155,250,000 if the Initial Purchaser (as defined in the Indenture) has elected to exercise its over-allotment option to purchase an additional $20,250,000 of the Securities), except as otherwise provided in the Indenture (except for Securities issued in substitution for destroyed, mutilated, lost or stolen Securities). Terms used herein which are defined in the Indenture have the meanings assigned to them in the Indenture.

6. OPTIONAL REDEMPTION. The Securities will be redeemable prior to maturity at the option of the Company, in whole or in part, at any time on or after November 22, 2005, at the following redemption prices (expressed as percentages of the principal amount thereof), if redeemed during the periods commencing on the dates set forth below, in each case together with accrued and unpaid interest to, but excluding, the redemption date:

<TABLE>
<CAPTION>

Date	Redemption Price
<S>	<C>

November 22, 2005	102.40%
November 16, 2006 and thereafter	101.20%

</TABLE>

7. NOTICE OF REDEMPTION. Notice of redemption will be mailed at least 30 days but not more than 60 days before the redemption date to each Holder of Securities to be redeemed at its registered address. Securities in denominations larger than $1,000 principal amount may be redeemed in part but only in positive integral multiples of $1,000 principal amount. On and after the redemption date interest ceases to accrue on Securities or portions of them called for redemption.

8. REPURCHASE AT OPTION OF HOLDER. In the event of a Change in Control with respect to the Company, then each Holder of the Securities shall have the right, at the Holder's option, subject to the rights of the holders of Senior Indebtedness under ARTICLE XI of the Indenture, to require the Company to repurchase such Holder's Securities including any portion thereof which is $1,000 in principal amount or any positive integral multiple thereof on a day (the "REPURCHASE DATE") that is 30 business days after the date of the Change in Control Notice, unless otherwise required by applicable law, at a price equal to 100% of the outstanding principal amount of such Security, plus accrued and unpaid interest to, but excluding, the Repurchase Date.

Within 30 business days after the occurrence of the Change in Control, the Company is obligated to give notice of the occurrence of such Change in Control to each Holder. Such notice shall include, among other things, the date by which Holder must notify the Company of such Holder's intention to exercise the Repurchase Right and of the procedure which such Holder must follow to exercise such right. To exercise the Repurchase Right, a Holder of Securities

must deliver on or before the close of business on the third business day immediately preceding the Repurchase Date written notice to the Company (or an agent designated by the Company for such purpose) and the Trustee of the Holder's exercise of such right together with the Securities with respect to which the right is being exercised, duly endorsed for transfer in accordance with the provisions of the Indenture.

A "CHANGE IN CONTROL" of the Company shall be deemed to have occurred at such time as:

(i) any "person" or "group" (as such terms are used for purposes of Sections 13(d) and 14(d) of the Exchange Act), is or becomes the "beneficial owner" (as such term is used in Rule 13d-3 under the Exchange Act), directly or indirectly, of 50% or more of the voting power of the Company's Common Stock or other capital stock into which our common stock is reclassified or changed; or

(ii) at any time the following persons cease for any reason to constitute a majority of our board of directors:

(1) individuals who on the issue date of the convertible notes constituted our board of directors and

(2) any new directors whose election by our board of directors or whose nomination for election by our stockholders was approved by at least a majority of the directors then still in office who were either directors on the issue date of the convertible notes or whose election or nomination for election was previously so approved; or

(iii) the sale, lease or transfer of all or substantially all of the assets of the Company to any "person" or "group" (as such terms are used in Sections 13(d) and 14(d) of the Exchange Act).

However, a Change in Control will not be deemed to have occurred if either:

(X) the last sale price of the Company's Common Stock for any five trading days during the ten trading days immediately preceding the Change in

Control is at least equal to 105% of the then effective conversion price on the date of such trading day; or

(Y) in the case of a merger or consolidation, all of the consideration (excluding cash payments for fractional shares and cash payments pursuant to dissenters' appraisal rights) in the merger or consolidation constituting the Change in Control consists of common stock traded on a U.S. national securities exchange or quoted on the NNM (or which will be so traded or quoted when issued or exchanged in connection with such Change in Control) and as a result of such transaction or transactions the Securities become convertible solely into such common stock.

9. CONVERSION. A Holder may convert his or her Security into Common Stock of the Company at any time prior to the close of business on November 16, 2007, or, (x) if the Security is called for redemption by the Company, the Holder may convert it at any time before the close of business on the business day immediately preceding the date fixed for such redemption, or (y) if the Security is to be repurchased by the Company pursuant to PARAGRAPH 8 hereof, the Holder may convert it at any time before the close of business on the business day immediately preceding the Repurchase Date. The initial conversion rate is 161.9905 shares of Common Stock per $1,000 principal amount of Securities, or an effective initial conversion price of approximately $6.17 per share, subject to adjustment in the event of certain circumstances as specified in the Indenture. The Company will deliver a check in lieu of any fractional share. On conversion no payment or adjustment for any unpaid and accrued interest, or liquidated damages with respect to, the Securities will be made. If a Holder surrenders a Security for conversion between the record date for the payment of interest and the next interest payment date, such Security, when surrendered for conversion, must be accompanied by payment of an amount equal to the interest thereon which the registered Holder on such record date is to receive, unless the Securities have been called for redemption as described in the Indenture.

To convert a Security, a Holder must (1) complete and sign the Conversion Notice, with appropriate signature guarantee, on the back of the Security, (2) surrender the Security to a Conversion Agent, (3) furnish appropriate endorsements and transfer documents if required by the Registrar or Conversion Agent, (4) pay the amount of interest, if any, the Holder may be paid as provided in the last sentence of the above paragraph and (5) pay any transfer or similar tax if required. A Holder may convert a portion of a Security if the portion is $1,000 principal amount or a positive integral multiple of $1,000 principal amount.

Any shares issued upon conversion of a Security shall bear the Private Placement Legend until after the second anniversary of the later of the issue date for the Securities and the last date on which the Company or any Affiliate of the Company was the owner of such shares or the Security (or any predecessor security) from which such shares were converted (or such shorter period of time as permitted by Rule 144(k) under the Securities Act or any successor provision thereunder) (or such longer period of time as may be required under the Securities Act or applicable state securities laws in the Opinion of Counsel for the Company, unless otherwise agreed by the Company and the Holder thereof).

10. SUBORDINATION. The Securities are subordinated in right of payment, in the manner and to the extent set forth in the Indenture, to the prior payment in full of all Senior Indebtedness. Each Holder by accepting a Security agrees to such subordination and authorizes the Trustee to give it effect.

11. DENOMINATIONS, TRANSFER, EXCHANGE. The Securities are in registered form without coupons in denominations of $1,000 principal amount and positive integral multiples of $1,000 principal amount. The transfer of Securities may be registered and Securities may be exchanged as provided in the Indenture. The Registrar may require a Holder, among other things, to furnish appropriate endorsements and transfer documents. No service charge shall be made for any such registration of transfer or exchange, but the Company may require payment of

a sum sufficient to cover any tax or other governmental charge payable in connection therewith. The Registrar need not exchange or register the transfer of any Security selected for redemption in whole or in part, except the unredeemed portion of Securities to be redeemed in part. Also, it need not

exchange or register the transfer of any Securities for a period of 15 days before the mailing of a notice of redemption of the Securities selected to be redeemed and in certain other circumstances provided in the Indenture.

12. PERSONS DEEMED OWNERS. The registered Holder of a Security may be treated as the owner of such Security for all purposes.

13. MERGER OR CONSOLIDATION. The Company shall not consolidate with or merge into, or transfer or lease all or substantially all of its properties and assets to, another person unless such other person is a corporation organized under the laws of the United States, any State thereof or the District of Columbia or a corporation or comparable legal entity organized under the laws of a foreign jurisdiction and whose equity securities are listed on a national securities exchange in the United States or authorized for quotation on the NNM prior to or upon giving effect to the transaction (PROVIDED HOWEVER, that in the case of a transaction where the surviving entity is organized under the laws of a foreign jurisdiction, the Company may not consummate the transaction without first (i) making provision for the satisfaction of its obligations to repurchase Securities following a Change in Control, if any, and (ii) obtaining an opinion of tax counsel experienced in such matters to the effect that, under then existing United States federal income tax laws, there would be no material adverse tax consequences to holders of the Securities resulting from such transaction); such person assumes by supplemental indenture all the obligations of the Company, under the Securities and this Indenture; and immediately after giving effect to the transaction, no Default or Event of Default shall exist.

14. AMENDMENTS, SUPPLEMENTS AND WAIVERS. Subject to certain exceptions, the Indenture or the Securities may be amended or supplemented with the consent of the Holders of at least a majority in aggregate principal amount of the Securities then outstanding, and any existing Default or Event of Default may be waived with the consent of the Holders of a majority in aggregate principal amount of the Securities then outstanding. Without notice to or the consent of any Securityholder, the Indenture or the Securities may be amended or supplemented to cure any ambiguity or inconsistency, to comply with SECTIONS 5.01 and 10.12 of the Indenture, to make any changes or modifications to the Indenture necessary in connection with the registration of the Securities under the Securities Act and the qualification of the Indenture under the TIA, to secure the obligations of the Company in respect of the Securities, or to add to covenants of the Company described in the Indenture for the benefit of Securityholders or to surrender any right or power conferred upon the Company.

15. DEFAULTS AND REMEDIES. An Event of Default includes the occurrence of any of the following: default in payment of principal at maturity, upon redemption or exercise of a Repurchase Right or otherwise; default for 30 days in payment of interest or other amounts due, provided that a failure to make any of the first four scheduled interest payments on any Security within three (3) business days after the applicable interest payment dates will constitute an Event of Default with no additional grace or cure period; failure by the Company for 60 days after

notice to it to comply with any of its other agreements in the Indenture or the Securities; certain payment defaults or the acceleration of other Indebtedness of the Company and its subsidiaries; certain events of bankruptcy or insolvency involving the Company or its Significant Subsidiaries; the Pledge Agreement cease to be in full force and effect or enforceable in accordance with its terms; and default by the Company or failure by the Company to comply with the Pledge Agreement or the Control Agreement, with no additional grace or cure period. If any Event of Default occurs and is continuing, the Trustee or the Holders of at least 25% in aggregate principal amount of the Securities then outstanding may declare all the Securities to be due and payable immediately, except as provided in the Indenture. If an Event of Default specified in SECTION 6.01(V) or (VI) of the Indenture with respect to the Company occurs, the principal of and accrued interest on all the Securities shall IPSO FACTO become and be immediately due and payable without any declaration or other act on the part of the Trustee or any Securityholder. Securityholders may not enforce the Indenture or the Securities except as provided in the Indenture. The Trustee may require indemnity satisfactory to it before it enforces the Indenture or the Securities. Subject to certain limitations, Holders of a majority in principal amount of the Securities then outstanding may direct the Trustee in its exercise of any trust or power. The Trustee may withhold from Securityholders notice of any continuing Default or Event of Default (except a Default or Event of Default in payment) if it determines that withholding notice is in the interests of the

Securityholders. The Company must furnish an annual compliance certificate to the Trustee.

16. REGISTRATION RIGHTS. The Holders are entitled to registration rights as set forth in the Registration Rights Agreement (as defined in the Indenture). The Holders shall be entitled to receive liquidated damages in certain circumstances, all as set forth in the Registration Rights Agreement.

17. TRUSTEE DEALINGS WITH THE COMPANY. The Trustee under the Indenture, or any banking institution serving as successor Trustee thereunder, in its individual or any other capacity, may make loans to, accept deposits from, and perform services for the Company or its Affiliates, and may otherwise deal with the Company or its Affiliates, as if it were not Trustee.

18. NO RECOURSE AGAINST OTHERS. No past, present or future director, officer, employee or stockholder, as such, of the Company shall have any liability for any obligations of the Company under the Securities or the Indenture or for any claim based on, in respect of or by reason of such obligations or their creation. Each Securityholder by accepting a Security waives and releases all such liability. The waiver and release are part of the consideration for the issue of the Securities.

19. AUTHENTICATION. This Security shall not be valid until authenticated by the manual signature of the Trustee or an authenticating agent.

20. ABBREVIATIONS. Customary abbreviations may be used in the name of a Securityholder or an assignee, such as: TEN COM (= tenants in common), TEN ENT (= tenants by the entirety), JT TEN (= joint tenants with right of survivorship and not as tenants in common), CUST (= Custodian), and U/G/M/A (Uniform Gifts to Minors Act).

THE COMPANY WILL FURNISH TO ANY SECURITYHOLDER UPON WRITTEN REQUEST AND WITHOUT CHARGE A COPY OF THE INDENTURE. REQUESTS MAY BE MADE TO:

Ligand Pharmaceuticals Incorporated
10275 Science Center Drive
San Diego, California 92121-1117
Facsimile: (858) 550-1825
Attention: President & Chief Executive Officer

[FORM OF ASSIGNMENT]

I or we assign to

PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER

- ----------

- ----------
(please print or type name and address)

- ----------

- ----------
the within Security and all rights thereunder, and hereby irrevocably constitutes and appoints

- ----------
Attorney to transfer the Security on the books of the Company with full power of substitution in the premises.

Dated:

---------- ----------

NOTICE: The signature on this assignment must correspond with the name as it appears upon the face of the within Security in every particular without alteration or enlargement or any change whatsoever and be guaranteed by a

guarantor institution participating in the Securities Transfer Agents Medallion Program or in such other guarantee program acceptable to the Trustee.

Signature Guarantee:

In connection with any transfer of this Security occurring prior to the date which is the earlier of (i) the date of the declaration by the Commission of the effectiveness of a registration statement under the Securities Act of 1933, as amended (the "SECURITIES ACT") covering resales of this Security (which effectiveness shall not have been suspended or terminated at the date of the transfer) and (ii) the Resale Restriction Termination Date, the undersigned confirms that it has not utilized any general solicitation or general advertising in

connection with transfer:

[Check One]

(1) ____ to the Company or any subsidiary thereof; or

(2) ____ pursuant to and in compliance with Rule 144A under the Securities Act of 1933, as amended; or

(3) ____ pursuant to the exemption from registration provided by Rule 144 under the Securities Act of 1933, as amended; or

(4) ____ pursuant to an effective registration statement under the Securities Act of 1933, as amended.

and unless the box below is checked, the undersigned confirms that such Security is not being transferred to an "affiliate" of the Company as defined in Rule 144 under the Securities Act of 1933, as amended (an "AFFILIATE"):

_____The transferee is an Affiliate of the Company. (If the Security is transferred to an Affiliate, the restrictive legend must remain on the Security for two years following the date of the transfer).

Unless one of the items is checked, the Trustee will refuse to register any of the Securities evidenced by this certificate in the name of any person other than the registered Holder thereof; PROVIDED, HOWEVER, that if item (3) or (4) is checked, the Company or the Trustee may require, prior to registering any such transfer of the Securities, in their sole discretion, such written legal opinions, certifications and other information as the Trustee or the Company have reasonably requested to confirm that such transfer is being made pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act of 1933, as amended.

If none of the foregoing items are checked, the Trustee or Registrar shall not be obligated to register this Security in the name of any person other than the Holder hereof unless and until the conditions to any such transfer of registration set forth herein and in SECTION 2.16 of the Indenture shall have been satisfied.

Dated: ---------- Signed: ----------

(Sign exactly as name appears on the other side of this Security)

Signature Guarantee:

TO BE COMPLETED BY PURCHASER IF (2) ABOVE IS CHECKED

The undersigned represents and warrants that it is purchasing this Security for its own account or an account with respect to which it exercises sole investment discretion and that it and any such account is a "qualified institutional buyer" within the meaning of Rule 144A under the Securities Act of

1933, as amended, and is aware that the sale to it is being made in reliance on Rule 144A and acknowledges that it has received such information regarding the Company as the undersigned has requested pursuant to Rule 144A or has determined transferor is relying upon the undersigned's foregoing representations in order to claim the exemption from registration provided by Rule 144A.

Dated:

---------- ----------

NOTICE: To be executed by an executive officer

CONVERSION NOTICE

To convert this Security into Common Stock of the Company, check the box:_____

To convert only part of this Security, state the principal amount to be converted (must be in multiples of $1,000):

$_____

If you want the stock certificate made out in another person's name, fill in the form below:

- ----------

(Insert other person's soc. sec. or tax I.D. no.)

- ----------

- ----------

- ----------

- ----------

(Print or type other person's name, address and zip code)

- ----------

Date:_____ Signature(s):

(Sign exactly as your name(s) appear(s) on the other side of this Security)

Signature(s) guaranteed by:

(All signatures must be guaranteed by a guarantor institution participating in the Securities Transfer Agents Medallion Program or in such other guarantee program acceptable to the Trustee.)

OPTION OF HOLDER TO ELECT PURCHASE NOTICE

Certificate No. of Security: _____

If you want to elect to have this Security purchased by the Company pursuant to SECTION 3.08 of the Indenture, check the box:

If you want to elect to have only part of this Security purchased by the Company pursuant to SECTION 3.08 of the Indenture, state the principal amount:

$_____
(in an integral multiple of $1,000)

Date:_____ Signature(s):

(Sign exactly as your name(s) appear(s) on the other side of this Security)

Signature(s) guaranteed by:

(All signatures must be guaranteed by a guarantor institution participating in the Securities Transfer Agents Medallion Program or in such other guarantee program acceptable to the Trustee.)

SCHEDULE A

SCHEDULE OF EXCHANGES OF INTERESTS IN THE GLOBAL SECURITYa.

The following exchanges of a part of this Global Security for an interest in another Global Security or for Securities in certificated form, have been made:

<TABLE>
<CAPTION>

Date of Exchange	Amount of decrease in Principal amount of this Global Security	Amount of increase in Principal amount of this Global Security	Principal amount of this Global Security following such decrease (or increase)	Signature or authorized signatory of Trustee or Note Custodian
<S>	<C>	<C>	<C>	<C>

</TABLE>

- ---
a This is included in Global Notes only.

EXHIBIT 4.5

PLEDGE AGREEMENT

This PLEDGE AGREEMENT (this "PLEDGE AGREEMENT") is made and entered into as of November 26, 2002 by and between LIGAND PHARMACEUTICALS INCORPORATED, a Delaware corporation (the "PLEDGOR"), and J.P. MORGAN TRUST COMPANY, NATIONAL ASSOCIATION, a national banking association (the "TRUSTEE"), in its capacity as trustee for the holders from time to time (the "HOLDERS") of the Notes (as defined below) issued by the Pledgor under the Indenture (as defined below), and as collateral agent for the Holders. Capitalized terms used herein without definition shall have the respective meanings ascribed to them in the Indenture.

W I T N E S S E T H

WHEREAS, the Pledgor and UBS Warburg LLC (the "INITIAL PURCHASER") are parties to a Purchase Agreement, dated as of November 21, 2002 (the "PURCHASE AGREEMENT"), pursuant to which the Pledgor will issue and sell to the Initial Purchaser $135,000,000 aggregate principal amount of 6% Convertible Subordinated Notes due 2007 (the "FIRM NOTES") and pursuant to which the Pledgor has granted to the Initial Purchaser an option to purchase up to an additional $20,250,000 aggregate principal amount of the Notes (the "ADDITIONAL NOTES" and, together with the Firm Notes, the "NOTES");

WHEREAS, the Pledgor and the Trustee are simultaneously herewith entering into that certain Indenture, dated as of the date hereof (such Indenture, as amended, restated, supplemented or otherwise modified from time to time, the "INDENTURE"), pursuant to which the Pledgor is issuing the Firm Notes on the date hereof;

WHEREAS, the Pledgor is, or will be, the beneficial owner of certain security entitlements (the "PLEDGED SECURITY ENTITLEMENTS") with respect to (i) the United States Treasury securities identified by CUSIP number in SCHEDULE I hereto and credited to the Trustee's account with JPMorgan Chase Bank (the "ACCOUNT INTERMEDIARY"), ABA No. 021000021, BNF: CTCC Operating Acct, A/C: 507-874-439, Ref.: Ligand Pharmaceuticals Incorporated Pledge Account at its office at New York City, in the name of "J.P. Morgan Trust Company, National Association, as Trustee for the ratable benefit of the Holders of the 6% Convertible Subordinated Notes due 2007 of Ligand Pharmaceuticals Incorporated, Collateral Pledge Account" (the "PLEDGE ACCOUNT"); and (ii) all other financial assets credited from time to time to the Pledge Account (collectively with the assets described in clause (i) above, the "PLEDGED FINANCIAL ASSETS");

WHEREAS, to secure the obligations of the Pledgor under this Pledge Agreement, the Registration Rights Agreement, the Indenture and the Notes to pay in full each of the first four scheduled interest payments, including Liquidated Damages (as defined in Section 19(f)(ii)), if any, on the Notes when due and to secure repayment of a portion of the principal, premium (if any) and interest on the Notes in the event that the Notes become due and payable prior to such time as the first four scheduled interest payments thereon shall have been paid in full (collectively, the "OBLIGATIONS"), the Pledgor has agreed to pledge to the Trustee for the ratable

benefit of the Holders of the Notes a security interest in the Collateral (as defined below) securing the payment and performance by the Pledgor of all of the Obligations;

WHEREAS, it is a condition precedent to the initial purchase of the Notes by the Initial Purchaser that the Pledgor shall have executed and delivered this Pledge Agreement; and

WHEREAS, unless otherwise defined herein or in the Indenture, terms defined in Article 8 or 9 of the UCC (as defined below) and/or in the Federal Book Entry Regulations (as defined below) are used in this Pledge Agreement as such terms are defined in such Article 8 or 9 and/or the Federal Book Entry Regulations. The term "UCC" shall mean the Uniform Commercial Code as in effect, from time to time, in the State of New York; PROVIDED, that if perfection or the effect of perfection or non-perfection or the priority of any security interest in any Collateral (as defined below) is governed by the Uniform Commercial Code as in effect in a jurisdiction other than the State of New York, "UCC" shall mean the Uniform Commercial Code as in effect, from time to time, in such other jurisdiction for purposes of the provisions hereof related to such perfection or

the effect of perfection or non-perfection or priority. The term "FEDERAL BOOK ENTRY REGULATIONS" shall mean (i) the federal regulations contained in Subpart B governing book-entry securities consisting of U.S. Treasury bonds, notes and bills and Subpart D of 31 C.F.R. Part 357, 31 C.F.R. Section 357.2, Section 357.10 through Section 357.14 and Section 357.41 through Section 357.44; and (ii) to the extent substantially identical to the federal regulations referred to in clause (i) above (as in effect from time to time), the federal regulations governing other book-entry securities.

A G R E E M E N T

NOW, THEREFORE, in consideration of the premises contained herein, and in order to induce the Holders to purchase the Notes, the Pledgor hereby agrees with the Trustee, for the ratable benefit of the Holders of the Notes, as follows:

SECTION 1. PLEDGE AND GRANT OF SECURITY INTEREST. The Pledgor hereby pledges to the Trustee, for the ratable benefit of the Holders of the Notes, and hereby grants to the Trustee, a security interest and continuing lien in all of the Pledgor's right, title and interest in and to the following, in each case, as to each type of property described below, whether now owned or hereafter acquired by the Pledgor, wherever located and whether now or hereafter existing or arising (hereinafter collectively referred to as the "COLLATERAL"):

(a) the Pledged Financial Assets and the certificates, if any, representing the Pledged Financial Assets, and all dividends, interest, money (as defined in the UCC), instruments (as defined in the UCC, the "INSTRUMENTS") and other property from time to time received, receivable or otherwise distributed or distributable in respect of, or in exchange for, any or all of the Pledged Financial Assets;

(b) the Pledge Account and all security entitlements with respect thereto, all Pledged Security Entitlements with respect to all Pledged Financial Assets from time to time credited to the Pledge Account, any and all securities accounts in which the Pledged Security Entitlements are carried and all dividends, interest, cash, instruments and other

property from time to time received, receivable or otherwise distributed or distributable in respect of, or in exchange for, any or all of the Pledged Security Entitlements;

(c) all other securities, securities entitlements and other financial assets hereafter acquired by the Pledgor pursuant to Article XII of the Indenture; and

(d) all proceeds of any and all of the foregoing Collateral (including, without limitation, proceeds that constitute property of the types described in subsections (a), (b) and/or (c) of this Section 1) and, to the extent not otherwise included, all cash.

SECTION 2. SECURITY FOR OBLIGATIONS. This Pledge Agreement secures, and the Collateral is collateral security for, the prompt and complete payment and performance when due (whether at stated maturity, by acceleration or otherwise) of all the Obligations, whether for principal, interest, fees or otherwise, now or hereafter existing, under this Pledge Agreement, the Notes, the Registration Rights Agreement or the Indenture (all such obligations, collectively, the "SECURED OBLIGATIONS"). Without limiting the generality of the foregoing, this Pledge Agreement secures, and the Collateral is collateral security for, the payment of all amounts that constitute part of the Secured Obligations and would be owed by the Pledgor to the Holders of the Notes or to the Trustee on behalf of the Holders of the Notes under this Pledge Agreement, the Notes, the Registration Rights Agreement or the Indenture but for the fact that such amounts are unenforceable or not allowable due to the existence of a bankruptcy, reorganization or similar proceeding involving the Pledgor.

SECTION 3. MAINTAINING THE PLEDGE ACCOUNT. So long as any Secured Obligation shall remain outstanding:

(a) The Trustee shall separately maintain the Pledge Account with the

Account Intermediary.

(b) Notwithstanding any term or condition to the contrary in any other agreement relating to the Pledge Account, and except as otherwise provided by the provisions of Section 5 and Section 18 hereof, no funds shall be paid or released to or for the account of, or withdrawn by or for the account of, the Pledgor or any other "PERSON" (as defined in the Indenture) from the Pledge Account.

The Pledge Account shall be subject to such applicable laws, and such applicable regulations of the Board of Governors of the Federal Reserve System and of any other appropriate banking or governmental authority, as may now or hereafter be in effect.

SECTION 4. DELIVERY OF COLLATERAL.

(a) All cash, certificates or instruments representing or evidencing the Pledged Financial Assets, the Pledged Security Entitlements or the Pledge Account shall be delivered to, and held by or on behalf of, the Trustee pursuant hereto and shall be in suitable form for transfer by delivery, or shall be accompanied by duly executed instruments of transfer or assignment in blank, all in form and substance satisfactory to

the Trustee. The Trustee shall have the right, at any time in its discretion and without notice to the Pledgor, to transfer to, or to register in the name of, the Trustee or any of its nominees any or all of the Collateral. In addition, the Trustee shall have the right at any time to exchange certificates or instruments representing or evidencing any or all of the Collateral for certificates or instruments of smaller or larger denominations. The Trustee shall have the right at any time to convert Collateral consisting of financial assets credited to the Pledge Account to Collateral consisting of financial assets held directly by the Trustee, and to convert Collateral consisting of financial assets held directly by the Trustee to Collateral consisting of financial assets credited to the Pledge Account.

(b) With respect to any Collateral in which the Pledgor has any right, title or interest and that constitutes an uncertificated security, the Pledgor shall cause the issuer thereof either (i) to register the Trustee as the registered owner of such security or (ii) to agree in writing with the Pledgor and the Trustee that such issuer will comply with instructions with respect to such security originated by the Trustee without further consent of the Pledgor, such agreement to be in form and substance satisfactory to the Trustee.

(c) With respect to any Collateral in which the Pledgor has any right, title or interest and that constitutes a security entitlement, the Pledgor shall cause the securities intermediary with respect to such security entitlement either (i) to identify in its records the Trustee as the entitlement holder of such security entitlement against such securities intermediary or (ii) to agree in writing with the Pledgor and the Trustee that such securities intermediary will comply with entitlement orders (that is, notifications communicated to such securities intermediary directing the transfer or redemption of the financial asset to which the Pledgor has a security entitlement) originated by the Trustee without further consent of the Pledgor, such agreement to be in substantially the form of ANNEX A hereto or otherwise in form and substance satisfactory to the Trustee.

(d) With respect to any Collateral that constitutes a securities account, the Pledgor shall comply with subsection (c) of this Section 4 with respect to all security entitlements carried in such securities account.

(e) Prior to, or concurrently with, the execution and delivery hereof, and prior to the transfer to the Trustee of the Pledged Security Entitlements, as provided in subsections (a) through (c), inclusive, of

this Section 4, the Trustee shall establish the Pledge Account with the Account Intermediary. Upon transfer of the Pledged Financial Assets to the Trustee, as confirmed to the Trustee by the securities intermediary, the Trustee shall make appropriate book entries indicating that the Pledged Financial Assets have been credited to, and are held in, the Pledge Account. Subject to the other terms and conditions of this Pledge Agreement, all funds or other property held by the Trustee pursuant to this Pledge Agreement shall be held in the Pledge Account subject (except as expressly provided in subsections (a), (b) and (c) of Section 5 hereof) to the exclusive dominion and control of the Trustee and exclusively for the ratable benefit of the Holders of the Notes and segregated from all other funds or other property otherwise held by the Trustee.

(f) All Collateral shall be retained in the Pledge Account pending disbursement pursuant to the terms hereof.

(g) Concurrently with the execution and delivery of this Pledge Agreement, the Trustee and the Account Intermediary are delivering to the Pledgor a duly executed Control Agreement (the "CONTROL AGREEMENT"), in the form of ANNEX A attached hereto.

(h) The Trustee shall deliver to the Pledgor and the Initial Purchaser, concurrently with the execution and delivery of this Pledge Agreement and concurrently with the execution of each and any supplement to this Pledge Agreement, in each case, a duly executed certificate, in the form of ANNEX B attached hereto, of a duly appointed, qualified and acting officer of the Trustee.

(i) Concurrently with the execution and delivery of this Pledge Agreement, the Pledgor shall deliver to the Trustee acknowledgment copies or stamped receipt copies of proper financing statements, duly filed on or before the date hereof under the UCC, covering the Collateral described in this Pledge Agreement.

(j) Concurrently with the execution and delivery of this Pledge Agreement, the Pledgor shall deliver to the Trustee a Written Independent Accountant Report (as defined below) stating that, in the opinion of the Independent Public Accountant, the Pledged Financial Assets are sufficient, upon receipt of the scheduled interest and principal payments of the Pledged Financial Assets, to provide for payment in full of the first four scheduled interest payments on the Notes when due.

SECTION 5. DISBURSEMENTS.

(a) At least three (3) "BUSINESS DAYS" (as defined in the Indenture) prior to the due date of any of the first four scheduled interest payments due on the Notes, the Pledgor may, pursuant to written instructions given by the Pledgor to the Trustee (an "ISSUER ORDER"), direct the Trustee to release from the Pledge Account and pay, on such due date, to the Holders of the Notes proceeds sufficient to provide for payment in full of such

interest then due on the Notes. Upon receipt of an Issuer Order, the Trustee shall (i) issue a Payment Order (as defined in the Control Agreement) to the Account Intermediary for the release, from the Pledge Account, of funds to the Trustee in an amount sufficient to provide for the payment of the interest on the Notes in accordance with such Issuer Order; and (ii) pay such funds to the Holders of the Notes in accordance with the Indenture and the Notes. Nothing in this Section 5 shall affect the Trustee's rights to apply the Collateral to the payments of amounts due on the Notes upon acceleration thereof.

(b) If the Pledgor makes any of the first four scheduled interest payments on the Notes or a portion of such interest payment from a source of funds other than the Pledge Account (such source, the "PLEDGOR Funds"), the Pledgor may, after payment in full of such interest payment, direct the Trustee pursuant to an Issuer Order to issue a Payment Order (as defined in the Control Agreement) to the Account Intermediary for the release, to the Pledgor or to another

party at the direction of the Pledgor (such party, the "PLEDGOR'S DESIGNEE"), of proceeds from the Pledge Account in an amount less than or equal to the amount of Pledgor Funds applied to such interest payment. Upon receipt by the Trustee of such Issuer Order, and provided the Trustee has received such interest payment, the Trustee shall direct the Account Intermediary pursuant to a Payment Order to pay to the Pledgor or the Pledgor's Designee, as the case may be, the requested amount from proceeds in the Pledge Account as soon as practicable.

(c) At least three (3) business days prior to the due date of each of the first four scheduled interest payments due on the Notes, the Pledgor shall give the Trustee notice (by Issuer Order) as to whether such interest payment will be made pursuant to Section 5(a) or Section 5(b) and the respective amounts of interest that will be paid from the Pledge Account and from Pledgor Funds. Any Pledgor Funds to be used to make any interest payment shall be delivered to the Trustee, in immediately available funds, prior to 10:00 a.m. (New York City time) on the due date of such interest payment. If no such notice is given or such Pledgor Funds have not been so delivered, the Trustee shall act pursuant to Section 5(a) as if it had received an Issuer Order pursuant thereto for the payment in full of the interest then due from the Pledge Account.

(d) The Trustee shall instruct the Account Intermediary to liquidate Collateral in the Pledge Account in order to make any of the scheduled payments of interest on the Notes, unless there are sufficient funds in the Pledge Account on the due date of such interest payment. The Trustee shall be entitled to instruct the Account Intermediary to sell any Collateral as contemplated hereunder prior to the maturity of such Collateral and shall not be responsible for any costs and expenses of such sale.

(e) Nothing contained in this Pledge Agreement shall (i) afford the Pledgor any right to issue entitlement orders with respect to any of the Pledged Security Entitlements or any securities account in which any such security entitlements may be carried, or otherwise afford the Pledgor control of any Pledged Security Entitlement or (ii) otherwise give rise to any rights of the Pledgor with respect to the Pledged Financial Assets or any securities account in which any of such security entitlements may be carried, other than

the Pledgor's rights under this Pledge Agreement as the beneficial owner of collateral pledged to, and subject to the exclusive dominion and control (except as expressly provided in subsections (a), (b), (f) and (g) of this Section 5) of, the Trustee in its capacity as such (and not as a securities intermediary) before the payment in full, when due, of the Obligations. The Pledgor acknowledges, confirms and agrees that the Trustee is an entitlement holder of the Pledged Security Entitlements solely as Trustee for the ratable benefit of the Holders of the Notes and not as a securities intermediary.

(f) If, prior to the payment of the fourth scheduled interest payment due on the Notes, repayment of the principal amount of the Notes shall be accelerated under the Indenture, the Trustee shall liquidate all Collateral in the Pledge Account for payment to the Holders of the Notes, subject to the automatic stay provisions of bankruptcy law, if applicable. Distributions from the Pledge Account shall be applied first to any accrued and unpaid interest on the Notes and second, to the extent available, to the repayment of a portion of the principal amount of the Notes.

(g) If, prior to the payment of the fourth scheduled interest payment due on the Notes, any Notes are converted in accordance with the Indenture or any Notes are repurchased by the Pledgor, then, upon the written request of the Pledgor to the Trustee and satisfaction of the conditions precedent specified below, the Trustee shall promptly instruct the Account Intermediary to liquidate Collateral to the

extent (but only to the extent) necessary to generate an amount of cash proceeds equal to the Release Amount (as defined below) and shall distribute to the Pledgor (such distribution, a "RELEASE --------- Distribution") such amount in immediately available funds. Upon each Release Distribution, the Trustee shall release the security interest and continuing lien in that portion of the Collateral, and proceeds derived therefrom, distributed to the Pledgor pursuant to such Release Distribution, and shall execute such documents as the Pledgor may reasonably request to evidence such release. No Release Distribution or liquidation to facilitate a Release Distribution shall occur unless all of the following shall have been satisfied:

(i) the Pledgor has delivered to the Trustee an opinion of counsel to the effect that (A) the Notes referred to above have been duly converted or repurchased by the Pledgor and (B) all conditions precedent to the Release Distribution have been satisfied;

(ii) the Pledgor has delivered to the Trustee an Officer's Certificate that (A) identifies the Notes that have been so converted or so repurchased, (B) affirms that such Notes have been duly converted or repurchased, (C) states that all conditions precedent relating to the Release Distribution have been satisfied and (D) states the Release Amount;

(iii) the Pledgor has delivered to the Trustee a Written Independent Accountant Report (as defined below) stating that the Collateral to be remaining after the proposed Release Distribution and related liquidation of Collateral will be sufficient, upon receipt of the scheduled interest and principal payments on the

remaining Pledged Financial Assets, to provide for payment in full of the remaining first four scheduled interest payments on the Remaining Notes (as defined below) when due;

(iv) no Event of Default (as defined in Section 13) has occurred and is continuing;

(v) no Event (as defined in the Registration Rights Agreement) has occurred and is continuing; and

(vi) no Notes that have been repurchased by the Pledgor have subsequently been resold.

"RELEASE AMOUNT" shall mean an amount equal to the net proceeds (after deducting expenses related in any way to the related Release Distribution and liquidation of Collateral) from the liquidation of that portion of the Collateral not necessary to remain in the Pledge Account in order to provide, from the receipt of the scheduled interest and principal payments on the remaining Pledged Financial Assets, for payment in full of the remaining first four scheduled interest payments on the Remaining Notes when due.

"REMAINING NOTES" shall mean the Notes other than the Notes specified in the Officer's Certificate referred to above as having been converted or repurchased.

SECTION 6. INVESTING OF AMOUNTS IN THE PLEDGE ACCOUNT. If requested and as directed by the Pledgor in writing, the Trustee shall, subject to the provisions of Sections 3, 5 and 14 of this Pledge Agreement, from time to time, instruct the Account Intermediary to invest interest paid on the Pledged Financial Assets and reinvest other proceeds of any Pledged Financial Assets that may mature or be sold (including, without limitation, pursuant to Section 5(g)), in each case, in (i) identified United States Treasury securities or (ii) selected shares of a money market fund registered under the Investment Company Act of 1940, as amended, the portfolio of which consists of United States Treasury securities, in each case credited to the Pledge Account, including any portfolios for which the Trustee or any of its affiliates provides investment advisory or management

services.

SECTION 7. REPRESENTATIONS AND WARRANTIES.

(a) The Pledgor hereby represents and warrants that:

(i) This Pledge Agreement has been duly authorized, validly executed and delivered by the Pledgor and constitutes a legal, valid and binding agreement of the Pledgor, enforceable against the Pledgor in accordance with its terms, except as (A) the enforceability hereof may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws now or hereafter in effect relating to or affecting creditors' rights or remedies generally; (B) the availability of equitable remedies may be limited by equitable principles of general applicability

and the discretion of the court before which any proceeding therefor may be brought; (C) the exculpation provisions and rights to indemnification hereunder may be limited by U.S. federal and state securities laws and public policy considerations; and (D) the waiver of rights and defenses contained in Section 19(h) and Section 19(l) hereof may be limited by applicable law.

(ii) The Pledgor is a corporation organized solely under the laws of the State of Delaware and not of any other State or jurisdiction, and the State of Delaware must maintain a public record showing the Pledgor to have been so organized. The Pledgor's exact legal name, within the meaning of Section 9-503(a)(1) of the UCC, is Ligand Pharmaceuticals Incorporated. The Pledgor is located, within the meaning of Section 9-307 of the UCC, in the State of Delaware. The Pledgor's organizational identification number in the State of Delaware is 2138989.

(iii) The Pledgor is the legal and beneficial owner of the Collateral free and clear of any Lien, claim, option or right of others (except for the security interest created by this Pledge Agreement). No effective financing statement or other instrument similar in effect covering all or any part of the Collateral is on file in any public or recording office, other than the financing statements filed pursuant to this Pledge Agreement.

(iv) Upon the delivery of the Collateral in accordance with the terms hereof, all filings and other actions (including, without limitation, (A) actions necessary to obtain control of the Collateral as provided in Sections 9-104, 9-105, 9-106 or 9-107 of the UCC, as applicable; and (B) actions necessary to perfect the Trustee's security interest with respect to the Collateral evidenced by a certificate of ownership) necessary to perfect the security interest in the Collateral created under this Pledge Agreement have been duly made or taken and are in full force and effect, and this Pledge Agreement creates in favor of the Trustee for the ratable benefit of the Holders of the Notes a valid and, together with such filings and other actions, perfected first-priority security interest in the Collateral, securing the payment of the Secured Obligations.

(v) The execution and delivery by the Pledgor of, and the performance by the Pledgor of its obligations under, this Pledge Agreement will not contravene any provision of applicable law or the Certificate of Incorporation of the Pledgor or any material agreement or other material instrument binding upon the Pledgor or any judgment, order or decree of any governmental body, agency or court having jurisdiction over the Pledgor, or result in the creation or imposition of any Lien on any assets of the Pledgor, except for the lien and security interest granted under this Pledge Agreement.

(vi) No consent of any other person and no approval, authorization or order of, action by, notice to, or filing or qualification with, any governmental authority, regulatory body, agency or other third party is required: (A) for the

grant by the Pledgor of the assignment, pledge and security interest granted under this Pledge Agreement; (B) for the execution or delivery by the Pledgor of, or the performance by the Pledgor of its obligations under, this Pledge Agreement; (C) for the perfection or maintenance of the assignment, pledge or security interest created hereunder (including the first-priority nature of such assignment, pledge or security interest), except for (I) the execution of the Control Agreement by the parties thereto and (II) the filing of financing statements under the UCC, which financing statements have been delivered to the Trustee for filing pursuant to Section 4(i); or (D) other than such consents, approvals, authorizations or orders required to be obtained by the Trustee (or the Holders) for reasons other than the consummation of this transaction, for the exercise by the Trustee of its rights provided for in this Pledge Agreement or the remedies in respect of the Collateral pursuant to this Pledge Agreement, except as may be required in connection with the disposition of any portion of the Collateral by laws affecting the offering and sale of securities generally.

(vii) There are no legal or governmental proceedings pending or, to the Pledgor's knowledge, threatened to which the Pledgor or any of the properties of the Pledgor is subject that would materially adversely affect the power or ability of the Pledgor to perform its obligations under this Pledge Agreement or to consummate the transactions contemplated hereby.

(viii) The pledge of the Collateral pursuant to this Pledge Agreement is not prohibited by law or governmental regulation (including, without limitation, Regulations T, U and X of the Board of Governors of the Federal Reserve System) applicable to the Pledgor.

(ix) No Event of Default (as defined below) exists.

(x) Based on the Account Intermediary's representation, warranty and agreement set forth in Section 2(e) of the Control Agreement and on Section 18 of the Control Agreement, the jurisdiction (for purposes of Section 8-110(e) of the UCC) of the securities intermediary that maintains the Pledge Account and all securities accounts carrying the Pledged Security Entitlements is New York. To the extent that any portion of the Pledge Account is deemed to constitute a deposit account, the jurisdiction (for purposes of the UCC) of the securities intermediary that maintains the Pledge Account is New York.

(b) The Trustee hereby represents and warrants that:

(i) This Pledge Agreement has been duly authorized, validly executed and delivered by the Trustee and constitutes a legal, valid and binding agreement of the Trustee, enforceable against the Trustee in accordance with its terms, except as the availability of equitable remedies may be limited by equitable principles of general applicability and the discretion of the court before which any proceeding therefor may be brought.

(ii) The execution and delivery by the Trustee of, and the performance by the Trustee of its obligations under, this Pledge Agreement will not contravene any provision of applicable law or the organizational documents of the Trustee or any material agreement or other material instrument binding upon the Trustee or any judgment, order or decree of any governmental body, agency or court having jurisdiction over the Trustee.

(iii) No consent of any other person and no approval, authorization or order of, action by notice to, or filing or qualification with, any governmental authority, regulatory body,

agency or other third party is required (A) for the execution or delivery by the Trustee of, or the performance by the Trustee of its obligations under, this Pledge Agreement; or (B) other than such consents, approvals, authorizations or orders required to be obtained by the Trustee (or the Holders) for reasons other than the consummation of this transaction, for the exercise by the Trustee of its rights provided for in this Pledge Agreement or the remedies in respect of the Collateral pursuant to this Pledge Agreement, except as may be required in connection with the disposition of any portion of the Collateral by laws affecting the offering and sale of securities generally.

(iv) There are no legal or governmental proceedings pending or, to the Trustee's knowledge, threatened to which the Trustee or any of the properties of the Trustee is subject that would materially adversely affect the power or ability of the Trustee to perform its obligations under this Pledge Agreement or to consummate the transactions contemplated hereby.

SECTION 8. FURTHER ASSURANCES.

(a) The Pledgor agrees that from time to time, at the expense of the Pledgor, the Pledgor shall promptly execute or otherwise authenticate, as necessary, and deliver all further instruments and documents and take all further action that may be necessary or desirable, or that the Trustee may reasonably request, in order to perfect, protect or preserve any pledge or security interest granted or purported to be granted hereunder or to enable the Trustee to exercise and enforce its rights and remedies hereunder with respect to any Collateral. Without limiting the generality of the foregoing, the Pledgor shall (i) if any Collateral shall be evidenced by a promissory note or other instrument, promptly deliver and pledge to the Trustee hereunder such note or instrument, duly indorsed and accompanied by duly executed instruments of transfer or assignment, all in form and substance satisfactory to the Trustee; (ii) if necessary, execute or otherwise authenticate, as necessary, and file such financing or continuation statements, or amendments thereto,

and such other instruments, notices or records, as may be necessary or desirable, or as the Trustee may reasonably request, in order to perfect, protect or preserve any pledge or security interest granted or purported to be granted hereby; (iii) promptly deliver and pledge to the Trustee for the ratable benefit of the Holders of the Notes certificates representing Collateral that constitutes certificated securities, accompanied by undated stock or bond powers executed in blank; and (iv) promptly deliver to the Trustee evidence that all other action that the Trustee may deem necessary or desirable in order to perfect and protect the security interest created by the Pledgor under this Pledge Agreement has been taken.

(b) The Pledgor hereby authorizes the Trustee to file one or more financing or continuation statements, and amendments thereto, relating to all or any part of the Collateral, in each case without the signature of the Pledgor, and regardless of whether any particular asset described in such financing statements falls within the scope of the UCC or the granting clause of this Pledge Agreement. A photocopy or other reproduction of this Pledge Agreement or any financing statement covering the Collateral or any part thereof shall be sufficient as a financing statement where permitted by law. The Pledgor ratifies its authorization for the Trustee to have filed such financing statements, continuation statements or amendments filed prior to the date hereof.

(c) The Pledgor shall furnish to the Trustee from time to time statements and schedules further identifying and describing the Collateral and such other reports in connection with the Collateral as the Trustee may reasonably request, all in reasonable detail.

(d) The Pledgor will promptly pay all reasonable costs incurred in connection with any of the foregoing within forty five (45) days of receipt of an invoice therefor. The Pledgor also agrees, whether or not requested by the Trustee, to take all actions that are necessary or desirable to

perfect or continue the perfection of, or to protect the first priority of, the Trustee's security interest in and to the Collateral, including the filing of all necessary financing and continuation statements, and any amendments thereto, and to protect the Collateral against the rights, claims or interests of third persons (other than any such rights, claims or interests created by or arising through the Trustee).

SECTION 9. COVENANTS. The Pledgor covenants and agrees with the Trustee for the ratable benefit of the Holders of the Notes that from and after the date of this Pledge Agreement until the earlier of payment in full in cash of (x) each of the first four scheduled interest payments on the Notes when due under the terms of the Indenture and the Notes and (y) all obligations due and owing under the Indenture and the Notes in the event such obligations become due and payable prior to the payment of the first four scheduled interest payments on the Notes:

(a) (i) it will not (and will not purport to) sell, assign or otherwise dispose of, or grant any option or warrant with respect to, any of the Collateral or the Pledgor's beneficial interest therein; and (ii) it will not create or suffer to exist any Lien or other adverse interest upon, or with respect to, any of the Collateral or the Pledgor's beneficial

interest therein (except for the security interest granted under this Pledge Agreement and any Lien arising under the Indenture in favor of the Trustee);

(b) it will not (i) enter into any agreement or understanding that restricts or inhibits or purports to restrict or inhibit the Trustee's rights or remedies hereunder, including, without limitation, the Trustee's right to sell or otherwise dispose of the Collateral; or (ii) fail to pay or discharge any tax, assessment or levy of any nature with respect to its beneficial interest in the Collateral not later than five (5) days prior to the date of any proposed sale under any judgment, writ or warrant of attachment with respect to such beneficial interest;

(c) it will not change its name, type of organization, jurisdiction of organization, organizational identification number or location from those set forth in Section 7(a)(ii) hereof without first giving at least thirty (30) days' prior written notice to the Trustee and taking all action reasonably required by the Trustee under this Pledge Agreement for the purpose of perfecting, protecting or preserving the security interest granted by this Pledge Agreement;

(d) it will, and will cause the Trustee to, execute and deliver on or prior to any sale of Additional Notes, a supplement to this Pledge Agreement, in substantially the form attached hereto as Annex C, providing for the pledge of additional Collateral in such amount as will, according to a Written Independent Accountant Report (as defined below) delivered to the Trustee, be sufficient, upon receipt of scheduled interest and principal payments of the Pledged Financial Assets comprising such additional Collateral, to provide for payment in full of the first four scheduled interest payments due on the Additional Notes.

(e) in the event of an Event (as defined in the Registration Rights Agreement) by reason of which Liquidated Damages (as defined in Section 19(f)(ii)) become due as provided in the Registration Rights Agreement, the Pledgor shall, at its sole cost, promptly deliver to the Trustee additional Pledged Security Entitlements in such amount as will, according to a Written Independent Accountant Report (as defined below) delivered to the Trustee, be sufficient, upon receipt of scheduled interest and/or principal payments of all Pledged Security Entitlements thereafter held in the Pledge Account, to provide payment of the first four scheduled interest payments due on the Notes, including the Liquidated Damages payable under the Registration Rights Agreement during the period beginning on the Event Date (as defined in the Registration Rights Agreement) and ending on the date of the fourth scheduled interest payment due on the Notes (assuming that Liquidated Damages remain payable under the Registration Rights Agreement for the entirety of such period). Such additional Pledged Security Entitlements shall be subject to the pledge set forth in Section 1 by the Pledgor to the Trustee for the ratable benefit of the Holders of the Notes

and shall be held by the Trustee in the Pledge Account.

(f) it shall select and engage, and pay the expenses of, a nationally recognized firm of independent public accountants (the "INDEPENDENT PUBLIC ACCOUNTANT") for the

purpose of performing agreed-upon procedures to verify, in a written report to be delivered to the Pledgor, the Trustee and the Initial Purchaser (a "WRITTEN INDEPENDENT ACCOUNTANT REPORT"), the computational accuracy of the sufficiency of the Collateral to secure the Obligations to the extent described in, and required by, Section 4(j), Section 5(g), Section 9(d) and Section 9(e), which Written Independent Accountant Report shall be in form and substance reasonably satisfactory to the Trustee.

SECTION 10. POWER OF ATTORNEY. In addition to all of the powers granted to the Trustee pursuant to the Indenture, the Pledgor hereby irrevocably appoints the Trustee as the Pledgor's attorney-in-fact (with full power of substitution), with full authority in the place and stead of the Pledgor and in the name of the Pledgor or otherwise, from time to time in the Trustee's discretion, if an Event of Default (as defined in Section 13) has occurred and is continuing, to take any action and to execute any instrument that is necessary or advisable or as the Trustee may deem necessary or advisable to accomplish the purposes of this Pledge Agreement, including:

(a) to ask for, demand, collect, sue for, recover, compromise, receive and give acquittance and receipts for moneys due and to become due under, or in respect of, any of the Collateral;

(b) to receive, indorse and collect any and all checks, notes, drafts or other (negotiable or non-negotiable) instruments, documents or chattel paper, in connection with subsection (a) above, and the Pledgor hereby waives notice of presentment, protest and non-payment of any instrument, document or chattel paper so indorsed or assigned;

(c) to file any claims or take any action or institute any proceedings that the Trustee may deem necessary or desirable for the collection of any of the Collateral or otherwise to enforce the rights of the Trustee with respect to any of the Collateral; and

(d) to pay or discharge taxes or Liens levied or placed upon the Collateral that the Pledgor has failed to pay or discharge in accordance herewith, the legality or validity thereof and the amounts necessary to discharge the same to be determined by the Trustee in its sole reasonable discretion, and such payments made by the Trustee to become part of the Obligations of the Pledgor to the Trustee, due and payable immediately upon demand; PROVIDED, HOWEVER, that the Trustee shall have no obligation to perform any of the foregoing actions under this Section 10.

The Trustee's authority under this Section 10 shall include, without limitation, the authority to (i) indorse and negotiate any checks or instruments representing proceeds of Collateral in the name of the Pledgor; (ii) execute and give receipt for any certificate of ownership or any document constituting Collateral; (iii) transfer title to any item of Collateral; (iv) sign the Pledgor's name on all financing statements (to the extent permitted by applicable law) or any other documents deemed necessary or appropriate by the Trustee to preserve, protect or perfect the security interest in the Collateral granted hereunder and to file the same; (v) prepare and file, and sign the Pledgor's name on, any notice of Lien; and (vi) take any other actions arising from or incident to the powers granted to the Trustee by this Pledge Agreement.

This power of attorney is coupled with an interest and is irrevocable by the Pledgor.

SECTION 11. NO ASSUMPTION OF DUTIES; REASONABLE CARE. The powers conferred on the Trustee hereunder are solely to protect the security interest of the

Trustee for the ratable benefit of the Holders of the Notes in the Collateral and shall not impose any duty on the Trustee to exercise any such powers other than those expressly provided herein or imposed by applicable law. Except as otherwise set forth in the Indenture and except as necessary for the safe custody of any Collateral in its possession and the accounting for moneys actually received by it hereunder, the Trustee shall have no duty as to any Collateral to (i) ascertain or take action with respect to calls, conversions, exchanges, maturities, tenders or other matters relative to any Collateral, whether or not the Trustee has or is deemed to have knowledge of such matters; (ii) take any necessary steps to preserve rights against any parties or any other rights pertaining to any Collateral; or (iii) except as otherwise set forth in Section 6 hereof, investing or reinvesting any of the Collateral or any loss on any investment. The Trustee shall be deemed to have exercised reasonable care in the custody and preservation of any Collateral in its possession if such Collateral is accorded treatment substantially equal to that which the Trustee accords its own property. The Trustee shall be entitled to all the rights, benefits, privileges and immunities accorded to it under the Indenture.

SECTION 12. INDEMNITY AND EXPENSES.

(a) The Pledgor agrees to indemnify, defend and save and hold harmless each of the Trustee and its officers, directors, employees, agents and advisors (each, an "INDEMNIFIED PARTY") from and against, and shall pay on demand, any and all claims, damages, losses, liabilities and expenses (including, without limitation, reasonable fees and expenses of counsel) that may be incurred by or asserted or awarded against any Indemnified Party, in each case arising out of or in connection with or resulting from this Pledge Agreement (including, without limitation, the enforcement of this Pledge Agreement), except to the extent such claims, damages, losses, liabilities or expenses result from such Indemnified Party's negligence or willful misconduct as found by a court of competent jurisdiction in a final, non-appealable judgment.

(b) The Pledgor will, upon demand, pay to the Trustee the amount of any and all reasonable expenses, including, without limitation, the reasonable fees and expenses of its counsel and of any experts and agents, that the Trustee may incur in connection with (i) the review, negotiation and administration of this Pledge Agreement; (ii) the custody or preservation of, or the sale of, collection from or other realization upon, any of the Collateral; (iii) the exercise or enforcement of any of the rights of the Trustee or the Holders of the Notes hereunder; or (iv) the failure by the Pledgor to perform or observe any of the provisions hereof.

SECTION 13. REMEDIES. If any Event of Default under the Indenture or default hereunder (any such Event of Default or default being referred to in this Pledge Agreement as an "EVENT OF DEFAULT") shall have occurred and be continuing:

(a) The Trustee and the Holders of the Notes may (i) exercise in respect of the

Collateral, in addition to all other rights and remedies given by law or by this Pledge Agreement or the Indenture, all of the rights and remedies of a secured party under the UCC (whether or not the UCC applies to the affected Collateral); (ii) require the Pledgor to, and the Pledgor hereby agrees that it shall at its expense and upon the request of the Trustee forthwith, assemble all or part of the Collateral as directed by the Trustee and make it available to the Trustee at a place and time to be designated by the Trustee that is reasonably convenient to both parties; and (iii) without notice except as specified below, sell the Collateral or any part thereof in one or more parcels at any broker's board or at a public or private sale, in one or more sales or lots, at any of the Trustee's offices or elsewhere, for cash, on credit or for future delivery, and upon such other terms as the Trustee may deem commercially reasonable. The Pledgor agrees that, to the extent notice of sale shall be required by law, at least ten (10) days' notice to the Pledgor of the time and

place of any public sale or the time after which any private sale is to be made shall constitute reasonable notification. The Trustee shall not be obligated to make any sale of Collateral regardless of notice of sale having been given. The Trustee may adjourn any public or private sale from time to time by announcement at the time and place fixed therefor, and such sale may, without further notice, be made at the time and place to which it is so adjourned. The purchaser of any or all Collateral so sold shall thereafter hold the same absolutely free from any claim, encumbrance or right of any kind whatsoever created by or through the Pledgor. Any sale of the Collateral conducted in conformity with reasonable commercial practices of banks, insurance companies, commercial finance companies or other financial institutions disposing of property similar to the Collateral shall be deemed to be commercially reasonable. The Trustee or any Holder of Notes may, in its own name or in the name of a designee or nominee, buy any of the Collateral at any public sale and, if permitted by applicable law, at any private sale. All expenses (including court costs and reasonable attorneys' fees, expenses and disbursements) of, or incident to, the enforcement, by the Trustee or by or on behalf of the Holders of the Notes, of any of the provisions hereof shall be recoverable from the proceeds of the sale or other disposition of the Collateral.

(b) Except as otherwise provided in the Indenture, any cash held by or on behalf of the Trustee and all cash proceeds received by or on behalf of the Trustee in respect of any sale of, collection from, or other realization upon all or any part of the Collateral may, in the discretion of the Trustee, be held by the Trustee as collateral for, and/or then or at any time thereafter applied (after payment of any amounts payable to the Trustee pursuant to Section 12(b) of this Pledge Agreement) in whole or in part by the Trustee for the ratable benefit of the Holders of the Notes against, all or any part of the Secured Obligations in such order as the Trustee shall elect in its sole discretion. Any surplus of such cash or cash proceeds held by or on behalf of the Trustee and remaining after payment in full of all the Secured Obligations shall be paid to the Pledgor or to whomsoever may be lawfully entitled to receive such surplus.

(c) The Trustee may at any time or from time to time, without notice to the Pledgor except as required by law, charge, set off and otherwise apply all or any part of the Secured Obligations against the Pledge Account or any part thereof.

(d) The Pledgor agrees to (i) provide the Trustee with such information as may be necessary or, in the opinion of the Trustee, advisable to enable the Trustee to effect the sale of the Collateral; and (ii) use its best efforts to do or cause to be done all such other acts and things as may be necessary to make such sale or sales of all or any portion of the Collateral pursuant to this Section 13 valid and binding and in compliance with any and all other applicable requirements of law. The Pledgor further agrees that a breach of any of the covenants contained in this Section 13(d) will cause irreparable injury to the Trustee and the Holders of the Notes, that the Trustee and the Holders of the Notes have no adequate remedy at law in respect of such breach and, as a consequence, that each and every covenant contained in this Section 13(d) shall be specifically enforceable against the Pledgor, and the Pledgor hereby, to the extent permitted by law, waives and agrees not to assert any defenses against an action for specific performance of such covenants except for a defense that no Event of Default has occurred and is continuing.

SECTION 14. SECURITY INTEREST ABSOLUTE. All rights of the Trustee and the Holders of the Notes and the pledges, assignments and security interests hereunder, and all obligations of the Pledgor hereunder, shall be irrevocable, absolute and unconditional, and the rights of the Trustee hereunder shall be enforceable irrespective of any or all of the following:

(a) any lack of validity or enforceability of the Indenture or Notes or any other agreement or instrument relating thereto;

(b) any change in the time, manner or place of payment of, or in any other term of, all or any of the Secured Obligations, or any other amendment or waiver of, consent to, or departure from, the Indenture or Notes or any other agreement or instrument relating thereto;

(c) any taking, exchange or release of, or non-perfection of any Liens on, any Collateral or any other collateral for all or any of the Secured Obligations;

(d) any manner of application of any Collateral or any other collateral, or proceeds thereof, to all or any of the Secured Obligations, or any manner of sale or other disposition of any Collateral or any other collateral for all or any of the Secured Obligations or any other assets of the Pledgor;

(e) any change, restructuring or termination of the corporate structure or existence of the Pledgor; or

(f) to the extent permitted by applicable law, any other circumstance (including, without limitation, any statute of limitations) or any existence of, or reliance on, any representation by the Trustee or any Holder of the Notes, which might otherwise constitute a defense available to, or a discharge of, the Pledgor in respect of the Secured Obligations or of this Pledge Agreement.

This Pledge Agreement shall continue to be effective or be reinstated, as the case may be, if at any time any payment of any of the Secured Obligations is rescinded or must

otherwise be returned by the Trustee or any Holder of the Notes or by any other person upon the insolvency, bankruptcy or reorganization of the Pledgor or otherwise, all as though such payment had not been made.

SECTION 15. AMENDMENTS, WAIVERS AND CONSENTS. No amendment or waiver of any provision of this Pledge Agreement, and no consent to any departure by the Pledgor from any provision of this Pledge Agreement, shall in any event be effective unless the same shall be in writing and signed by the Trustee, and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given. No failure on the part of the Trustee or any Holder of the Notes to exercise, and no delay in exercising, any right hereunder shall operate as a waiver thereof; nor shall any single or partial exercise of any such right preclude any other or further exercise thereof or the exercise of any other right.

SECTION 16. NOTICES. Any notice or communication given hereunder shall be sufficiently given if in writing and delivered in person or by telecopier communication or mailed by first class mail or commercial courier service, addressed as follows; or, as to any party, at such other address as shall be designated by such party in a written notice to the other parties:

If to the Pledgor:

Ligand Pharmaceuticals Incorporated
10275 Science Center Drive
San Diego, California 92121-1117
Attention: General Counsel
Fax: (858) 550-7506

If to the Trustee:

J.P. Morgan Trust Company, National Association
560 Mission Street, 13th Floor
San Francisco, CA 94105
Attention: Mitch Gardner
Fax: (415) 315-7585

with a copy to:

Nixon Peabody LLP
2 Embarcadero Center, Suite 2700
San Francisco, CA 94111
Attention: Varya Simpson
Fax: (415) 984-8300

All such notices and other communications shall, when mailed, delivered or telecopied, respectively, be effective when deposited in the mails, delivered or telecopied, respectively, addressed as aforesaid.

SECTION 17. CONTINUING SECURITY INTEREST. This Pledge Agreement shall create a continuing security interest in the Collateral and (a) shall, unless otherwise provided in this Pledge Agreement, remain in full force and effect until terminated in accordance with Section 18 hereof; (b) be binding upon the Pledgor and its successors, transferees and assigns; and (c) inure, together with the rights and remedies of the Trustee hereunder, to the Holders of the Notes and their respective successors, transferees and assigns.

SECTION 18. TERMINATION. So long as no Event of Default shall have occurred and be continuing, this Pledge Agreement (other than the Pledgor's obligations under Section 12 hereof) shall terminate upon the earliest of (a) the redemption of the Notes in whole, (b) the payment in full of each of the first four scheduled interest payments due on the Notes under the terms of the Indenture, (c) the payment in full of all obligations due and owing under the Notes and the Indenture in the event the obligations become due and payable prior to payment of the first four scheduled interest payments on the Notes, and (d) the discharge of the Indenture. Upon any such termination, without any necessary action on the part of the Pledgor, (i) the Control Agreement(s) shall terminate and control of the Pledge Account and the Pledged Security Entitlements shall revert to the Pledgor, (ii) the Trustee shall promptly obtain from the Account Intermediary and deliver to the Pledgor all certificates and instruments representing any portion of the Pledged Financial Assets constituting certificated securities, (iii) the Trustee shall execute and deliver such documents and instruments, at the Pledgor's expense, as the Pledgor may reasonably request in connection with the termination of this Pledge Agreement and the security interest and lien in the Collateral, and (iv) the Trustee shall no longer have any rights in any of the Collateral.

SECTION 19. MISCELLANEOUS PROVISIONS.

(a) NO ADVERSE INTERPRETATION OF OTHER AGREEMENTS. This Pledge Agreement may not be used to interpret another pledge, security or debt agreement of the Pledgor or any subsidiary thereof. No such pledge, security or debt agreement (other than the Indenture and Registration Rights Agreement) may be used to interpret this Pledge Agreement.

(b) SEVERABILITY. The provisions of this Pledge Agreement are severable, and if any clause or provision shall be held invalid, illegal or unenforceable in whole or in part in any jurisdiction, such invalidity, illegality or unenforceability shall affect in that jurisdiction only such clause or provision, or part thereof, and shall not in any manner affect such clause or provision in any other jurisdiction or any other clause or provision of this Pledge Agreement in any jurisdiction.

(c) HEADINGS. The headings in this Pledge Agreement have been inserted for convenience of reference only, are not to be considered a part hereof and shall in no way modify or restrict any of the terms or provisions hereof.

(d) COUNTERPART ORIGINALS. This Pledge Agreement may be signed in two or more counterparts, each of which shall be deemed an original, but all of which shall together constitute one and the same agreement. Delivery of an executed counterpart of a signature page to this Pledge Agreement by telecopier shall be effective as delivery of an

original executed counterpart of this Pledge Agreement.

(e) BENEFITS OF PLEDGE AGREEMENT. Nothing in this Pledge Agreement, express or implied, shall give to any person, other than the parties hereto and their successors hereunder, and the Holders of the Notes and the Account Intermediary, any benefit or any legal or equitable right, remedy or claim under this Pledge Agreement. If the Pledgor consolidates or merges into any other person in a transaction in which the Pledgor is not the surviving corporation, or conveys, transfers or leases its properties and assets substantially as an entirety to any person, then the successor entity, transferee or lessee shall expressly assume the Pledgor's obligations under this Pledge Agreement in writing.

(f) INTERPRETATION OF AGREEMENT.

(i) To the extent a term or provision of this Pledge Agreement conflicts with the Indenture, the Indenture shall control with respect to the subject matter of such term or provision. Acceptance of or acquiescence in a course of performance rendered under this Pledge Agreement shall not be relevant to determine the meaning of this Pledge Agreement even though the accepting or acquiescing party had knowledge of the nature of the performance and opportunity for objection.

(ii) All references in this Pledge Agreement to "scheduled interest" or "scheduled interest payment," or words to like effect, shall be deemed to include all Liquidated Damages (as defined below), if any, payable on the Notes, determined in accordance with the Registration Rights Agreement, for the period with respect to which such interest or interest payment is payable. "LIQUIDATED DAMAGES" shall have the meaning ascribed to "Liquidated Damages Amount" in the Registration Rights Agreement.

(g) SURVIVAL OF REPRESENTATIONS AND COVENANTS. All representations, warranties and covenants contained herein shall survive the execution and delivery of this Pledge Agreement and shall terminate only upon the termination of this Pledge Agreement, except as otherwise specified in such representations, warranties and covenants.

(h) WAIVERS. The Pledgor waives presentment and demand for payment of any of the Obligations, protest and notice of dishonor or default with respect to any of the Obligations and all other notices to which the Pledgor might otherwise be entitled, in each case except as otherwise expressly provided herein or in the Indenture.

(i) AUTHORITY OF THE TRUSTEE.

(i) The Trustee shall have and be entitled to exercise all powers hereunder that are specifically granted to the Trustee by the terms hereof, together with such powers as are reasonably incident thereto. The Trustee may perform any of its duties hereunder or in connection with the Collateral by or through agents or employees and shall be entitled to retain counsel and to act in reliance

upon the advice of counsel concerning all such matters. Except as otherwise expressly provided in this Pledge Agreement or the Indenture, neither the Trustee nor any director, officer, employee, attorney or agent of the Trustee shall be liable to the Pledgor for any action taken or omitted to be taken by the Trustee, in its capacity as collateral agent, hereunder, except for its own gross negligence or willful misconduct, and the Trustee shall not be responsible for the validity, effectiveness or sufficiency hereof or of any document or security furnished pursuant hereto. The Trustee and its directors, officers,

employees, attorneys and agents shall be entitled to rely on any communication, instrument or document believed by it or them to be genuine and correct and to have been signed or sent by the proper person or persons.

(ii) The Pledgor acknowledges that the rights and responsibilities of the Trustee under this Pledge Agreement with respect to any action taken by the Trustee or the exercise or non-exercise by the Trustee of any option, right, request, judgment or other right or remedy provided for herein or resulting or arising out of this Pledge Agreement shall, as between the Trustee and the Holders of the Notes, be governed by the Indenture and by such other agreements with respect thereto as may exist from time to time among them; PROVIDED, HOWEVER, that as between the Trustee and the Pledgor, the Trustee shall be conclusively presumed to be acting as agent for the Holders of the Notes with full and valid authority so to act or refrain from acting, and the Pledgor shall not be obligated or entitled to make any inquiry respecting such authority.

(j) FINAL EXPRESSION. This Pledge Agreement, together with the Indenture, the Control Agreement and any other agreement executed in connection herewith, is intended by the parties as a final expression of this Pledge Agreement and is intended as a complete and exclusive statement of the terms and conditions thereof.

(k) RIGHTS OF HOLDERS OF THE NOTES. No Holder of Notes shall have any independent rights hereunder other than those rights of individual Holders of the Notes described in Section 6.06 of the Indenture; provided that nothing in this subsection shall limit any rights granted to the Trustee under the Notes or the Indenture.

(l) GOVERNING LAW; SUBMISSION TO JURISDICTION; WAIVER OF JURY TRIAL; WAIVER OF DAMAGES.

(i) THIS PLEDGE AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK EXCLUSIVE OF ITS CHOICE OF LAW PROVISIONS AND REGARDLESS OF THE LAWS THAT MIGHT OTHERWISE GOVERN UNDER APPLICABLE PRINCIPLES OF CONFLICT OF LAWS.

(ii) The Pledgor agrees that the Trustee shall, in its capacity as collateral agent and trustee or in the name and on behalf of any Holder of Notes, have the right, to the extent permitted by applicable law, to proceed against the

Pledgor or the Collateral in a court in any location reasonably selected in good faith (and having personal or in rem jurisdiction over the Pledgor or the Collateral, as the case may be) to enable the Trustee to realize on the Collateral, or to enforce a judgment or other court order entered in favor of the Trustee. The Pledgor agrees that it will not assert any counterclaims, setoffs or crossclaims in any proceeding brought by the Trustee to realize on the Collateral or to enforce a judgment or other court order in favor of the Trustee, except for such counterclaims, setoffs or crossclaims which, if not asserted in any such proceeding, could not otherwise be brought or asserted. The Pledgor waives, to the extent permitted by applicable law, any objection that it may have to the location of the court in the State of New York once the Trustee has commenced a proceeding described in this paragraph including, without limitation, any objection to the laying of venue or based on the grounds of forum non conveniens.

(iii) The Pledgor agrees that neither any Holder of Notes nor (except as otherwise provided in this Pledge Agreement or the Indenture) the Trustee in its capacity as trustee shall have any liability to the Pledgor (whether arising in tort, contract or otherwise) for losses suffered by the Pledgor in connection with,

arising out of, or in any way related to, the transactions contemplated and the relationship established by this Pledge Agreement, or any act, omission or event occurring in connection therewith, unless it is determined by a final and nonappealable judgment of a court that is binding on the the Trustee or such Holder of Notes, as the case may be, that such losses were the result of acts or omissions on the part of the Trustee or such Holder of Notes, as the case may be, constituting gross negligence or willful misconduct.

(iv) To the extent permitted by applicable law, the Pledgor waives the posting of any bond otherwise required of the Trustee or any Holder of Notes in connection with any judicial process or proceeding to enforce any judgment or other court order pertaining to this Pledge Agreement or any related agreement or document entered in favor of the Trustee or any Holder of Notes, or to enforce by specific performance, temporary restraining order or preliminary or permanent injunction, this Pledge Agreement or any related agreement or document between the Pledgor on the one hand and the Trustee and/or the Holders of the Notes on the other hand.

(v) EACH OF THE PARTIES HERETO IRREVOCABLY WAIVES ANY AND ALL RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY ACTION, PROCEEDING OR CLAIM (WHETHER BASED ON CONTRACT, TORT OR OTHERWISE) OF ANY NATURE RELATING TO THIS AGREEMENT, ANY DOCUMENTS EXECUTED IN CONNECTION WITH THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED IN ANY OF SUCH DOCUMENTS. EACH PARTY HERETO ACKNOWLEDGES THAT THE FOREGOING WAIVER IS KNOWING AND VOLUNTARY.

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IN WITNESS WHEREOF, the Pledgor and the Trustee have each caused this Pledge Agreement to be duly executed and delivered as of the date first above written.

Pledgor: LIGAND PHARMACEUTICALS INCORPORATED

By: /S/ DAVID E. ROBINSON

Name:
Title:

Trustee: J.P. MORGAN TRUST COMPANY, NATIONAL ASSOCIATION

By: /S/ MITCH GARDNER

Name:
Title:

SCHEDULE I

PLEDGED FINANCIAL ASSETS

<TABLE>
<CAPTION>

Security	Coupon Date	CUSIP No.
<S>	<C>	<C>
U.S. Treasury Strip	05-15-03	912833FS4
U.S. Treasury Strip	11-15-03	912820DJ3
U.S. Treasury Strip	05-15-04	912833FU9
U.S. Treasury Strip	11-15-04	912833FV7

</TABLE>

ANNEX A

CONTROL AGREEMENT

CONTROL AGREEMENT

This CONTROL AGREEMENT (this "CONTROL AGREEMENT") dated as of November 26, 2002 by and among LIGAND PHARMACEUTICALS INCORPORATED, a Delaware corporation (the "PLEDGOR"), J.P. MORGAN TRUST COMPANY, NATIONAL ASSOCIATION, a national banking association (the "TRUSTEE"), in its capacity as trustee for the Holders (as defined in the Pledge Agreement referred to below), and JPMORGAN CHASE BANK, a New York banking corporation (the "ACCOUNT INTERMEDIARY"), in its capacity as securities intermediary and depository bank.

W I T N E S S E T H

WHEREAS, the Pledgor and the Trustee have entered into that certain Pledge Agreement dated as of November 26, 2002 (capitalized terms used herein without definition shall have the respective meanings ascribed to them in the Pledge Agreement).

WHEREAS, the Pledgor is, or will be, the beneficial owner of certain Pledged Security Entitlements with respect to (i) the United States Treasury securities identified by CUSIP number in SCHEDULE I hereto, and credited to the Trustee's account with the Account Intermediary, ABA No. 021000021, BNF: CTCC Operating Acct, A/C: 507-874-439, Ref.: Ligand Pharmaceuticals Incorporated Pledge Account at its office at New York City, in the name of "J.P. Morgan Trust Company, National Association, as Trustee for the ratable benefit of the Holders of the 6% Convertible Subordinated Notes due 2007 of Ligand Pharmaceuticals Incorporated, Collateral Pledge Account" (the "PLEDGE ACCOUNT"); and (ii) all other financial assets credited from time to time to the Pledge Account (collectively with the assets described in clause (i) above, the "PLEDGED FINANCIAL ASSETS");

WHEREAS, the Pledgor has granted to the Trustee, pursuant to the Pledge Agreement, a security interest (the "SECURITY INTEREST") in certain Collateral consisting of, among other things and as more particularly described in the Pledge Agreement, the Pledged Financial Assets, Pledged Security Entitlements and the Pledge Account.

WHEREAS, terms defined in Article 8 or 9 of the UCC (as defined below) are used in this Control Agreement (including, without limitation, the immediately preceding paragraphs) as such terms are defined in such Article 8 or 9. The term "UCC" shall mean the Uniform Commercial Code as in effect, from time to time, in the State of New York; PROVIDED, that if perfection or the effect of perfection

or non-perfection or the priority of any security interest in any Collateral is governed by the Uniform Commercial Code as in effect in a jurisdiction other than the State of New York, "UCC" shall mean the Uniform Commercial Code as in effect, from time to time, in such other jurisdiction for purposes of the provisions hereof related to such perfection or the effect of perfection or non-perfection or priority.

WHEREAS, the Pledgor, the Trustee and the Account Intermediary are delivering this Control Agreement pursuant to the terms of the Pledge Agreement.

A G R E E M E N T

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

SECTION 1. NOTICE OF EXCLUSIVE CONTROL. The Pledgor, the Trustee and the Account Intermediary are entering into this Control Agreement to perfect, and confirm the first-priority lien of, the Trustee's security interest in the Collateral. The Account Intermediary agrees to promptly make all necessary entries or notations in its books and records to reflect the Trustee's security interest in the Collateral and to apply any value distributed on account of any Pledged Financial Assets as directed in writing by the Trustee without further consent from the Pledgor. The Account Intermediary acknowledges that the Trustee has exclusive control over the Pledge Account and all Pledged Security Entitlements contained therein from time to time.

SECTION 2. THE ACCOUNT. The Account Intermediary hereby represents and warrants to, and agrees with, the Pledgor, the Trustee and the Holders of the Notes:

(a) that the Account Intermediary has established the Pledge Account and shall not change the name or account number of the Pledge Account without the prior written consent of the Trustee;

(b) that the Account Intermediary maintains the Pledge Account for the Trustee, and all property (including, without limitation, all funds and financial assets) held by the Account Intermediary for the account of the Trustee is, and will continue to be, credited to the Pledge Account;

(c) that (i) (A) to the extent that funds are credited to the Pledge Account, the Pledge Account is a deposit account; (B) to the extent that financial assets are credited to the Pledge Account, the Pledge Account is a securities account; (ii) the Account Intermediary is (A) the bank with which the Pledge Account is maintained and (B) the securities intermediary with respect to financial assets held in the Pledge Account; (iii) the Trustee is (A) the Account Intermediary's customer with respect to the Pledge Account and (B) the entitlement holder with respect to financial assets credited from time to time to the Pledge Account;

(d) that all financial assets in registered form or payable to or to the order of and credited to the Pledge Account shall be registered in the name of, payable to or to the order of, or endorsed in the name of, the Account Intermediary, and in no case during the term of the Pledge Agreement will any financial asset credited to the Pledge Account be registered in the name of, payable to or to the order of, or endorsed in the name of, the Pledgor, except to the extent the foregoing have been subsequently endorsed by the Pledgor to the Account Intermediary or in blank;

(e) that, notwithstanding any other agreement to the contrary, the Account Intermediary's jurisdiction with respect to the Pledge Account for purposes of the UCC is, and will continue to be for so long as the Security Interest shall be in effect, the State

of New York;

(f) that the Account Intermediary does not know of any claim to or interest in the Pledge Account or any property (including, without

limitation, all funds and financial assets) credited to the Pledge Account, except for claims and interests of the parties referred to in this Control Agreement;

(g) that it is a commercial bank that in the ordinary course of its business maintains securities accounts for others and is acting in that capacity hereunder and with respect to the Pledge Account;

(h) that the Pledge Account shall be an account to which funds or financial assets may be credited, and it undertakes to treat the Trustee (in its capacity as such) as entitled to exercise rights that comprise (and, therefore, entitled to the benefits of) such funds or financial assets, and entitled to exercise the rights of an entitlement holder in the manner contemplated by the UCC;

(i) that, subject to applicable law, it has not granted, and covenants that so long as it acts as a securities intermediary or bank hereunder it shall not grant control over, or with respect to, any Collateral credited to any Pledge Account from time to time to any "PERSON" (as defined in the Indenture) other than the Trustee in its capacity as such;

(j) that it shall not, subject to applicable law, knowingly take any action inconsistent with, and represents and covenants that it is not and so long as this Control Agreement remains in effect will not knowingly become party to any agreement the terms of which are inconsistent with, the provisions of this Control Agreement;

(k) that any funds that are credited to the Pledge Account shall be treated as funds, and any item of property credited to the Pledge Account shall be treated a financial asset;

(l) that no item of Collateral credited to the Pledge Account shall be subject to any security interest, lien or right of setoff in favor of it as securities intermediary or account intermediary, except as may be expressly permitted under the Indenture and the Pledge Agreement;

(m) that it will maintain the Pledge Account and appropriate books and records in respect thereof in accordance with its usual procedures and subject to the terms of this Control Agreement; and

(n) that, with respect to any Collateral that constitutes a security entitlement, it shall comply with the provisions of Section 3(a) of this Control Agreement and, with respect to any Collateral that constitutes a securities account, it shall comply with the provisions of Section 3(a) of this Control Agreement with respect to all security entitlements carried in such securities account.

SECTION 3. CONTROL BY THE TRUSTEE.

(a) The Account Intermediary shall comply with (i) all written instructions directing disposition of the funds in the Pledge Account (such instructions, a "PAYMENT ORDER"); (ii) all notifications and entitlement orders that the Account Intermediary receives directing it to transfer or redeem any financial asset in the Pledge Account; and (iii) all other directions concerning the Collateral, including, without limitation, directions to distribute to the Trustee proceeds of any such transfer or redemption or interest on any property in the Pledge Account (any such instruction, notification or direction referred to in clause (i), (ii) or (iii) above being an "ACCOUNT DIRECTION"), in each case of clauses (i), (ii) and (iii) above originated by the Trustee without further consent by the Pledgor or any other person.

(b) The Trustee hereby acknowledges that it shall maintain and exercise control of the Pledge Account on behalf of the Holders of the Notes.

(c) The Account Intermediary shall not (i) comply with Account Directions or other directions concerning the Collateral that are not originated by the Trustee or (ii) distribute to the Pledgor interest or

other distributions on or in respect of the Collateral.

SECTION 4. PRIORITY OF TRUSTEE'S SECURITY INTEREST.

(a) The Account Intermediary waives any security interest, lien or right of setoff the Account Intermediary may have, now or in the future, against the Pledge Account or property in the Pledge Account, except that the Account Intermediary shall retain its prior lien on property credited to the Pledge Account to secure or satisfy, and only to secure or satisfy, payment for (i) property purchased for the Pledge Account; (ii) normal commissions and customary fees and expenses for the routine maintenance and operation of the Pledge Account; and (iii) to the extent that the Pledge Account is a deposit account, the face amount of any items that have been credited to the Pledge Account but which are subsequently returned unpaid because of uncollected or insufficient funds.

(b) The Account Intermediary will not enter into any other agreement with any person relating to Account Directions or other directions with respect to the Pledge Account.

SECTION 5. STATEMENTS, CONFIRMATIONS AND NOTICES OF ADVERSE CLAIMS.

(a) The Account Intermediary shall send copies of all statements and confirmations for the Pledge Account simultaneously to the Pledgor and the Trustee.

(b) When the Account Intermediary knows of any claim or interest in the Pledge Account or any property (including, without limitation, all funds and financial assets) credited to the Pledge Account other than the claims and interests of the parties referred to in this Control Agreement, the Account Intermediary shall promptly notify the Trustee and the Pledgor of such claim or interest.

SECTION 6. THE ACCOUNT INTERMEDIARY'S RESPONSIBILITIES.

(a) The Account Intermediary shall not be liable to the Pledgor for complying with an Account Direction or other direction concerning the Collateral originated by the Trustee, even if the Pledgor notifies the Account Intermediary that the Trustee is not legally entitled to issue the Account Direction or such other direction unless the Account Intermediary takes the action after it is served with an injunction, restraining order, or other legal process enjoining it from doing so, issued by a court of competent jurisdiction, and had a reasonable opportunity to act on the injunction, restraining order or other legal process.

(b) This Control Agreement does not create any obligation of the Account Intermediary except for those expressly set forth in this Control Agreement and, to the extent that the Pledge Account is a securities account, in Part 5 of Article 8 of the UCC and, to the extent that the Pledge Account is a deposit account, in Article 4 of the UCC. In particular, the Account Intermediary need not investigate whether the Trustee is entitled under the Trustee's agreements with the Pledgor to give an Account Direction or other direction concerning the Pledge Account. The Account Intermediary may conclusively rely on notices and communications it believes are given by the appropriate party.

(c) The Account Intermediary shall give prompt written notice to the Pledgor and the Trustee of any attachment, levy, stay, injunction or legal process which is served upon the Account Intermediary and which relates to the Pledged Account.

SECTION 7. PAYMENT OF EXPENSES. The Pledgor shall pay to the Account Intermediary, within forty five (45) days of demand by the Account Intermediary, normal commissions and customary fees and expenses for the routine maintenance and operation of the Pledge Account.

SECTION 8. INDEMNITY. The Pledgor shall indemnify the Account Intermediary and its officers, directors, employees and agents against claims, liabilities and expenses arising out of this Control Agreement (including, without

limitation, reasonable attorneys' fees and disbursements), except to the extent that any such claims, liabilities or expenses are caused by the Account Intermediary's negligence or willful misconduct as found by a court of competent jurisdiction in a final, non-appealable judgment.

SECTION 9. TERMINATION; SURVIVAL.

(a) This Control Agreement shall terminate automatically upon receipt by the Account Intermediary of written notice executed by an officer of the Trustee that either

(i) all of the Secured Obligations have been paid in full in cash or otherwise satisfied or (ii) all of the Collateral has been released, whichever is earlier, and the Account Intermediary shall thereafter be relieved of all duties and obligations hereunder. The Account Intermediary may terminate this Control Agreement on sixty (60) days' prior notice to the Trustee and the Pledgor, provided that before such termination the Account Intermediary and the Pledgor shall make arrangements to transfer the property in the Pledge Account to another securities intermediary that shall have executed, together with the Trustee and the Pledgor, a control agreement in favor of the Trustee for the ratable benefit of the Holders of the Notes in respect of such property in substantially the form of this Control Agreement or otherwise in form and substance satisfactory to the Trustee.

(b) In the event that the Trustee ceases to serve as trustee under the Indenture, the Trustee, the Account Intermediary and the Pledgor shall make arrangements for a successor trustee appointed in accordance with the Indenture to assume the rights and obligations of the Trustee hereunder, and such successor trustee shall execute, together with the Account Intermediary and the Pledgor, a control agreement in favor of such successor trustee for the ratable benefit of the Holders of the Notes in substantially the form of this Control Agreement or otherwise in form and substance reasonably satisfactory to such successor trustee.

(c) Sections 7 and 8 shall survive termination of this Control Agreement.

SECTION 10. CONFLICT WITH OTHER AGREEMENTS.

(a) In the event of any conflict between this Control Agreement (or any portion thereof) and any other agreement now existing or hereafter entered into, the terms of this Control Agreement shall prevail;

(b) No amendment or modification of this Control Agreement or waiver of any right hereunder shall be binding on any party hereto unless it is in writing and is signed by all of the parties hereto;

(c) The Account Intermediary hereby confirms and agrees that:

(i) there are no other agreements entered into between the Account Intermediary and the Pledgor or Trustee with respect to the Pledge Account;

(ii) it has not entered into, and until the termination of this Control Agreement will not enter into, any agreement with any other person relating to the Pledge Account and/or any financial assets credited thereto pursuant to which it has agreed to comply with entitlement orders (as defined in Section 8-102(a)(8) of the UCC) of such other person; and

(iii) it has not entered into, and until the termination of this Control Agreement will not enter into, any agreement with the Pledgor or the Trustee purporting to limit or condition the obligation of the Account Intermediary to

comply with Account Directions as set forth in Section 3 hereof.

SECTION 11. PERMITTED INVESTMENTS. In accordance with the Pledge Agreement, the Trustee shall direct, pursuant to an Account Direction, the Account Intermediary with respect to the selection of investments to be made with the funds in the Pledge Account.

SECTION 12. ENTIRE AGREEMENT. This Control Agreement is the entire agreement, and supersedes any prior agreements and contemporaneous oral agreements, of the parties concerning its subject matter.

SECTION 13. AMENDMENTS. No modification, amendment or waiver of, or consent to any departure by any party from, any provision of this Control Agreement shall be effective unless made in writing signed by the parties hereto, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given.

SECTION 14. FINANCIAL ASSETS. The Account Intermediary agrees with the Trustee and the Pledgor that, to the fullest extent permitted by applicable law, all property credited from time to time to the Pledge Account shall be treated as financial assets under Article 8 of the UCC.

SECTION 15. NOTICES. All notices, demands, requests, consents, approvals and other communications required or permitted hereunder shall be in writing (except that Account Directions may be given orally) and will be effective upon receipt if delivered personally, or if sent by facsimile transmission with confirmation of delivery, or by nationally recognized overnight courier service, to the Pledgor's or the Trustee's respective address as set forth in the Pledge Agreement, and to the Account Intermediary's address as set forth below, or to such other address as any party may give to the other parties in writing for such purpose.

If to the Account Intermediary:

JPMorgan Chase Bank
600 Travis Street, 11th Floor
Houston, TX 77002
Attention: Kirk Dodson
Fax: (713) 577-5200

with a copy to:

J.P. Morgan Trust Company, National Association
560 Mission Street, 13th Floor
San Francisco, CA 94105
Attention: Mitch Gardner
Fax: (415) 315-7585

SECTION 16. BINDING EFFECT. This Control Agreement shall become effective when it shall have been executed by the Pledgor, the Trustee and the Account Intermediary, and thereafter shall be binding upon and inure to the benefit of the Pledgor, the Trustee and the

Account Intermediary and their respective successors and assigns. If the Pledgor consolidates or merges into any other person in a transaction in which the Pledgor is not the surviving corporation, or conveys, transfers or leases its properties and assets substantially as an entirety to, any person, then the successor entity, transferee or lessee, as the case may be, shall expressly assume the Pledgor's obligations under this Control Agreement in writing.

SECTION 17. EXECUTION IN COUNTERPARTS. This Control Agreement may be executed in any number of counterparts and by different parties hereto in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement. Delivery of an executed counterpart of a signature page to this Control Agreement by telecopier shall be effective as delivery of an original executed counterpart of this Control Agreement.

SECTION 18. GOVERNING LAW AND JURISDICTION. THIS CONTROL AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK EXCLUSIVE OF ITS CHOICE OF LAW PROVISIONS AND REGARDLESS OF THE LAWS THAT MIGHT OTHERWISE GOVERN UNDER APPLICABLE PRINCIPLES OF CONFLICT OF LAWS. Each of the parties hereby irrevocably submits for itself and its property in any legal action or proceeding relating to this Control Agreement, or for recognition and enforcement of any judgment in respect thereof, to the non-exclusive general jurisdiction and venue of the courts of the State of New York, the courts of the United States of America in New York and appellate courts from any thereof.

SECTION 19. WAIVER OF JURY TRIAL. EACH OF THE PARTIES HERETO IRREVOCABLY WAIVES ANY AND ALL RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY ACTION, PROCEEDING OR CLAIM (WHETHER BASED ON CONTRACT, TORT OR OTHERWISE) OF ANY NATURE RELATING TO THIS AGREEMENT, ANY DOCUMENTS EXECUTED IN CONNECTION WITH THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED IN ANY OF SUCH DOCUMENTS. EACH PARTY HERETO ACKNOWLEDGES THAT THE FOREGOING WAIVER IS KNOWING AND VOLUNTARY.

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IN WITNESS WHEREOF, the parties hereto have caused this Control Agreement to be executed by their respective officers thereunto duly authorized, as of the date first above written.

Pledgor: LIGAND PHARMACEUTICALS INCORPORATED

By:
Name:
Title:

Trustee: J.P. MORGAN TRUST COMPANY, NATIONAL ASSOCIATION

By:
Name:
Title:

Account Intermediary: JPMORGAN CHASE BANK

By:
Name:
Title:

SCHEDULE I

PLEDGED FINANCIAL ASSETS

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<CAPTION>

Security	Coupon Date	CUSIP No.
<S>	<C>	<C>
U.S. Treasury Strip	05-15-03	912833FS4
U.S. Treasury Strip	11-15-03	912820DJ3
U.S. Treasury Strip	05-15-04	912833FU9
U.S. Treasury Strip	11-15-04	912833FV7

</TABLE>

TRUSTEE CERTIFICATE

J.P. MORGAN TRUST COMPANY, NATIONAL ASSOCIATION

OFFICER'S CERTIFICATE

PURSUANT TO SECTION 4(h) OF THE PLEDGE AGREEMENT, dated as of November 26, 2002 (as amended, restated, supplemented or otherwise modified from time to time, the "PLEDGE AGREEMENT"), by and between LIGAND PHARMACEUTICALS INCORPORATED, a Delaware corporation (the "PLEDGOR"), and J.P. MORGAN TRUST COMPANY, NATIONAL ASSOCIATION, a national banking association (the "TRUSTEE"), in its capacity as trustee for the holders from time to time (the "HOLDERS") of the Notes (as defined in the Pledge Agreement) and as collateral agent for the Holders, the undersigned officer of the Trustee, on behalf of the Trustee, makes the following certifications to the Pledgor and the Initial Purchaser. Capitalized terms used herein without definition shall have the respective meanings ascribed to them in the Pledge Agreement.

1. Substantially contemporaneously with the execution and delivery of this Officer's Certificate, the Trustee has acquired its security entitlement to the initial Pledged Financial Assets through a "securities account" (as defined in Section 8-501(a) of the New York Uniform Commercial Code) maintained by the Trustee, for value and without notice of any adverse claim thereto. Without limiting the generality of the foregoing, the Pledge Account, the Pledged Financial Assets and the other Collateral are not, and the Trustee's security entitlement to the Collateral is not, to the actual knowledge of the corporate trust officer having responsibility for the administration of the Pledge Agreement on behalf of the Trustee, subject to any Lien granted by or to or arising through or in favor of any securities intermediary (including, without limitation, J.P. Morgan Trust Company, National Association) through which the Trustee derives its security entitlement to the Collateral.

2. The Trustee has not knowingly caused or permitted the Pledge Account or its security entitlement thereto to become subject to any Lien created by or arising through the Trustee.

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IN WITNESS WHEREOF, the undersigned officer has executed this Officer's Certificate on behalf of J.P. Morgan Trust Company, National Association, as Trustee as of the date first above written.

J.P. MORGAN TRUST
COMPANY, NATIONAL ASSOCIATION

By:
Name:
Title:

J.P. MORGAN TRUST COMPANY, NATIONAL ASSOCIATION

OFFICER'S CERTIFICATE

PURSUANT TO SECTION 4(h) OF THE PLEDGE AGREEMENT, dated as of November 26, 2002 (as amended, restated, supplemented or otherwise modified from time to time, the "PLEDGE AGREEMENT"), by and between LIGAND PHARMACEUTICALS INCORPORATED, a Delaware corporation (the "PLEDGOR"), and J.P. MORGAN TRUST COMPANY, NATIONAL ASSOCIATION, a national banking association (the "TRUSTEE"), in its capacity as trustee for the holders from time to time (the "HOLDERS") of the Notes (as

defined in the Pledge Agreement) and as collateral agent for the Holders, the undersigned officer of the Trustee, on behalf of the Trustee, makes the following certifications to the Pledgor and the Initial Purchaser. Capitalized terms used herein without definition shall have the respective meanings ascribed to them in the Pledge Agreement.

3. Substantially contemporaneously with the execution and delivery of this Officer's Certificate, the Trustee has acquired its security entitlement to the additional Pledged Financial Assets identified in Supplement No. 1 to the Pledge Agreement through a "securities account" (as defined in Section 8-501(a) of the New York Uniform Commercial Code) maintained by the Trustee, for value and without notice of any adverse claim thereto. Without limiting the generality of the foregoing, the Pledge Account, the Pledged Financial Assets and the other Collateral are not, and the Trustee's security entitlement to the Collateral is not, to the actual knowledge of the corporate trust officer having responsibility for the administration of the Pledge Agreement on behalf of the Trustee, subject to any Lien granted by or to or arising through or in favor of any securities intermediary (including, without limitation, J.P. Morgan Trust Company, National Association) through which the Trustee derives its security entitlement to the Collateral.

4. The Trustee has not knowingly caused or permitted the Pledge Account or its security entitlement thereto to become subject to any Lien created by or arising through the Trustee.

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IN WITNESS WHEREOF, the undersigned officer has executed this Officer's Certificate on this November 27, 2002 on behalf of J.P. Morgan Trust Company, National Association, as Trustee.

J.P. MORGAN TRUST
COMPANY, NATIONAL ASSOCIATION

By:
Name:
Title:

ANNEX C

SUPPLEMENT TO THE PLEDGE AGREEMENT

SUPPLEMENT TO THE PLEDGE AGREEMENT

This SUPPLEMENT NO. 1 (this "SUPPLEMENT") dated as of November 27, 2002 to the PLEDGE AGREEMENT dated as of November 26, 2002 (as amended, restated, supplemented or otherwise modified from time to time, the "PLEDGE AGREEMENT") by and between LIGAND PHARMACEUTICALS INCORPORATED, a Delaware corporation (the "PLEDGOR"), and J.P. MORGAN TRUST COMPANY, NATIONAL ASSOCIATION, a national banking association (the "TRUSTEE"), in its capacity as trustee for the holders from time to time (the "HOLDERS") of the Notes (as defined in the Pledge Agreement), and as collateral agent for the Holders. Capitalized terms used herein without definition shall have the respective meanings ascribed to them in the Pledge Agreement.

W I T N E S S E T H

WHEREAS, the Pledgor and UBS Warburg LLC (the "INITIAL PURCHASER") are parties to a Purchase Agreement, dated as of November 21, 2002 (the "PURCHASE AGREEMENT"), pursuant to which the Pledgor has granted to the Initial Purchaser an option to purchase up to an additional $20,250,000 aggregate principal amount

of the Notes;

WHEREAS, the Pledgor and the Trustee have entered into that certain Indenture dated as of November 26, 2002 (as amended, restated, supplemented or otherwise modified from time to time, the "INDENTURE"), pursuant to which the Pledgor is issuing the Notes;

WHEREAS, pursuant to the Indenture, the Pledgor is required to purchase, or cause the purchase of, and pledge to the Trustee for the ratable benefit of the Holders of the Notes, on or prior to any sale of the Additional Notes, Additional Collateral (as defined below) securities in an amount that will be sufficient, upon receipt of scheduled interest and principal payments of the securities comprising the Additional Collateral, according to a written report of a nationally recognized firm of independent public accountants selected by the Pledgor and delivered to the Trustee, to provide payment in full of the first four scheduled interest payments due on the Notes;

WHEREAS, the Pledgor and the Trustee have entered into the Pledge Agreement, pursuant to which the Pledgor has previously pledged the Collateral to the Trustee for the ratable benefit of the Holders of the Notes in connection with the purchase by the Initial Purchaser of $135,000,000 aggregate principal amount of Firm Notes;

WHEREAS, the Initial Purchaser has exercised its option under the Purchase Agreement to purchase $20,250,000 aggregate principal amount of the Additional Notes; and

WHEREAS, it is a condition precedent to the purchase of the Notes by the Initial Purchaser pursuant to the option granted in the Purchase Agreement that the Pledgor purchase Additional Collateral (as defined below) and deposit such Additional Collateral into the Pledge Account to be held therein subject to the terms of the Pledge Agreement and shall have granted the assignment and security interest and made the pledge and assignment contemplated by the Pledge Agreement.

A G R E E M E N T

NOW, THEREFORE, in consideration of the premises herein contained, and in order to induce the Initial Purchaser to purchase the Additional Notes, the Pledgor and the Trustee hereby agree, for the benefit of the Initial Purchaser and for the ratable benefit of the Holders of the Notes, as follows:

SECTION 1. PLEDGE AND GRANT OF SECURITY INTEREST. Pursuant to Section 1 of the Pledge Agreement, as security for the prompt and complete payment and performance when due (whether at the stated maturity, by acceleration or otherwise) of the Obligations, the Pledgor hereby assigns and pledges to the Trustee for the ratable benefit of the Holders of the Notes, and hereby grants to the Trustee for the ratable benefit of the Holders of the Notes, a lien on and security interest in all of the Pledgor's right, title and interest in, to and under the government securities identified by CUSIP number in Schedule I hereto (the "ADDITIONAL COLLATERAL") and the certificates representing the Additional Collateral, the scheduled payments of principal and interest thereon which will be sufficient to provide for payment in full of the first four scheduled interest payments due on the Notes issued in connection herewith. The Pledge Agreement is hereby incorporated herein by reference.

SECTION 2. SUPPLEMENT TO SCHEDULE I. The parties hereto agree that Schedule I to the Pledge Agreement shall be supplemented by Schedule I hereto.

SECTION 3. TRANSFER OF ADDITIONAL COLLATERAL. Pursuant to Section 9(d) of the Pledge Agreement, on or prior to the date hereof, the Pledgor agrees to transfer, or caused to be transferred, to the Pledge Account, the Additional Collateral in such amount as will, according to a Written Independent Accountant Report delivered to the Trustee, be sufficient, upon receipt of scheduled interest and principal payments of the Pledged Financial Assets comprising the Additional Collateral, to provide for payment in full of the first four scheduled interest payments due on the Notes.

SECTION 4. REPRESENTATIONS AND WARRANTIES.

(a) The Pledgor hereby represents and warrants to the Trustee that:

(i) Each of this Supplement and the Pledge Agreement as supplemented hereby has been duly authorized, validly executed and delivered by the Pledgor and constitutes a legal, valid and binding agreement of the Pledgor, enforceable against the Pledgor in accordance with its terms, except as (A) the enforceability hereof and thereof may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws now or hereafter in effect relating to or affecting creditors' rights or remedies generally; (B) the availability of equitable remedies may be limited by equitable principles of general applicability and the discretion of the court before which any proceeding therefor may be brought; (C) the exculpation provisions and rights to indemnification under the Pledge Agreement may be limited by U.S. federal and state securities laws and

public policy considerations; and (D) the waiver of rights and defenses contained in Section 19(h) and Section 19(l) of the Pledge Agreement may be limited by applicable law.

(ii) The representations and warranties of the Pledgor set forth in Section 7(a) of the Pledge Agreement are true and correct in all material respects with the same effect as if made on and as of the date hereof.

(b) The Trustee hereby represents and warrants to the Pledgor that:

(i) Each of this Supplement and the Pledge Agreement as supplemented hereby has been duly authorized, validly executed and delivered by the Trustee and constitutes a legal, valid and binding agreement of the Trustee, enforceable against the Trustee in accordance with its terms, except as the availability of equitable remedies may be limited by equitable principles of general applicability and the discretion of the court before which any proceeding therefor may be brought.

(ii) The representations and warranties of the Trustee set forth in Section 7(b) of the Pledge Agreement are true and correct in all material respects with the same effect as if made on and as of the date hereof.

SECTION 5. EXECUTION IN COUNTERPARTS. This Supplement may be signed in two or more counterparts, each of which shall be deemed an original, but all of which shall together constitute one and the same agreement. Delivery of an executed counterpart of a signature page to this Supplement by telecopier shall be effective as delivery of an original executed counterpart of this Supplement.

SECTION 6. EFFECT OF SUPPLEMENT. Except as expressly supplemented hereby, the Pledge Agreement shall remain in full force and effect.

SECTION 7. GOVERNING LAW. THIS SUPPLEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK EXCLUSIVE OF ITS CHOICE OF LAW PROVISIONS AND REGARDLESS OF THE LAWS THAT MIGHT OTHERWISE GOVERN UNDER APPLICABLE PRINCIPLES OF CONFLICT OF LAWS.

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IN WITNESS WHEREOF, the Pledgor and the Trustee have each caused this Supplement to be duly executed and delivered as of the date first above written.

Pledgor: LIGAND PHARMACEUTICALS INCORPORATED

By: /s/ PAUL V. MAIER
Name:
Title:

Trustee: J.P. MORGAN TRUST COMPANY, NATIONAL ASSOCIATION

By: /s/ MITCH GARDNER

Name:
Title:

SCHEDULE I

ADDITIONAL COLLATERAL

<TABLE>
<CAPTION>

Security	Coupon Date	CUSIP No.
- --------	----------	---------
<S>	<C>	<C>
U.S. Treasury Strip	05-15-03	912833FS4
U.S. Treasury Strip	11-15-03	912820DJ3
U.S. Treasury Strip	05-15-04	912833FU9
U.S. Treasury Strip	11-15-04	912833FV7

</TABLE>

EXHIBIT 4.6

CONTROL AGREEMENT

This CONTROL AGREEMENT (this "CONTROL AGREEMENT") dated as of November 26, 2002 by and among LIGAND PHARMACEUTICALS INCORPORATED, a Delaware corporation (the "PLEDGOR"), J.P. MORGAN TRUST COMPANY, NATIONAL ASSOCIATION, a national banking association (the "TRUSTEE"), in its capacity as trustee for the Holders (as defined in the Pledge Agreement referred to below), and JPMORGAN CHASE BANK, a New York banking corporation (the "ACCOUNT INTERMEDIARY"), in its capacity as securities intermediary and depository bank.

W I T N E S S E T H

WHEREAS, the Pledgor and the Trustee have entered into that certain Pledge Agreement dated as of November 26, 2002 (capitalized terms used herein without definition shall have the respective meanings ascribed to them in the Pledge Agreement).

WHEREAS, the Pledgor is, or will be, the beneficial owner of certain Pledged Security Entitlements with respect to (i) the United States Treasury securities identified by CUSIP number in SCHEDULE I hereto, and credited to the Trustee's account with the Account Intermediary, ABA No. 021000021, BNF: CTCC Operating Acct, A/C: 507-874-439, Ref.: Ligand Pharmaceuticals Incorporated Pledge Account at its office at New York City, in the name of "J.P. Morgan Trust Company, National Association, as Trustee for the ratable benefit of the Holders of the 6% Convertible Subordinated Notes due 2007 of Ligand Pharmaceuticals Incorporated, Collateral Pledge Account" (the "PLEDGE ACCOUNT"); and (ii) all other financial assets credited from time to time to the Pledge Account (collectively with the assets described in clause (i) above, the "PLEDGED FINANCIAL ASSETS");

WHEREAS, the Pledgor has granted to the Trustee, pursuant to the Pledge Agreement, a security interest (the "SECURITY INTEREST") in certain Collateral consisting of, among other things and as more particularly described in the Pledge Agreement, the Pledged Financial Assets, Pledged Security Entitlements and the Pledge Account.

WHEREAS, terms defined in Article 8 or 9 of the UCC (as defined below) are used in this Control Agreement (including, without limitation, the immediately preceding paragraphs) as such terms are defined in such Article 8 or 9. The term "UCC" shall mean the Uniform Commercial Code as in effect, from time to time, in the State of New York; PROVIDED, that if perfection or the effect of perfection or non-perfection or the priority of any security interest in any Collateral is governed by the Uniform Commercial Code as in effect in a jurisdiction other than the State of New York, "UCC" shall mean the Uniform Commercial Code as in effect, from time to time, in such other jurisdiction for purposes of the provisions hereof related to such perfection or the effect of perfection or non-perfection or priority.

WHEREAS, the Pledgor, the Trustee and the Account Intermediary are delivering this Control Agreement pursuant to the terms of the Pledge Agreement.

A G R E E M E N T

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

SECTION 1. NOTICE OF EXCLUSIVE CONTROL. The Pledgor, the Trustee and the Account Intermediary are entering into this Control Agreement to perfect, and confirm the first-priority lien of, the Trustee's security interest in the Collateral. The Account Intermediary agrees to promptly make all necessary entries or notations in its books and records to reflect the Trustee's security interest in the Collateral and to apply any value distributed on account of any Pledged Financial Assets as directed in writing by the Trustee without further consent from the Pledgor. The Account Intermediary acknowledges that the Trustee has exclusive control over the Pledge Account and all Pledged Security Entitlements contained therein from time to time.

SECTION 2. THE ACCOUNT. The Account Intermediary hereby represents and warrants to, and agrees with, the Pledgor, the Trustee and the Holders of the Notes:

(a) that the Account Intermediary has established the Pledge Account and shall not change the name or account number of the Pledge Account without the prior written consent of the Trustee;

(b) that the Account Intermediary maintains the Pledge Account for the Trustee, and all property (including, without limitation, all funds and financial assets) held by the Account Intermediary for the account of the Trustee is, and will continue to be, credited to the Pledge Account;

(c) that (i) (A) to the extent that funds are credited to the Pledge Account, the Pledge Account is a deposit account; (B) to the extent that financial assets are credited to the Pledge Account, the Pledge Account is a securities account; (ii) the Account Intermediary is (A) the bank with which the Pledge Account is maintained and (B) the securities intermediary with respect to financial assets held in the Pledge Account; (iii) the Trustee is (A) the Account Intermediary's customer with respect to the Pledge Account and (B) the entitlement holder with respect to financial assets credited from time to time to the Pledge Account;

(d) that all financial assets in registered form or payable to or to the order of and credited to the Pledge Account shall be registered in the name of, payable to or to the order of, or endorsed in the name of, the Account Intermediary, and in no case during the term of the Pledge Agreement will any financial asset credited to the Pledge Account be registered in the name of, payable to or to the order of, or endorsed in the name of, the Pledgor, except to the extent the foregoing have been subsequently endorsed by the Pledgor to the Account Intermediary or in blank;

(e) that, notwithstanding any other agreement to the contrary, the Account Intermediary's jurisdiction with respect to the Pledge Account for purposes of the UCC

is, and will continue to be for so long as the Security Interest shall be in effect, the State of New York;

(f) that the Account Intermediary does not know of any claim to or interest in the Pledge Account or any property (including, without limitation, all funds and financial assets) credited to the Pledge Account, except for claims and interests of the parties referred to in this Control Agreement;

(g) that it is a commercial bank that in the ordinary course of its business maintains securities accounts for others and is acting in that capacity hereunder and with respect to the Pledge Account;

(h) that the Pledge Account shall be an account to which funds or financial assets may be credited, and it undertakes to treat the Trustee (in its capacity as such) as entitled to exercise rights that comprise (and, therefore, entitled to the benefits of) such funds or financial assets, and entitled to exercise the rights of an entitlement holder in the manner contemplated by the UCC;

(i) that, subject to applicable law, it has not granted, and covenants that so long as it acts as a securities intermediary or bank hereunder it shall not grant control over, or with respect to, any Collateral credited to any Pledge Account from time to time to any "PERSON" (as defined in the Indenture) other than the Trustee in its capacity as such;

(j) that it shall not, subject to applicable law, knowingly take any action inconsistent with, and represents and covenants that it is not and so long as this Control Agreement remains in effect will not knowingly become party to any agreement the terms of which are inconsistent with, the provisions of this Control Agreement;

(k) that any funds that are credited to the Pledge Account shall be treated as funds, and any item of property credited to the Pledge Account shall be treated a financial asset;

(l) that no item of Collateral credited to the Pledge Account shall be

subject to any security interest, lien or right of setoff in favor of it as securities intermediary or account intermediary, except as may be expressly permitted under the Indenture and the Pledge Agreement;

(m) that it will maintain the Pledge Account and appropriate books and records in respect thereof in accordance with its usual procedures and subject to the terms of this Control Agreement; and

(n) that, with respect to any Collateral that constitutes a security entitlement, it shall comply with the provisions of Section 3(a) of this Control Agreement and, with respect to any Collateral that constitutes a securities account, it shall comply with the provisions of Section 3(a) of this Control Agreement with respect to all security entitlements carried in such securities account.

SECTION 3. CONTROL BY THE TRUSTEE.

(a) The Account Intermediary shall comply with (i) all written instructions directing disposition of the funds in the Pledge Account (such instructions, a "PAYMENT ORDER"); (ii) all notifications and entitlement orders that the Account Intermediary receives directing it to transfer or redeem any financial asset in the Pledge Account; and (iii) all other directions concerning the Collateral, including, without limitation, directions to distribute to the Trustee proceeds of any such transfer or redemption or interest on any property in the Pledge Account (any such instruction, notification or direction referred to in clause (i), (ii) or (iii) above being an "ACCOUNT DIRECTION"), in each case of clauses (i), (ii) and (iii) above originated by the Trustee without further consent by the Pledgor or any other person.

(b) The Trustee hereby acknowledges that it shall maintain and exercise control of the Pledge Account on behalf of the Holders of the Notes.

(c) The Account Intermediary shall not (i) comply with Account Directions or other directions concerning the Collateral that are not originated by the Trustee or (ii) distribute to the Pledgor interest or other distributions on or in respect of the Collateral.

SECTION 4. PRIORITY OF TRUSTEE'S SECURITY INTEREST.

(a) The Account Intermediary waives any security interest, lien or right of setoff the Account Intermediary may have, now or in the future, against the Pledge Account or property in the Pledge Account, except that the Account Intermediary shall retain its prior lien on property credited to the Pledge Account to secure or satisfy, and only to secure or satisfy, payment for (i) property purchased for the Pledge Account; (ii) normal commissions and customary fees and expenses for the routine maintenance and operation of the Pledge Account; and (iii) to the extent that the Pledge Account is a deposit account, the face amount of any items that have been credited to the Pledge Account but which are subsequently returned unpaid because of uncollected or insufficient funds.

(b) The Account Intermediary will not enter into any other agreement with any person relating to Account Directions or other directions with respect to the Pledge Account.

SECTION 5. STATEMENTS, CONFIRMATIONS AND NOTICES OF ADVERSE CLAIMS.

(a) The Account Intermediary shall send copies of all statements and confirmations for the Pledge Account simultaneously to the Pledgor and the Trustee.

(b) When the Account Intermediary knows of any claim or interest in the Pledge Account or any property (including, without limitation, all funds and financial assets) credited to the Pledge Account other than the claims and interests of the parties referred to in this Control Agreement, the Account Intermediary shall promptly notify the Trustee and the Pledgor of such claim or interest.

SECTION 6. THE ACCOUNT INTERMEDIARY'S RESPONSIBILITIES.

(a) The Account Intermediary shall not be liable to the Pledgor for complying with an Account Direction or other direction concerning the Collateral originated by the Trustee, even if the Pledgor notifies the Account Intermediary that the Trustee is not legally entitled to issue the Account Direction or such other direction unless the Account Intermediary takes the action after it is served with an injunction, restraining order, or other legal process enjoining it from doing so, issued by a court of competent jurisdiction, and had a reasonable opportunity to act on the injunction, restraining order or other legal process.

(b) This Control Agreement does not create any obligation of the Account Intermediary except for those expressly set forth in this Control Agreement and, to the extent that the Pledge Account is a securities account, in Part 5 of Article 8 of the UCC and, to the extent that the Pledge Account is a deposit account, in Article 4 of the UCC. In particular, the Account Intermediary need not investigate whether the Trustee is entitled under the Trustee's agreements with the Pledgor to give an Account Direction or other direction concerning the Pledge Account. The Account Intermediary may conclusively rely on notices and communications it believes are given by the appropriate party.

(c) The Account Intermediary shall give prompt written notice to the Pledgor and the Trustee of any attachment, levy, stay, injunction or legal process which is served upon the Account Intermediary and which relates to the Pledged Account.

SECTION 7. PAYMENT OF EXPENSES. The Pledgor shall pay to the Account Intermediary, within forty five (45) days of demand by the Account Intermediary, normal commissions and customary fees and expenses for the routine maintenance and operation of the Pledge Account.

SECTION 8. INDEMNITY. The Pledgor shall indemnify the Account Intermediary and its officers, directors, employees and agents against claims, liabilities and expenses arising out of this Control Agreement (including, without limitation, reasonable attorneys' fees and disbursements), except to the extent that any such claims, liabilities or expenses are caused by the Account Intermediary's negligence or willful misconduct as found by a court of competent jurisdiction in a final, non-appealable judgment.

SECTION 9. TERMINATION; SURVIVAL.

(a) This Control Agreement shall terminate automatically upon receipt by the Account Intermediary of written notice executed by an officer of the Trustee that either (i) all of the Secured Obligations have been paid in full in cash or otherwise satisfied or (ii) all of the Collateral has been released, whichever is earlier, and the Account Intermediary shall thereafter be relieved of all duties and obligations hereunder. The Account Intermediary may terminate this Control Agreement on sixty (60) days' prior notice to the Trustee and the Pledgor, provided that before such termination the Account Intermediary and the Pledgor shall make arrangements to transfer the property in the Pledge Account to another securities intermediary that shall have executed, together with the Trustee and the Pledgor, a control agreement in favor of the Trustee for the ratable benefit of the Holders of the Notes in respect of such property in substantially the form of this Control Agreement or otherwise in form and substance satisfactory to the Trustee.

(b) In the event that the Trustee ceases to serve as trustee under the Indenture, the Trustee, the Account Intermediary and the Pledgor shall make arrangements for a successor trustee appointed in accordance with the Indenture to assume the rights and obligations of the Trustee hereunder, and such successor trustee shall execute, together with the Account Intermediary and the Pledgor, a control agreement in favor of such successor trustee for the ratable benefit of the Holders of the Notes in substantially the form of this Control Agreement or otherwise in form and substance reasonably satisfactory to such successor trustee.

(c) Sections 7 and 8 shall survive termination of this Control Agreement.

SECTION 10. CONFLICT WITH OTHER AGREEMENTS.

(a) In the event of any conflict between this Control Agreement (or any portion thereof) and any other agreement now existing or hereafter entered into, the terms of this Control Agreement shall prevail;

(b) No amendment or modification of this Control Agreement or waiver of any right hereunder shall be binding on any party hereto unless it is in writing and is signed by all of the parties hereto;

(c) The Account Intermediary hereby confirms and agrees that:

(i) there are no other agreements entered into between the Account Intermediary and the Pledgor or Trustee with respect to the Pledge Account;

(ii) it has not entered into, and until the termination of this Control Agreement will not enter into, any agreement with any other person relating to the Pledge Account and/or any financial assets credited thereto pursuant to which it has agreed to comply with entitlement orders (as defined in Section 8-102(a)(8) of the UCC) of such other person; and

(iii) it has not entered into, and until the termination of this Control Agreement will not enter into, any agreement with the Pledgor or the Trustee purporting to limit or condition the obligation of the Account Intermediary to comply with Account Directions as set forth in Section 3 hereof.

SECTION 11. PERMITTED INVESTMENTS. In accordance with the Pledge Agreement, the Trustee shall direct, pursuant to an Account Direction, the Account Intermediary with respect to the selection of investments to be made with the funds in the Pledge Account.

SECTION 12. ENTIRE AGREEMENT. This Control Agreement is the entire agreement, and supersedes any prior agreements and contemporaneous oral agreements, of the parties concerning its subject matter.

SECTION 13. AMENDMENTS. No modification, amendment or waiver of, or consent to any departure by any party from, any provision of this Control Agreement shall be effective unless made in writing signed by the parties hereto, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given.

SECTION 14. FINANCIAL ASSETS. The Account Intermediary agrees with the Trustee and the Pledgor that, to the fullest extent permitted by applicable law, all property credited from time to time to the Pledge Account shall be treated as financial assets under Article 8 of the UCC.

SECTION 15. NOTICES. All notices, demands, requests, consents, approvals and other communications required or permitted hereunder shall be in writing (except that Account Directions may be given orally) and will be effective upon receipt if delivered personally, or if sent by facsimile transmission with confirmation of delivery, or by nationally recognized overnight courier service, to the Pledgor's or the Trustee's respective address as set forth in the Pledge Agreement, and to the Account Intermediary's address as set forth below, or to such other address as any party may give to the other parties in writing for such purpose.

If to the Account Intermediary:

JPMorgan Chase Bank
600 Travis Street, 11th Floor
Houston, TX 77002
Attention: Kirk Dodson
Fax: (713) 577-5200

with a copy to:

J.P. Morgan Trust Company, National Association
560 Mission Street, 13th Floor

San Francisco, CA 94105
Attention: Mitch Gardner
Fax: (415) 315-7585

SECTION 16. BINDING EFFECT. This Control Agreement shall become effective when it shall have been executed by the Pledgor, the Trustee and the Account Intermediary, and thereafter shall be binding upon and inure to the benefit of the Pledgor, the Trustee and the Account Intermediary and their respective successors and assigns. If the Pledgor consolidates or merges into any other person in a transaction in which the Pledgor is not the surviving corporation, or conveys, transfers or leases its properties and assets substantially as an entirety to, any person, then the successor entity, transferee or lessee, as the case may be, shall expressly assume the Pledgor's obligations under this Control Agreement in writing.

SECTION 17. EXECUTION IN COUNTERPARTS. This Control Agreement may be executed in any number of counterparts and by different parties hereto in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement. Delivery of an executed counterpart of a signature page to this Control Agreement by telecopier shall be effective as delivery of an original executed counterpart of this Control Agreement.

SECTION 18. GOVERNING LAW AND JURISDICTION. THIS CONTROL AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK EXCLUSIVE OF ITS CHOICE OF LAW PROVISIONS AND REGARDLESS OF THE LAWS THAT MIGHT OTHERWISE GOVERN UNDER APPLICABLE PRINCIPLES OF CONFLICT OF LAWS. Each of the parties hereby irrevocably submits for itself and its property in any legal action or proceeding relating to this Control Agreement, or for recognition and enforcement of any judgment in respect thereof, to the non-exclusive general jurisdiction and venue of the courts of the State of New York, the courts of the United States of America in New York and appellate courts from any thereof.

SECTION 19. WAIVER OF JURY TRIAL. EACH OF THE PARTIES HERETO IRREVOCABLY WAIVES ANY AND ALL RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY ACTION, PROCEEDING OR CLAIM (WHETHER BASED ON CONTRACT, TORT OR OTHERWISE) OF ANY NATURE RELATING TO THIS AGREEMENT, ANY DOCUMENTS EXECUTED IN CONNECTION WITH THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED IN ANY OF SUCH DOCUMENTS. EACH PARTY HERETO ACKNOWLEDGES THAT THE FOREGOING WAIVER IS KNOWING AND VOLUNTARY.

[THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have caused this Control Agreement to be executed by their respective officers thereunto duly authorized, as of the date first above written.

Pledgor: LIGAND PHARMACEUTICALS INCORPORATED

By: /S/ DAVID E. ROBINSON
Name:
Title:

Trustee: J.P. MORGAN TRUST COMPANY, NATIONAL ASSOCIATION

By: /S/ MITCH GARDNER
Name:
Title:

Account Intermediary: JPMORGAN CHASE BANK

By: /S/ MITCH GARDNER
Name:
Title:

SCHEDULE I

PLEDGED FINANCIAL ASSETS

<TABLE>
<CAPTION>

Security	Coupon Date	CUSIP No.
<S>	<C>	<C>
U.S. Treasury Strip	05-15-03	912833FS4
U.S. Treasury Strip	11-15-03	912820DJ3
U.S. Treasury Strip	05-15-04	912833FU9
U.S. Treasury Strip	11-15-04	912833FV7

</TABLE>

Exhibit 5.1

OPINION OF CLIFFORD CHANCE US LLP

January 13, 2003

Ligand Pharmaceuticals Incorporated
10275 Science Center Drive

San Diego, CA 92121

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as special counsel to Ligand Pharmaceuticals Incorporated, a Delaware corporation (the "Company"), in connection with the Registration Statement on Form S-3 (the "Registration Statement"), filed by the Company with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"). The Registration Statement covers offers and sales (i) of up to $155,250,000 aggregate principal amount of the Company's 6% Convertible Subordinated Notes Due 2007 (the "Notes") and (ii) up to 25,149,025 shares of the Company's common stock, par value $0.001 per share, issuable upon conversion of the Notes (the "Shares") that may be made from time to time by the selling securityholders named in the Registration Statement.

This opinion is being furnished in accordance with the requirements of Item 16 of Form S-3 and Item 601(b)(5)(i) of Regulation S-K.

In rendering the opinion expressed below, we have examined and relied upon originals or copies, certified or otherwise identified to our satisfaction, of such corporate records, documents, certificates and other instruments as in our judgment are necessary or appropriate. As to factual matters relevant to the opinion set forth below, we have, with your permission, relied upon certificates of officers of the Company and public officials. On the basis of the foregoing and in reliance thereon, we are of the opinion that (i) the Notes constitute valid and binding obligations of the Company, except as may be limited by applicable bankruptcy, insolvency, reorganization, moratorium, fraudulent transfer and other similar laws of general application relating to or affecting creditors' rights, by general principles of equity and by an implied covenant of good faith, and (ii) following the issuance of Shares upon conversion of the Notes in accordance with their terms, such Shares will be validly issued, fully paid and nonassessable.

We consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement and to the reference to this firm under the caption "Legal Matters" in the prospectus which is part of the Registration Statement. In giving this consent, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act, the rules and regulations of the Commission promulgated thereunder, or Item 509 of Regulation S-K.

This opinion letter is rendered as of the date first written above, and we disclaim any obligation to advise you of facts, circumstances, events or developments which hereafter may be brought to our attention and which may alter, affect or modify the opinion expressed herein. Our opinion is expressly limited to the matters set forth above and we render no opinion, whether by implication or otherwise, as to any other matters relating to the Company, the Notes or the Shares.

Very truly yours,

/s/ Clifford Chance US LLP

Exhibit 12.1

RATIO OF EARNINGS TO FIXED CHARGES

The following table sets forth our ratio of earnings to fixed charges for the years ended December 31, 1997, 1998, 1999, 2000, 2001 and the nine months ended September 30, 2002. As earnings are inadequate to cover the combined fixed charges, we have provided the deficiency amounts. For purposes of this computation, "Earnings" consist of loss before income taxes, excluding the cumulative effect of a change in accounting principle, plus fixed charges, and "fixed charges" consist of interest and the amortization of debt issuance costs and debt discount incurred and the portion of rental expense deemed by us to be representative of the interest factor of rental payments under leases.

<TABLE>
<CAPTION>

	YEAR ENDED DECEMBER 31,					NINE MONTHS ENDED SEPTEMBER 30,
	2001	2000	1999	1998	1997	2002
	(IN THOUSANDS)					
<S>	<C>	<C>	<C>	<C>	<C>	<C>
Net loss before cumulative effect of a change in accounting principle (A)	$ (100,150)	$ (117,886)	$ (74,719)	$ (59,277)	$ (42,995)	$ (25,868)
Interest expense on indebtedness and amortization of debt issuance costs and debt discount	$ 8,088	$ 8,322	$ 12,979	$ 13,119	$ 13,601	$ 5,213
Portion of rent expense representative of interest	$ 2,112	$ 3,386	$ 3,514	$ 3,727	$ 3,466	$ 2,385
Earnings	$ (89,950)	$ (106,178)	$ (58,226)	$ (42,431)	$ (25,928)	$ (18,270)
Interest expense on indebtedness and amortization of debt issuance costs and debt discount	$ 8,088	$ 8,322	$ 12,979	$ 13,119	$ 13,601	$ 5,213
Portion of rent expense representative of interest	$ 2,112	$ 3,386	$ 3,514	$ 3,727	$ 3,466	$ 2,385
Total fixed charges	$ 10,200	$ 11,708	$ 16,493	$ 16,846	$ 17,067	$ 7,598
Ratio of earnings to fixed charges	--	--	--	--	--	--
Coverage deficiency	$ (100,150)	$ (117,886)	$ (74,719)	$ (59,277)	$ (42,995)	$ (25,868)

</TABLE>

(A) In December 1999, the Securities and Exchange Commission issued Staff Accounting Bulletin ("SAB") No. 101, Revenue Recognition in Financial Statements. We implemented SAB No. 101 in the fourth quarter of 2000 as a change in accounting principle. The cumulative effect of this change to December 31, 1999, which was recorded in 2000, was $13.1 million.

Exhibit 23.1

INDEPENDENT AUDITORS' CONSENT

We consent to the incorporation by reference in this Registration Statement of Ligand Pharmaceuticals Incorporated on Form S-3 of our report dated February 22, 2002 (which report expresses an unqualified opinion and includes an explanatory paragraph referring to a change in accounting principle), appearing in the Annual Report on Form 10-K of Ligand Pharmaceuticals Incorporated for the year ended December 31, 2001 and to the reference to us under the heading "Experts" in the Prospectus, which is part of this Registration Statement.

/S/DELOITTE & TOUCHE LLP

San Diego, California
January 10, 2003

Exhibit 23.2

CONSENT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS

We consent to the reference to our firm under the caption "Experts" in this Registration Statement (Form S-3) and related Prospectus of Ligand Pharmaceuticals and to the incorporation by reference therein of our report dated February 22, 2000, with respect to the consolidated financial statements and schedules of Ligand Pharmaceuticals, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 1999, filed with the Securities and Exchange Commission.

/S/ERNST & YOUNG LLP

San Diego, California
January 10, 2003

Exhibit 25.1

SECURITIES AND EXCHANGE COMMISSION
Washington, D. C. 20549

FORM T-1

STATEMENT OF ELIGIBILITY
UNDER THE TRUST INDENTURE ACT OF 1939 OF

A CORPORATION DESIGNATED TO ACT AS TRUSTEE

CHECK IF AN APPLICATION TO DETERMINE ELIGIBILITY OF A TRUSTEE PURSUANT TO SECTION 305(b)(2)

J. P. MORGAN TRUST COMPANY, NATIONAL ASSOCIATION
(Exact name of trustee as specified in its charter)

(State of incorporation if not a national bank)	95-4655078 (I.R.S. employer identification No.)

560 MISSION STREET, FLOOR 13 SAN FRANCISCO, CALIFORNIA (Address of principal executive offices)	94105 (Zip Code)

William H. McDavid
General Counsel
270 Park Avenue

New York, New York 10017
Tel: (212) 270-2611

(Name, address and telephone number of agent for service)

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

DELAWARE (State or other jurisdiction 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 (Zip Code)

6% CONVERTIBLE SUBORDINATED NOTES DUE 2007
(Title of the indenture securities)

ITEM 1. GENERAL INFORMATION.

Furnish the following information as to the trustee:

(a) Name and address of each examining or supervising authority to which it is subject.

Comptroller of the Currency, Washington, D.C.

Board of Governors of the Federal Reserve System, Washington, D.C.

(b) Whether it is authorized to exercise corporate trust powers.

Yes.

ITEM 2. AFFILIATIONS WITH OBLIGOR.

If the Obligor is an affiliate of the trustee, describe each such affiliation.

None.

ITEM 16. LIST OF EXHIBITS.

List below all exhibits filed as part of this statement of eligibility.

Exhibit 1. Articles of Association of the Trustee as Now in Effect (see Exhibit 1 to Form T-1 filed in connection with Form 8-K of the Southern California Water Company filing, dated December 7, 2001, which is incorporated by reference).

Exhibit 2. Certificate of Authority of the Trustee to Commence Business (see Exhibit 2 to Form T-1 filed in connection with Registration Statement No. 333-41329, which is incorporated by reference).

Exhibit 3. Authorization of the Trustee to Exercise Corporate Trust Powers (contained in Exhibit 2).

Exhibit 4. Existing By-Laws of the Trustee (see Exhibit 4 to Form T-1 filed in connection with Form 8-K of the Southern California Water Company filing, dated December 7, 2001, which is incorporated by reference).

Exhibit 5. Not Applicable

Exhibit 6. The consent of the Trustee required by Section 321 (b) of the Act (see Exhibit 6 to Form T-1 filed in connection with Registration Statement No. 333-41329, which is incorporated by reference).

Exhibit 7. A copy of the latest report of condition of the Trustee, published pursuant to law or the requirements of its supervising or examining authority.

Exhibit 8. Not Applicable

Exhibit 9. Not Applicable

SIGNATURE

Pursuant to the requirements of the Trust Indenture Act of 1939, the Trustee, J. P. Morgan Trust Company, National Association, has duly caused this statement of eligibility and qualification to be signed on its behalf by the undersigned, thereunto duly authorized, all in the City of San Francisco, and State of California, on the 13th day of January, 2003.

J. P. Morgan Trust Company,
National Association

By /S/: MITCH GARDNER

Mitch Gardner
Vice President

EXHIBIT 7. Report of Condition of the Trustee.

CONSOLIDATED REPORT OF CONDITION OF J.P. MORGAN TRUST COMPANY, N.A., (FORMERLY CHASE MANHATTAN BANK AND TRUST COMPANY, N.A.)

(Legal Title)

LOCATED AT 1800 CENTURY PARK EAST, STE. 400 LOS ANGELES, CA 90067

(Street) (City) (State) (Zip)

AS OF CLOSE OF BUSINESS ON SEPTEMBER 30, 2002

ASSETS DOLLAR AMOUNTS IN THOUSANDS

<TABLE>

<S>	<C>
1. Cash and balances due from depository institutions (from Schedule RC-A):	
a. Noninterest-bearing balances and currency and coin (1)	9,685
b. Interest bearing balances (2)	0
2. Securities:	
a. Held-to-maturity securities (from Schedule RC-B, column A)	0
b. Available-for-sale securities (from Schedule RC-B, column D)	101,834
3. Federal Funds sold and securities purchased agreements to resell	0
4. Loans and lease financing receivables (from Schedule RC-C):	
a. Loans and leases held for sale	0
b. Loans and leases, net of unearned income	141,553
c. LESS: Allowance for loan and lease losses	0
d. Loans and leases, net of unearned income and allowance (item 4.b minus 4.c)	141,553
5. Trading assets (from Schedule RC-D)	0
6. Premises and fixed assets (including capitalized leases)	5,549
7. Other real estate owned (from Schedule RC-M)	0
8. Investments in unconsolidated subsidiaries and associated companies (from Schedule RC-M)	0
9. Customers' liability to this bank on acceptances outstanding	0
10. Intangible assets	
a. Goodwill	0
b. Other intangible assets (from Schedule RC-M)	154,231
11. Other assets (from Schedule RC-F)	27,391
12. TOTAL ASSETS (sum of items 1 through 11)	440,243

</TABLE>

(1) INCLUDES CASH ITEMS IN PROCESS OF COLLECTION AND UNPOSTED DEBITS.
(2) INCLUDES TIME CERTIFICATES OF DEPOSIT NOT HELD FOR TRADING.

LIABILITIES

<TABLE>

<S>	<C>
13. Deposits:	
a. In domestic offices (sum of totals of columns A and C from Schedule RC-E)	91,278
(1) Noninterest-bearing (1)	91,278
(2) Interest-bearing	0
b. In foreign offices, Edge and Agreement subsidiaries, and IBF'	
(1) Noninterest-bearing	0
(2) Interest-bearing	0
14. Federal funds purchased and securities sold under agreements to repurchase	0
15. Trading liabilities (from Schedule RC-D)	0
16. Other borrowed money (includes mortgage indebtedness and obligations under capitalized leases) (from Schedule RC-M):	0
17. Not applicable	
18. Bank's liability on acceptances executed and outstanding	0
19. Subordinated notes and debentures (2)	0
20. Other liabilities (from Schedule RC-G)	42,911
21. Total liabilities (sum of items 13 through 20)	134,189
22. Minority interest in consolidated subsidiaries	0

EQUITY CAPITAL

23. Perpetual preferred stock and related surplus	0
24. Common stock	600
25. Surplus (exclude all surplus related to preferred stock)	277,263

26.	a. Retained earnings	28,186
	b. Accumulated other comprehensive income (3)	0
27.	Other equity capital components (4)	0
28.	Total equity capital (sum of items 23 through 27)	306,054
29.	Total liabilities, minority interest, and equity capital (sum of items 21, 22, and 28)	440,243

</TABLE>

_____

(1) Includes total demand deposits and noninterest-bearing time and savings deposits.

(2) Includes limited-life preferred stock and related surplus.

(3) Includes net unrealized holding gains (losses) on available-for-sale securities, accumulated net gains (losses) on cash flow hedges, and minimum pension liability adjustments.

(4) Includes treasury stock and unearned Employee Stock Ownership Plan shares.