UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 10-Q

MARK ONE

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

FOR THE QUARTERLY PERIOD ENDED SEPTEMBER 30, 1998 OR

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

FOR THE TRANSITION PERIOD FROM _____ TO _____ . COMMISSION FILE NUMBER:0-20720

LIGAND PHARMACEUTICALS INCORPORATED
(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

DELAWARE	77-0160744
(STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION)	(I.R.S. EMPLOYER IDENTIFICATION NO.)
10275 SCIENCE CENTER DRIVE SAN DIEGO, CA (ADDRESS OF PRINCIPAL EXECUTIVE OFFICES)	92121-1117 (ZIP CODE)

REGISTRANT'S TELEPHONE NUMBER, INCLUDING AREA CODE: (619) 535-7500

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

As of October 31, 1998 the registrant had 42,526,245 shares of Common Stock outstanding.

LIGAND PHARMACEUTICALS INCORPORATED
QUARTERLY REPORT

FORM 10-Q

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* No information provided due to inapplicability of item.

PART I. FINANCIAL INFORMATION
ITEM 1 FINANCIAL STATEMENTS

LIGAND PHARMACEUTICALS INCORPORATED
CONSOLIDATED BALANCE SHEETS
(IN THOUSANDS, EXCEPT SHARE DATA)

<TABLE>
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	September 30, 1998 (Unaudited)	December 31, 1997
<S>	<C>	<C>
ASSETS		
Current assets:		
Cash and cash equivalents	$ 24,939	$ 62,252
Short-term investments	15,852	20,978
Inventory	1,533	65
Other current assets	3,628	799
Total current assets	45,952	84,094
Restricted short-term investments	2,809	3,057
Property and equipment, net	30,387	14,853
Notes receivable from officers and employees	562	559
Acquired technology	37,317	--
Other assets	8,709	4,860
	$ 125,736	$ 107,423
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 5,547	$ 10,717
Accrued liabilities	5,792	5,609
Deferred revenue	4,311	2,616
Current portion of obligations under capital leases	3,056	2,753

Total current liabilities	18,706	21,695
Long-term obligations under capital leases	8,593	8,501
Convertible note	2,500	6,250
Convertible subordinated debentures	38,634	36,628
Accrued acquisition obligation	50,000	
Stockholders' equity:		
Convertible preferred stock, $.001 par value; 5,000,000 shares authorized; none issued	--	--
Common stock, $.001 par value; 80,000,000 shares authorized; 42,526,245 shares and 38,504,459 shares issued at September 30, 1998 and December 31, 1997, respectively	43	39
Paid-in capital	362,141	311,681
Adjustment for unrealized gains on available-for-sale securities	101	384
Accumulated deficit	(354,971)	(277,744)
	7,314	34,360
Less treasury stock, at cost (1,114 shares at September 30, 1998 and December 31, 1997)	(11)	(11)
Total stockholders' equity	7,303	34,349
	$ 125,736	$ 107,423

</TABLE>

See accompanying notes.

LIGAND PHARMACEUTICALS INCORPORATED
CONSOLIDATED STATEMENTS OF OPERATIONS
(UNAUDITED)
(IN THOUSANDS, EXCEPT PER SHARE DATA)

<TABLE>
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	Three Months Ended September 30,		Nine Months Ended September 30,	
	1998	1997	1998	1997
<S>	<C>	<C>	<C>	<C>
Revenues:				
Collaborative research and development:				
Related parties	$ --	$ 6,710	$ --	$ 18,923
Unrelated parties	3,844	3,363	13,117	10,652
Other	103	99	282	325
	3,947	10,172	13,399	29,900
Costs and expenses:				
Research and development	16,985	18,038	49,222	51,353
Selling, general and administrative	3,825	2,501	9,924	7,379
Write-off of acquired in-process technology	30,000	--	30,000	--
Total operating expenses	50,810	20,539	89,146	58,732
Loss from operations	(46,863)	(10,367)	(75,747)	(28,832)
Interest income	521	798	2,406	2,800
Interest expense	(1,933)	(1,995)	(5,886)	(6,085)
Realized gain on investments	2,000	--	2,000	--
Net loss	$(46,275)	$(11,564)	$(77,227)	$(32,117)
Basic and diluted loss per share	$ (1.15)	$ (.35)	$ (1.97)	$ (.99)
Shares used in computing net loss per share	40,333	32,800	39,256	32,484

	========	========	========	========

</TABLE>

See accompanying notes.

LIGAND PHARMACEUTICALS INCORPORATED
CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)
(IN THOUSANDS)

<TABLE>
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	Nine Months Ended September 30,	
	1998	1997
<S>	<C>	<C>
OPERATING ACTIVITIES		
Net loss	$(77,227)	$(32,117)
Adjustments to reconcile net loss to net cash used by operating activities:		
Depreciation and amortization	3,215	3,037
Amortization of notes receivable from officers and employees	144	185
Amortization of deferred compensation and consulting	--	322
Amortization of warrant subscription receivable	--	1,529
Accretion of debt discount	2,006	2,006
Gain on sale of property and equipment	(24)	(69)
Write off of acquired in-process technology	30,000	--
Change in operating assets and liabilities:		
Other current assets	(2,796)	696
Receivable from a related party	--	(59)
Accounts payable and accrued liabilities	(7,070)	(674)
Deferred revenue	1,695	(1,242)
Net cash used in operating activities	(50,057)	(26,386)
INVESTING ACTIVITIES		
Purchase of short-term investments	(28,777)	(18,584)
Proceeds from short-term investments	33,620	27,367
Increase in/payment of notes receivable from officers and employees	(147)	(204)
Increase in other assets	(7,422)	(3,668)
Decrease in other assets	3,577	89
Purchase of property and equipment	(1,113)	(3,727)
Seragen assets acquired	(5,756)	--
Proceeds from sale of property and equipment	24	32
Net cash provided by/(used in) investing activities	(5,994)	1,305
FINANCING ACTIVITIES		
Principal payments on obligations under capital leases	(2,232)	(2,366)
Net change in restricted short-term investment	249	471
Net proceeds from sale of common stock	20,721	5,583
Net cash provided by financing activities	18,738	3,688
Net decrease in cash and cash equivalents	(37,312)	(21,393)
Cash and cash equivalents at beginning of period	62,252	34,830
Cash and cash equivalents at end of period	$ 24,939	$ 13,437
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:		
Interest paid	$ 4,958	$ 5,142
SUPPLEMENTAL SCHEDULE OF NON-CASH INVESTING AND FINANCING ACTIVITIES:		
Additions to obligations under capital leases	$ 2,627	$ 2,676

Conversion of note to common stock	$ 3,750	$ 6,250
Common stock issued to purchase Seragen	$ 25,996	--

</TABLE>

See accompanying notes

LIGAND PHARMACEUTICALS INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(UNAUDITED)

SEPTEMBER 30, 1998

1. BASIS OF PRESENTATION

The consolidated financial statements of Ligand Pharmaceuticals Incorporated (the "Company") for the three and nine months ended September 30, 1998 and 1997 are unaudited. These financial statements reflect all adjustments, consisting of only normal recurring adjustments which, in the opinion of management, are necessary to fairly present the consolidated financial position as of September 30, 1998 and the consolidated results of operations for the three and nine months ended September 30, 1998 and 1997. The results of operations for the periods ended September 30, 1998 are not necessarily indicative of the results to be expected for the year ending December 31, 1998. For more complete financial information, these financial statements, and the notes thereto, should be read in conjunction with the audited consolidated financial statements for the year ended December 31, 1997 included in the Ligand Pharmaceuticals Incorporated Form 10-K filed with the Securities and Exchange Commission.

In June 1997, the Financial Accounting Standards Board issued SFAS 130, Reporting Comprehensive Income, and SFAS 131, Segment Information. Both of these standards are effective for fiscal years beginning after December 15, 1997. SFAS 130 requires that all components of comprehensive income, including net income, be reported in the financial statements in the period in which they are recognized. SFAS 130 requires the change in net unrealized gains (losses) on available-for-sale securities to be included in comprehensive income. As adjusted for this item, comprehensive net loss for the nine month periods ended September 30, 1998 and 1997 is $(77.5) million and $(32.0) million, respectively. SFAS 131 amends the requirements for a public enterprise to report financial and descriptive information about its reportable operating segments. The Company currently operates in one business and operating segment and does not believe adoption of this standard will have a material impact on the Company's financial statements as reported.

INVENTORIES

In August 1998, the Company acquired Seragen, Inc. ("Seragen") (See Note 3.) In December 1997, Seragen submitted a Biologic License Application ("BLA") to the U.S. Food and Drug Administration ("FDA") for ONTAK(TM) (DAB(389)IL-2, Interleukin-2 Fusion Protein or denileukin diftitox). In June 1998 the FDA issued a Complete Review Letter to Seragen in respect to its BLA. Seragen responded to the issues set out in the Complete Review Letter in August 1998 and is awaiting final FDA action. In preparation for the approval by the FDA, if received, Seragen has manufactured commercial quantities of ONTAK(TM) and in purchase accounting for the Merger the Company has capitalized approximately $1.5 million of work-in-process inventory as of September 30, 1998. If the FDA does not approve the BLA, and ONTAK(TM) is not approved for commercial sale, any capitalized costs related to ONTAK(TM) will be expensed.

2. NET LOSS PER SHARE

Basic and diluted net loss per share is computed using the weighted average number of common shares outstanding.

3. MERGER AGREEMENT

On August 12, 1998, a wholly owned subsidiary of the Company was merged into Seragen, with Seragen as the surviving corporation (the "Merger"). In addition, the Company had previously announced that it had signed a definitive asset purchase agreement to acquire substantially all the assets of Marathon

Biopharmaceuticals, LLC, ("Marathon") which currently provides manufacturing services to Seragen under a service agreement. Finally, in August 1998 Seragen signed an agreement with the Company and Eli Lilly and Company ("Lilly") under which Lilly assigned to the Company Lilly's rights and obligations under its agreements with Seragen, including its sales and marketing rights to ONTAK(TM).

Under the terms of the merger agreement, Ligand paid merger consideration at closing in the amount of $30.0 million, $4.0 million of which was in cash and $26.0 million of which was in the form of approximately 1,858,515 shares of the Company's Common Stock valued at $13.99 per share. The valuation of the Company's Common Stock for this portion of the transaction is based on the average closing share price for the five trading days prior to signing of the definitive agreement in May 1998. From the upfront payment, Seragen's common shareholders received at the time of closing

approximately 0.036 of a share of the Company's Common Stock for every share of Seragen common stock owned immediately prior to closing. The remainder of the $30.0 million in merger consideration paid at closing was used to settle claims of Seragen's creditors and obligees.

The merger agreement also calls for an additional $37.0 million payment in cash and/or the Company's Common Stock, at the Company's option, to be paid six months after the date of receipt of final FDA clearance to market ONTAK(TM). The $37.0 million payment will not be made, however, if ONTAK(TM) is not cleared by the FDA by August 12, 2000. From the $37.0 million, Seragen's common shareholders will receive $0.23 in, at the Company's option, cash or equivalent value of the Company's Common Stock (based on the average closing price for the 10 trading days immediately preceding the second closing), for every Seragen common share owned prior to the Merger. The remainder of the $37 million payment will be used to settle claims of Seragen's creditors and obligees.

Additionally, the Company's agreement with Lilly calls for up to $5.0 million, payable in cash or the Company's Common Stock, at the Company's option, in potential milestone payments to Lilly, if ONTAK(TM) is approved by the FDA, and upon certain other events. Upon certain other events, Lilly could receive an additional $5.0 million in milestone payments.

The agreement with Marathon, the organization which provides manufacturing services to Seragen, provides for Ligand's acquisition of substantially all of Marathon's assets for $5.0 million, with an additional $3.0 million to be paid six months after FDA approval of ONTAK(TM). The Company may purchase the assets of Marathon at any time before January 31, 1999. The purchase payments can be paid in cash or the Company's Common Stock, at the Company's option.

The Merger was accounted for using the purchase method of accounting. The purchase price, totaling $83.8 million, which includes liabilities assumed of $2.0 million was allocated to the fair value of the assets acquired, including an allocation to in-process technology which was written off, resulting in a one-time non-cash charge to results of operations of approximately $30.0 million. As of September 30, 1998, subject to a valuation of tangible and intangible assets in order to properly allocate the total purchase price to all of the assets acquired and liabilities assumed in the Merger as required by Accounting Principles Board Opinion No. 16, the Company recorded $50.0 million for accrued contingent payments, $40.0 million related to the approval of ONTAK(TM) and $10.0 million for payments to Marathon and Lilly, $15.0 million for the value of Marathon property and equipment and has capitalized a value of $37.3 million for the acquired technology related to ONTAK(TM), as Seragen had received its Complete Review Letter from the FDA at the time of acquisition.

The following pro forma condensed statement of operations information has been prepared to give effect to the merger as if such transaction had occurred at the beginning of the periods presented. The historical results of operations have been adjusted to reflect (i) elimination of the one-time charge to operations for the purchase of acquired in-process technology: (ii) adjustment for depreciation resulting from adjusting the basis of property and equipment to fair value and amortization over 25 years, (iii) amortization of acquired technology over 15 years, (iv) elimination of Seragen stock issuance costs (1997) and compensation expense amortization (1998), (v) elimination of interest income for Seragen and reduction of Ligand interest income resulting from use of

$6.0 million for the Merger at an annual interest rate of 5.5% and (vi) Elimination of interest expense related to the amortization of Seragen's Ajinomoto liability. The information presented is not necessarily indicative of the results of future operations of the merged companies.

Pro Forma Results Of Operations
(Unaudited)
In thousands

<TABLE>
<CAPTION>

	Year ended December 31, 1997	Nine Months ended September 30, 1998	
<S>	<C>	<C>	
Revenues	$ 56,413	$ 16,203	
Net loss	$(118,675)	$ (56,236)	
Weighted average shares outstanding	34,987	39,256	
Loss per share	$ (3.39)	$ (1.43)	

</TABLE>

4. STRATEGIC ALLIANCE AND FINANCING

On September 29, 1998, the Company and Elan Corporation, plc ("Elan") signed a binding letter of agreement. Elan purchased approximately $20.0 million of the Company's Common Stock in two installments. On September 29, 1998, Elan purchased 1,278,970 shares of the Company's Common Stock for $14.9 million ($11.65 per share). The second installment to purchase 437,768 shares for $5.1 million ($11.65 per share) occurred at the closing of the transaction on November 9, 1998.

Elan purchased from the Company at the closing, $40.0 million in issue price of Zero Coupon Convertible Senior Notes, due 2008 with an 8.0% per annum yield to maturity (the "Notes"). Of these Notes $30.0 million are convertible into the Company's Common Stock at $14.00 per share. The balance issued of $10.0 million along with up to an additional $70.0 million of Notes which Elan may also purchase will be convertible into the Company's Common Stock at a price which is the average of the closing prices of the Company's Common Stock for the 20 trading days immediately prior to the issuance of a Note plus a premium; however, in no event will the conversion price be less than $14.00 per share or more than $20.00 per share. Interest will accrue during the term of the Notes, and the Notes may be used to finance the final payments for the Seragen Merger expected in 1999 as well as other acquisitions of complementary technologies, subject to the consent of Elan.

Elan also agreed to exclusively license to the Company in the United States and Canada its proprietary product Morphelan(TM). For the rights to Morphelan(TM), the Company will pay Elan certain license fees at the closing of the transaction, and milestone payments upon the occurrence of certain events up to and including the approval of the New Drug Application ("NDA") in the United States. Payment may be in cash or subject to certain conditions in the Company's Common Stock or Notes. At closing, the Company paid Elan $5.0 million through the issuance of 429,185 shares of the Company's Common Stock ($11.65 per share) and $10.0 million from the issuance of Notes.

PART I. FINANCIAL INFORMATION
ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This quarterly report may contain predictions, estimates and other forward-looking statements that involve a number of risks and uncertainties, including those discussed below at "Risks and Uncertainties." While this outlook represents management's current judgment on the future direction of the

business, such risks and uncertainties could cause actual results to differ materially from any future performance suggested below. The Company undertakes no obligation to release publicly the results of any revisions to these forward-looking statements to reflect events or circumstances arising after the date hereof.

OVERVIEW

Since January 1989, the Company has devoted substantially all of its resources to its intracellular receptor ("IR") and Signal Transducers and Activators of Transcription ("STATs") drug discovery and development programs. The Company has been unprofitable since its inception and expects to incur substantial additional operating losses due to continued requirements for research and development, preclinical testing, clinical trials, regulatory activities, establishment of manufacturing processes and sales and marketing capabilities until the approval and commercialization of the Company's products generate sufficient revenues, expected in 1999. The Company expects that losses will fluctuate from quarter to quarter as a result of differences in the timing of expenses incurred, the revenues earned from collaborative arrangements and future product sales. Some of these fluctuations may be significant. As of September 30, 1998, the Company's accumulated deficit was approximately $355.0 million.

On August 12, 1998, a wholly owned subsidiary of the Company was merged into Seragen, with Seragen as the surviving corporation (the "Merger"). In addition, the Company had previously announced that it had signed a definitive asset purchase agreement to acquire substantially all the assets of Marathon Biopharmaceuticals, LLC, ("Marathon") which currently provides manufacturing services to Seragen under a service agreement. Finally, in August 1998 Seragen signed an agreement with the Company and Eli Lilly and Company ("Lilly") under which Lilly assigned to the Company Lilly's rights and obligations under its agreements with Seragen, including its sales and marketing rights to ONTAK(TM).

Under the terms of the merger agreement, Ligand paid merger consideration at closing in the amount of $30.0 million, $4.0 million of which was in cash and $26.0 million of which was in the form of approximately 1,858,515 shares of the Company's Common Stock valued at $13.99 per share. The valuation of the Company's Common Stock for this portion of the transaction is based on the average closing share price for the five trading days prior to signing of the definitive agreement in May 1998. From the upfront payment, Seragen's common shareholders received at the time of closing approximately 0.036 of a share of the Company's Common Stock for every share of Seragen common stock owned immediately prior to closing. The remainder of the $30.0 million in merger consideration paid at closing was used to settle claims of Seragen's creditors and obligees.

The merger agreement also calls for an additional $37.0 million payment in cash and/or the Company's Common Stock, at the Company's option, to be paid six months after the date of receipt of final FDA clearance to market ONTAK(TM). The $37.0 million payment will not be made, however, if ONTAK(TM) is not cleared by the FDA by August 12, 2000. From the $37.0 million, Seragen's common shareholders will receive $0.23 in, at the Company's option, cash or equivalent value of the Company's Common Stock (based on the average closing price for the 10 trading days immediately preceding the second closing), for every Seragen common share owned prior to the Merger. The remainder of the $37 million payment will be used to settle claims of Seragen's creditors and obligees.

Additionally, the Company's agreement with Lilly calls for up to $5.0 million, payable in cash or the Company's Common Stock, at the Company's option, in potential milestone payments to Lilly, if ONTAK(TM) is approved by the FDA, and upon certain other events. Upon certain other events, Lilly could receive an additional $5.0 million in milestone payments.

The agreement with Marathon, the organization which provides manufacturing services to Seragen, provides for Ligand's acquisition of substantially all of Marathon's assets for $5.0 million, with an additional $3.0 million to be paid six months after FDA approval of ONTAK(TM). The Company may purchase the assets of Marathon at any time before January 31, 1999. The purchase payments can be paid in cash or the Company's Common Stock, at the Company's option.

The Merger was accounted for using the purchase method of accounting. The purchase price, totaling $83.8 million, which includes liabilities assumed of $2.0 million was allocated to the fair value of the assets acquired, including an allocation to in-process technology which was written off, resulting in a one-time non-cash charge to results of operations of approximately $30.0 million. As of September 30, 1998, subject to a valuation of tangible and intangible assets in order to properly allocate the total purchase price to all of the assets acquired and liabilities assumed in the Merger as required by Accounting Principles Board Opinion No. 16, the Company recorded $50.0 million for accrued contingent payments, $40.0 million related to the approval of ONTAK(TM) and $10.0 million for payments to Marathon and Lilly, $15.0 million for the value of Marathon property and equipment and has capitalized a value of $37.3 million for the acquired technology related to ONTAK(TM), as Seragen had received its Complete Review Letter from the FDA at the time of acquisition.

On September 29, 1998, the Company and Elan Corporation, plc ("Elan") signed a binding letter of agreement. Elan purchased approximately $20.0 million of the Company's Common Stock in two installments. On September 29, 1998, Elan purchased 1,278,970 shares of the Company's Common Stock for $14.9 million ($11.65 per share). The second installment to purchase 437,768 shares for $5.1 million ($11.65 per share) occurred at the closing of the transaction on November 9, 1998.

Elan purchased from the Company at the closing, $40.0 million in issue price of Zero Coupon Convertible Senior Notes, due 2008 with an 8.0% per annum yield to maturity (the "Notes"). Of these Notes $30.0 million are convertible into the Company's Common Stock at $14.00 per share. The balance issued of $10.0 million along with up to an additional $70.0 million of Notes which Elan may also purchase will be convertible into the Company's Common Stock at a price which is the average of the closing prices of the Company's Common Stock for the 20 trading days immediately prior to the issuance of a Note plus a premium; however, in no event will the conversion price be less than $14.00 per share or more than $20.00 per share. Interest will accrue during the term of the Notes, and the Notes may be used to finance the final payments for the Seragen Merger expected in 1999 as well as other acquisitions of complementary technologies, subject to the consent of Elan.

Elan also agreed to exclusively license to the Company in the United States and Canada its proprietary product Morphelan(TM). For the rights to Morphelan(TM), the Company will pay Elan certain license fees at the closing of the transaction, and milestone payments upon the occurrence of certain events up to and including the approval of the New Drug Application ("NDA") in the United States. Payment may be in cash or subject to certain conditions in the Company's Common Stock or Notes. At closing, the Company paid Elan $5.0 million through the issuance of 429,185 shares of the Company's Common Stock ($11.65 per share) and $10.0 million from the issuance of Notes.

In December 1994, the Company and Allergan, Inc. ("Allergan") formed Allergan Ligand Retinoid Therapeutics, Inc. ("ALRT") to continue the research and development activities previously conducted by the Allergan Ligand Joint Venture (the "Joint Venture"). In June 1995, the Company and ALRT completed a public offering of 3,250,000 units (the "Units") with aggregate proceeds of $32.5 million (the "ALRT Offering") and cash contributions by Allergan and the Company of $50.0 million and $17.5 million, respectively, providing for net proceeds of $94.3 million for retinoid product research and development. Each Unit consisted of one share of ALRT's callable common stock ("Callable Common Stock") and two warrants, each warrant entitling the holder to purchase one share of the Common Stock of the Company. In September 1997, the Company and Allergan exercised their respective options to purchase all of the Callable Common Stock (the "Stock Purchase Option") and certain assets (the "Asset Purchase Option") of ALRT. The Company's exercise of the Stock Purchase Option required the issuance of 3,166,567 shares of the Company's Common Stock along with cash payments totaling $25.0 million, to holders of the Callable Common Stock in November 1997. Allergen's exercise of the Asset Purchase Option required a cash payment of $8.9 million to ALRT in November 1997, which was used by the Company to pay a portion of the Stock Purchase Option. Prior to September 1997, cash received from ALRT was recorded as contract revenue. As a result of the ALRT buyback, research expenditures incurred related to ALRT activities are no longer reimbursed, eliminating the ALRT contract revenue recognition. The buyback of ALRT was accounted for using the purchase method of accounting. The excess of the purchase price over the fair value of net assets acquired was allocated to in-process technology and written off resulting in a one time non-cash charge to

results of operations of $65.0 million in 1997.

RESULTS OF OPERATIONS

Three Months Ended September 30, 1998 ("1998"), as Compared with Three Months Ended September 30, 1997 ("1997")

The Company had revenues of $3.9 million for 1998 compared to revenues of $10.2 million for 1997. The decrease in revenues is primarily due to the buyback of ALRT which resulted in reduced revenue of $6.7 million in 1998 compared to 1997, completion of the Glaxo-Wellcome, plc ("Glaxo") and Sankyo Company Ltd. ("Sankyo") collaborations in 1997 resulting in reduced revenues in 1998 of $432,000 and $667,000, respectively compared to 1997, completion of the American Home Products Corporation ("AHP") collaboration in 1998 resulting in reduced revenue of $917,000 compared to 1997, offset by increased revenues of $2.6 million in 1998 from a new research and development collaboration with Lilly which began in November 1997. Revenues in 1998 were derived from the Company's research and development agreements with (i) Lilly of $2.6 million, (ii) SmithKline Beecham Corporation ("SmithKline Beecham") of $886,000, (iii) Abbott Laboratories ("Abbott") of $300,000, (iv) AHP of $99,000, as well as from product sales of in-licensed products by Ligand's Canadian subsidiary of $103,000. Revenues for 1997 were derived from the Company's research and development agreements with (i) ALRT of $6.7 million, (ii) AHP of $1.0 million, (iii) SmithKline Beecham of $1.0 million, (iv) Sankyo of $667,000, (v) Glaxo of $432,000, (vi) Abbott of $300,000, as well as from product sales of in-licensed products by Ligand's Canadian subsidiary of $99,000.

For 1998, research and development expenses decreased to $17.0 million from $18.0 million in 1997. The decrease in expenses was primarily due to initial drug product validation costs incurred in 1997 and the closure of Glycomed's Alameda facility and completion of the research portion of the Sankyo collaboration in October 1997. Selling, general and administrative expenses increased to $3.8 million in 1998 from $2.5 million in 1997. The increase was primarily attributable to personnel additions and increased expenses in preparation for commercialization activities. Interest income decreased to $521,000 in 1998 from $798,000 in 1997 due to a decrease in cash as a result of cash used to fund development and clinical programs and to support the growth in commercialization activities. Interest expense was $2.0 million for 1998 and 1997. A realized gain of $2.0 million was due to the sale of equity securities in 1998.

A one-time charge of $30.0 million was incurred in 1998 due to the Merger.

The Company has significant net operating loss carryforwards for federal and state income taxes which are available subject to Internal Revenue Code Sections 382 and 383 carryforward limitations.

Nine Months Ended September 30, 1998 ("1998"), as Compared with Nine Months Ended September 30, 1997 ("1997")

The Company had revenues of $13.4 million for 1998 compared to revenues of $29.9 million for 1997. The decrease in revenues is primarily due to the buyback of ALRT which resulted in reduced revenue of $18.9 million in 1998 compared to 1997, completion of the Glaxo and Sankyo collaborations in 1997, resulting in reduced revenues in 1998 of $1.3 million and $2.1 million, respectively compared to 1997, completion of the AHP collaboration resulting in a revenue decrease of $2.3 million in 1998 compared to 1997, offset by increased revenues of $7.5 million in 1998 from the new collaboration with Lilly which began in November 1997. Revenues in 1998 were derived from the Company's research and development agreements with (i) Lilly of $7.5 million, (ii) SmithKline Beecham of $2.7 million, (iii) AHP of $1.3 million, (iv) Abbott of $900,000, product sales of in-licensed products by Ligand's Canadian subsidiary of $282,000 and a one-time license fee payment of $686,000. Revenues for 1997 were derived from the Company's research and development agreements with (i) ALRT of $18.9 million, (ii) AHP of $3.4 million, (iii) SmithKline Beecham of $2.5 million, (iv) Sankyo of $2.1 million, (v) Abbott of $1.4 million, (vi) Glaxo of $1.3 million as well as from product sales of in-licensed products by Ligand's Canadian subsidiary of $325,000.

For 1998, research and development expenses decreased to $49.2 million in 1998 from $51.4 million in 1997. The decrease in expenses was primarily due to initial drug product validation costs incurred in 1997 and the closure of Glycomed's Alameda facility and completion of the research portion of the Sankyo collaboration in October 1997, offset by increased expenses related to completion of phase III trials and NDA preparation and submission for the Company's lead product candidate. Selling, general and administrative expenses increased to $9.9 million in 1998 from $7.4 million in 1997. The increase was primarily attributable to personnel additions and increased expenses in preparation for commercialization activities. Interest income decreased to $2.4 million in 1998 from $2.8 million in 1997. The decrease is due to the usage of cash to fund development and clinical programs and support the growth in commercialization activities. Interest expense decreased to $5.9 million in 1998, from $6.1 million in 1997 due to the conversion of convertible notes. A realized gain of $2.0 million was due to the sale of equity securities in 1998.

A one-time charge of $30.0 million was incurred in 1998 due to the Merger.

The Company has significant net operating loss carryforwards for federal and state income taxes which are available subject to Internal Revenue Code Sections 382 and 383 carryforward limitations.

LIQUIDITY AND CAPITAL RESOURCES

The Company has financed its operations through private and public offerings of its equity securities, collaborative research revenues, capital and operating lease transactions, issuance of convertible notes, investment income and product sales. From inception through September 30, 1998, the Company has raised cash proceeds of $216.5 million from sales of equity securities: $78.2 million from the Company's public offerings and an aggregate of $138.3 million from private placements and the exercise of options and warrants.

As of September 30, 1998, the Company had acquired an aggregate of $43.3 million in property, laboratory and office equipment (including Marathon) and $4.8 million in tenant leasehold improvements. Of these totals, $15.0 million was recorded in the Seragen Merger and will be paid in cash or common stock, at the Company's option, while substantially all of the balance has been funded through capital lease and equipment note obligations. In addition, the Company leases its office and laboratory facilities under operating leases. In July 1994, the Company entered into a long-term lease related to the construction of a new laboratory facility, which was completed and occupied in August 1995. In March 1997, the Company entered into a long-term lease, related to a second build-to-suit facility and loaned the construction partnership $3.7 million at an annual interest rate of 8.5% which will be paid back monthly over a 10-year period. The second build-to-suit facility was completed and occupied in December 1997. In February 1997, the Company signed a master lease agreement to finance future capital equipment up to $1.5 million, and in July 1997, the master lease agreement was extended to December 1998 to include up to an additional $4.5 million. Each individual schedule under the extended master lease agreement will be paid back monthly with interest over a five-year period. As of September 30, 1998, the company had $1.0 million available to finance future capital equipment.

Working capital decreased to $27.2 million as of September 30, 1998, from $62.4 million at the end of 1997. The decrease in working capital resulted from a decrease in cash payments in 1998 due to increases in clinical trials and product development expenses and accruals in late 1997, increased selling expenses, semi-annual interest payments due on convertible subordinated debentures and convertible notes and the Merger obligations, offset by the $14.9 million equity investment by Elan in September 1998. For the same reasons, cash and cash equivalents, short-term investments and restricted cash decreased to $43.6 million at September 30, 1998 from $86.3 million at December 31, 1997. The Company primarily invests its cash in United States government and investment grade corporate debt securities.

In April 1998, SmithKline Beecham plc. and the Company initiated a new collaboration to develop small molecule drugs for the treatment or prevention of obesity. As part of the collaboration, SmithKline Beecham plc. purchased 274,423 shares of Ligand Common Stock for $5.0 million ($18.22 per share), a 20% premium

over a 15-day average of the daily closing price of the Company's Common Stock prior to execution of the agreement. The premium has been deferred and will be recognized as revenue over the two-year period in which services will be provided under the collaborative agreement. SmithKline Beecham plc. also purchased for $1.0 million a warrant to purchase 150,000 shares of Ligand Common Stock at $20.00 per share. The warrant expires in five years, and Ligand may require SmithKline Beecham plc. to exercise the warrant under certain circumstances after three years. SmithKline Beecham plc. will also purchase additional Ligand Common Stock at a 20% premium if a certain research milestone is achieved and will make cash payments to Ligand if subsequent milestones are met.

In June 1998, the Company converted $3.8 million of the convertible notes outstanding to AHP into 374,625 shares of the Company's Common Stock at a $10.01 conversion price.

In August 1998, the Company paid merger consideration in the amount of $30.0 million, $4.0 million of which was cash and $26.0 million of which was in the form of approximately 1,858,515 shares of the Company's Common Stock valued at $13.99 per share under the terms of the Merger. The merger agreement also calls for an additional $37.0 million payment in cash and/or Company Common Stock, at the Company's option, to be paid six months after the date of receipt of final FDA clearance to market ONTAK(TM). The $37.0 million payment will not be made, however, if ONTAK(TM) is not cleared by the FDA by August 12, 2000.

On September 29, 1998, Elan purchased 1,278,970 shares of the Company's Common Stock for $14.9 million ($11.65 per share), an additional 437,768 shares for $5.1 million ($11.65 per share) was purchased by Elan upon closing of the

transaction. Elan purchased from the Company, at the closing, $40.0 million in issue price of Zero Coupon Convertible Senior Notes, due 2008 with an 8.0% per annum yield to maturity. Elan may also purchase up to an additional $70.0 million of Notes which will be convertible into the Company's Common Stock at $14.00 to $20.00 per share.

Upon the closing, Elan also licensed its proprietary product, Morphelan(TM) to the Company in the U.S. and Canada. The Company agreed to pay certain upfront license fees on the closing and milestones upon the occurrence of certain events. Payments may be in cash or subject to certain conditions in the Company's Common Stock or Notes.

The Company believes that its available cash, cash equivalents, marketable securities and existing sources of funding will be adequate to satisfy its anticipated capital requirements through 1999. The Company's future capital requirements will depend on many factors, including the pace of scientific progress in research and development programs, the magnitude of these programs, the scope and results of preclinical testing and clinical trials, the time and costs involved in obtaining regulatory approvals, the costs involved in preparing, filing, prosecuting, maintaining and enforcing patent claims, competing technological and market developments, the ability to establish additional collaborations, changes in the existing collaborations, the cost of manufacturing scale-up and the effectiveness of the Company's commercialization activities.

YEAR 2000 COMPLIANCE

Many currently installed computer systems and software products are coded to accept only two digit entries in the date code field. These date code fields will need to accept four digit entries to distinguish 21st century dates from 20th century dates. As a result, many companies' software and computer systems may need to be upgraded or replaced in order to comply with such "Year 2000" requirements. The impact of the Year 2000 issue may affect other systems that utilize imbedded computer chip technology, including, but not limited to, building controls, security systems or laboratory equipment. It may also impact the ability to obtain products or services if the provider encounters and fails to resolve "Year 2000" related problems.

The Company has established an active program to identify and resolve Year 2000 related issues. This program includes the review and assessment of information

technology and non-information technology systems, as well as third parties with which the Company has a material relationship. This program consists of four phases: inventory, risk assessment, problem validation, and problem resolution. The inventory phase identified potential risks posed to the company. They include, but are not limited to, computer software, computer hardware, telecommunications systems, laboratory equipment, facilities systems (security, environment control, alarm), service providers (contract research organizations, consultants, product distribution), and other third parties. The risk assessment phase categorized and prioritized each risk by potential impact to the organization. The problem validation phase tests each potential risk, according to priority, to determine if an action risk exists. In the case of critical third parties this step will include a review of their Year 2000 plans and activities. The problem resolution phase will, for each validated risk, determine the method/strategy for alleviating the risk. It may include anything from replacement of hardware or software to process modification to selection of alternative vendors. This step also includes the development of contingency plans. The Company initiated this program earlier in the year and is currently working on the problem validation phase. It is expected that this phase will be completed by the end of 1998 at which time contingency plans will be determined and that the problem resolution phase will be completed by the end of the third quarter in 1999.

To date, certain of the Company's internal information technology and non-information technology systems have been identified as not being Year 2000 compliant. In addition, the Company utilizes critical third-party service providers, for which full assessment of their Year 2000 compliance has not yet been completed. This assessment is taking place as part of the current problem validation phase. The Company is actively correcting problems as they are identified. These corrections include the replacement of hardware and software systems, the identification of alternative service providers, and the creation of contingency plans. Current estimated cost of identified problems is approximately $100,000 for hardware and software upgrades or modifications. In addition it is estimated that approximately $400,000 of internal personnel costs will be required to complete the remaining phases of the project. The Company does not believe that the cost of these actions will have a material adverse affect on the Company's business. It is expected that any problems identified in the remaining phases of the project will be able to be resolved as part of normal operating expenses.

A failure of the Company's internal computer systems or of third-party equipment or software used by the Company, or of systems maintained by the Company's suppliers, to be Year 2000 compliant may have a material adverse effect on the Company's business. In addition, adverse changes in the purchasing patterns of the Company's potential customers as a

result of Year 2000 issues affecting such customers may have a material adverse effect on the Company's business. These expenditures by potential customers may result in reduced funds available to purchase the Company's products, which could have a material adverse effect on the Company's business.

RISKS AND UNCERTAINTIES

In addition to the other business information contained herein, the following are among the factors that should also be considered carefully in evaluating Ligand, its wholly-owned subsidiaries, Glycomed Inc., Seragen, Inc., Ligand Pharmaceuticals (Canada) Incorporated and Allergan Ligand Retinoid Therapeutics, Inc. ("Ligand" or the "Company") and its business.

Uncertainty of Product Development and Commercialization and Related Technology. Ligand was founded in 1987 and has not generated any revenues from the sale of products developed by Ligand or its collaborative partners. To achieve profitable operations, the Company, alone or with others, must successfully develop, clinically test, market and sell its products. Any products resulting from the Company's or its collaborative partners' product development efforts are not expected to be available for sale until the end of the year, if at all.

No assurance can be given that required regulatory approvals from the FDA or equivalent foreign authorities for their intended indications or any other indication with respect to ONTAK(TM), Panretin gel (alitretinoin) 0.1%, Morphelan(TM), or any other potential products will be obtained in a timely manner or at all. If any such approvals are not obtained, it could have a material adverse effect on the Company's business.

The development of new pharmaceutical products is highly uncertain and subject to a number of significant risks. Potential products that appear to be promising at early stages of development may not reach the market for a number of reasons. Such reasons include the possibilities that potential products are found during preclinical testing or clinical trials to be ineffective or to cause harmful side effects, that they fail to receive necessary regulatory approvals, are difficult or uneconomical to manufacture on a large scale, fail to achieve market acceptance or are precluded from commercialization by proprietary rights of third parties. To date, Ligand's resources have been substantially dedicated to the research and development of potential pharmaceutical products based upon its expertise in IR and STATs technologies, while Seragen has concentrated its efforts on potential pharmaceutical products based on its fusion protein technology. Even though certain pharmaceutical products act through IRs, some aspects of the Company's IR technologies have not been used to produce marketed products. In addition, the Company is 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. The Company expects that its potential products, ONTAK(TM) for cutaneous T-cell lymphoma CTCL and Panretin gel for AIDS-related Kaposi's Sarcoma ("KS") will not be available for commercial sale until the end of the year, if at all. Potential products tested in preclinical trials may not be successful in human clinical trials. Products currently in, or which in the future advance to, various phases of human clinical trials may not prove to be efficacious, or unintended or unacceptably high levels of toxic side effects may occur. Most of the Company's potential products will require extensive additional development, including preclinical testing and clinical trials, as well as regulatory approvals, prior to commercialization. A number of factors may prevent successful commercialization, including a failure of the Company's product development efforts, failure to obtain required regulatory approvals from the FDA or equivalent foreign authorities for any indication, failure to produce any products, if introduced, in commercial quantities at reasonable costs or failure to successfully market such products. Further, the Company has no sales and only limited marketing capabilities outside Canada, and even if the Company's products in internal development are approved for marketing, the Company may not be able to develop such capabilities or successfully market such products.

Uncertainties Related to Regulatory Review of ONTAK(TM) and Panretin Gel. In December 1997, Seragen submitted a Biologic License Application ("BLA") to the FDA requesting clearance to market its lead molecule, ONTAK(TM), for the treatment of patients with advanced CTCL who have received previous treatment with other agents. In May 1998, Ligand announced the submission of a New Drug Application ("NDA") to the FDA for Panretin gel (altitretinoin) 0.1% for the treatment of AIDS-related KS and was granted priority review by the FDA in July, 1998. Panretin gel will be reviewed by the Oncologic Drug Advisory Committee ("ODAC") on November 16, 1998.

On June 2, 1998, Ligand and Seragen announced that ODAC had voted favorably on questions put to it by the FDA regarding the efficacy of, and the acceptability of the incidence and severity of toxicity associated with, ONTAK(TM) for the treatment of patients with recurrent or persistent CTCL. ODAC also recommended that treating physicians should decide the appropriate doses within a prescribed dose range. ODAC's votes, although not binding, will be considered by the FDA in its review of the BLA.

On June 9, 1998, the FDA issued a Complete Review Letter to Seragen in respect to its BLA. The Center for Biologics Evaluation and Research ("CBER"), the division of the FDA responsible for reviewing Seragen's application, no longer issues so-called "approvable" or "non-approvable" letters at the conclusion of their formal review of license applications

when the action is not an approval. Instead, the CBER issues letters signifying that a complete review of all information and data submitted has been carried

out. Per the CBER's January 22, 1998 correspondence to applicants, a complete review letter "summarizes all of the deficiencies and describes actions necessary to place the application in a condition for approval."

The Complete Review Letter fulfills the FDA's commitment under the Prescription Drug User Fee Act to a six-month review of the BLA, which was designated for priority review. Upon the issuance of the Complete Review Letter, the review clock was suspended with respect to the BLA and will not be reactivated until all deficiencies have been addressed by Seragen.

The Complete Review Letter identified certain deficiencies in the BLA related to safety, efficacy, manufacturing and product characterization. Seragen believes it addressed and responded to the issues set out in the Complete Review Letter and is awaiting final FDA action.

The short-term future financial results of the Company and the price of the Company's Common Stock will be highly dependent on the timely receipt of regulatory approvals required to market these products in the United States and other jurisdictions and the subsequent successful commercial introduction of such products. Any failure to obtain required regulatory approvals on a timely basis could have a material adverse effect on the Company and a significant impact on the trading price of the Company's Common Stock. Generally, only a small percentage of new pharmaceutical products are approved for sale. Moreover, if regulatory approval of a product is granted, the approval may limit the indicated uses for which the product may be marketed. Such regulatory approvals may be conditioned upon the performance of additional clinical trials or other requirements established by the regulatory authorities. Even if regulatory approval is obtained, a marketed product and its manufacturer are subject to continual review. Discovery of previously unknown problems with a product or manufacturer may result in restrictions on the use of the product or its manufacturer, including withdrawal of the product from market. Also, prior to marketing, the Company will be required to finalize labeling requirements and satisfy the regulatory authorities that all manufacturing facilities meet regulatory requirements.

History of Operating Losses; Accumulated Deficit; Future Capital Needs; Uncertainty of Additional Funding. Ligand has experienced significant operating losses since its inception in 1987. As of September 30, 1998, Ligand had an accumulated deficit of approximately $355.0 million. To date, substantially all of Ligand's revenues have consisted of amounts received under collaborative arrangements. The Company expects to incur additional losses due to continued requirements for research and development, preclinical testing, clinical trials, regulatory activities, establishment of manufacturing processes and sales and marketing capabilities.

The discovery, development and commercialization of products will require the commitment of substantial resources to conduct research, preclinical testing and clinical trials, to establish pilot scale and commercial scale manufacturing processes and facilities, and to establish and develop quality control, regulatory, marketing, sales and administrative capabilities. The future capital requirements of the Company will depend on many factors, including the pace of scientific progress in its research and development programs, the magnitude of these programs, the scope and results of preclinical testing and clinical trials, the time and costs involved in obtaining regulatory approvals, the costs involved in preparing, filing, prosecuting, maintaining and enforcing patent claims, competing technological and market developments, the ability to establish additional collaborations, changes in existing collaborations, the cost of manufacturing scale-up and the effectiveness of the Company's commercialization activities. To date, Ligand has not generated any revenue from the sales of products developed by Ligand or its collaborative partners. Ligand may not be able to, independently or through its collaborations, successfully develop, manufacture or market any products or ever achieve or sustain revenues or profitability from the commercialization of such products. Moreover, even if profitability is achieved, the level of that profitability cannot be accurately predicted. Ligand expects that operating results will fluctuate from quarter to quarter as a result of differences in the timing of expenses incurred and the revenues received from collaborative arrangements and other sources. Some of these fluctuations may be significant. The Company believes that its available cash, cash equivalents, marketable securities and existing sources of funding will be adequate to satisfy its anticipated capital requirements through 1999.

Glycomed's outstanding indebtedness includes $50.0 million principal amount of 7 1/2% Convertible Subordinated Debentures Due 2003 (the "Debentures"). Glycomed

may not have the funds necessary to pay the interest on and the principal of the Debentures or, if not, that it will be able to refinance the Debentures when due. If Glycomed does not have such funds, it will be forced to refinance the Debentures and may not be successful in doing so. In November 1998,

Ligand issued $40.0 million in issue price of Notes to Elan. Failure to make payments when due under the Debentures would trigger an event of default under the Notes.

The Company has incurred negative cash flow from operations since inception and does not expect to generate positive cash flow to fund its operations for at least the next year. As a result, additional equity or debt financings may be required in the near future to fund the Company's operations. Additional equity or debt financings may not be available on acceptable terms, if at all. In addition, such financings, if consummated, may not be adequate to meet the Company's capital requirements. Any additional equity or convertible debt financings could result in substantial dilution to Ligand's stockholders. For instance, the Notes are convertible into Common Stock at the option of Elan. If adequate funds are not available, the Company may be required to delay, reduce the scope of or eliminate one or more of their drug development programs or attempt to continue development by entering into arrangements with collaborative partners or others that may require the Company to relinquish some or all of its rights to certain technologies or drug candidates that the Company would not otherwise relinquish. Any inability of the Company to obtain additional financing or of the Company or Glycomed to service its obligations under outstanding indebtedness could have a material adverse effect on the Company's business.

Uncertainties Related to Clinical Trials. Before obtaining required regulatory approvals for the commercial sale of each product under development, the Company and its collaborators must demonstrate through preclinical studies and clinical trials that such product is safe and efficacious for use. The results of preclinical studies and initial clinical trials are not necessarily predictive of results that will be obtained from large-scale clinical trials. Clinical trials of any product under development may not demonstrate the safety and efficacy of a product to the satisfaction of the regulatory authorities, or at all, or may not result in a marketable product. The safety and efficacy of a therapeutic product under development by the Company must be supported by extensive data from clinical trials. A number of companies have suffered significant setbacks in advanced clinical trials, despite promising results in earlier trials. The failure to demonstrate adequately the safety and efficacy of a therapeutic drug under development would delay or prevent regulatory approval of the product and could have a material adverse effect on the Company's business. In addition, the FDA may require additional clinical trials, which could result in increased costs and significant development delays.

The rate of completion of clinical trials of the Company's potential products is dependent upon, among other factors, obtaining adequate clinical supplies and the rate of patient accrual. Patient accrual 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. Delays in planned patient enrollment in clinical trials may result in increased costs, program delays or both, which could have a material adverse effect on the Company's business. In addition, some of the Company's current collaborative partners have certain rights to control the planning and execution of product development and clinical programs. These may impede the Company's ability to conduct such programs in accordance with the schedules and in the manner currently contemplated by the Company for such programs. There can be no assurance that, if clinical trials are completed, the Company or its collaborative partners will submit an NDA or BLA with respect to any potential products or that any such application will be reviewed and approved by the FDA in a timely manner, if at all.

Reliance on Collaborative Relationships. The Company's strategy for the development, clinical testing, manufacturing and commercialization of certain of its potential products includes entering into collaborations with corporate partners, licensors, licensees and others. To date, Ligand has entered into drug discovery and development collaborations with Lilly, SmithKline Beecham, AHP, Abbott, Sankyo, Glaxo, Allergan and Pfizer Inc. These collaborations provide

Ligand 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, respectively. The Company's collaborative agreements allow its collaborative partners significant discretion in electing to pursue or not to pursue any development program. The Company's collaborations may not continue and may not be successful. In addition, Ligand's collaborators may not pursue alternative technologies either on their own or in collaboration with others as a means of developing drugs competitive with the types of drugs currently being developed in collaboration with Ligand, and any such action may result in the withdrawal of support and increased competition for the Company's programs. In addition, if products are approved for marketing under these programs, any revenues to Ligand from these products will be dependent on the manufacturing, marketing and sales efforts of its collaborators, which generally retain commercialization rights under the collaborative agreements. Ligand's current collaborators also generally have the right to terminate their respective collaborations under certain circumstances. If any of the Company's collaborative partners were to breach or terminate its agreements with the Company or otherwise fail to conduct its collaborative activities successfully, the development of the Company's products under such agreements would be delayed

or terminated. The delay or termination of any of the collaborations could have a material adverse effect on the Company's business.

There can be no assurance that disputes will not arise in the future with Ligand's collaborators, including with respect to the ownership of rights to any technology developed. For example, the Company was involved in litigation with Pfizer, which was settled in April 1996, with respect to Ligand's rights to receive milestones and royalties based on the development and commercialization of droloxifene. These and other possible disagreements between collaborators and the Company could lead to delays in the achievement of milestones or receipt of milestone payments or research revenue, to delays or interruptions in, or termination of, collaborative research, development and commercialization of certain potential products, or could require or result in litigation or arbitration, which could be time consuming and expensive and could have a material adverse effect on the Company's business.

Uncertainty of Patent Protection; Dependence on Proprietary Technology. The patent positions of pharmaceutical and biopharmaceutical firms, including Ligand, are uncertain and involve complex legal and technical questions for which important legal principles are largely unresolved. In addition, the coverage sought in a patent application can be significantly reduced before or after a patent is issued. This uncertain situation is also affected by revisions to the United States patent law adopted in recent years to give effect to international accords to which the United States has become a party. The extent to which such changes in law will affect the operations of Ligand cannot be ascertained. In addition, there is currently pending before Congress legislation providing for other changes to the patent law which may adversely affect pharmaceutical and biopharmaceutical firms. If such pending legislation is adopted, the extent to which such changes would affect the operations of the Company cannot be ascertained.

Ligand's success will depend in part on its ability to obtain patent protection for its technology both in the United States and other countries. A number of pharmaceutical and biotechnology companies and research and academic institutions have developed technologies, filed patent applications or received patents on various technologies that may be related to Ligand's business. Some of these patent applications, patents or technologies may conflict with Ligand's technologies or patent applications. Any such conflict could limit the scope of the patents, if any, that Ligand may be able to obtain or result in the denial of Ligand's patent applications. In addition, if patents that cover Ligand's activities are issued to other companies, Ligand may not able to obtain licenses to such patents at a reasonable cost, if at all, or be able to develop or obtain alternative technology. The Company has from time to time had, continues to have and may have in the future discussions with its current and potential collaborators regarding the scope and validity of the Company's patent and other proprietary rights to its technologies, including the Company's co-transfection assay. If a collaborator or other party were successful in having substantial patent rights of the Company determined to be invalid, it could adversely affect

the ability of the Company to retain existing collaborations beyond their expiration or could where contractually permitted, encourage their termination. Such a determination could also adversely affect the Company's ability to enter into new collaborations. If any disputes should arise in the future with respect to the rights in any technology developed with a collaborator or with respect to other matters involving the collaboration, there could be delays in the achievement of milestones or receipt of milestone payments or research revenues, or interruptions or termination of collaborative research, development and commercialization of certain potential products, and litigation or arbitration could result. Any of the foregoing matters could be time consuming and expensive and could have a material adverse effect on the Company.

Ligand owns or has exclusive rights to more than 130 currently pending patent applications in the United States relating to Ligand's technology, as well as foreign counterparts of certain of these applications in many countries. Patents may not be issued from any of these applications or, if patents do issue, sufficient claims to protect Ligand's technology may not be allowed. In addition, Ligand is the owner or exclusive licensee of rights covered by approximately 290 worldwide patents issued or allowed to it or to The Salk Institute of Biological Studies ("The Salk Institute"), Baylor College of Medicine ("Baylor") and other licensors. Further, patents issued to Ligand or to licensors of Ligand's technology may be challenged, invalidated, circumvented or rendered unenforceable based on, among other things, subsequently discovered prior art, lack of entitlement to the priority of an earlier, related application, or failure to comply with the written description, best mode, enablement or other applicable requirements. In addition, rights granted under any such patents may not provide significant proprietary protection or commercial advantage to Ligand. The invalidation, circumvention or unenforceability of any of Ligand's patent protection could have a material adverse effect on the Company' business.

The commercial success of Ligand will also depend in part on Ligand's not infringing patents issued to competitors and not breaching technology licenses that cover technology used in Ligand's products. It is uncertain whether any third-party patents will require Ligand to develop alternative technology or to alter its products or processes, obtain licenses or cease

certain activities. If any such licenses are required, there can be no assurance that Ligand will be able to obtain such licenses on commercially favorable terms, if at all. Failure by Ligand to obtain a license to any technology that it may require to commercialize its products could have a material adverse effect on Ligand's business. Litigation, which could result in substantial cost to Ligand, may also be necessary to enforce any patents issued or licensed to Ligand or to determine the scope and validity of third-party proprietary rights. There can be no assurance that Ligand's patents or those of its licensors, if issued, would be held valid by a court or that a competitor's technology or product would be found to infringe such patents. If any of its competitors have filed patent applications in the United States which claim technology also invented by Ligand, Ligand may be required to participate in interference proceedings declared by the U.S. Patent and Trademark Office ("PTO") in order to determine priority of invention and, thus, the right to a patent for the technology, which could result in substantial cost to Ligand to determine its rights.

Ligand has learned that a United States patent has been issued to, and foreign counterparts have been filed by, Hoffman LaRoche ("Roche") that include claims to a formulation of 9-cis-Retinoic acid (Panretin) and use of that compound to treat epithelial cancers. Ligand had previously filed an application which has an earlier filing date than the Roche patent and which has claims that the Company believes are broader than but overlap in part with claims under the Roche patent. Ligand is currently investigating the scope and validity of this patent to determine its impact upon the Panretin capsules and gel products. The PTO has informed Ligand that the overlapping claims are patentable to Ligand and initiated an interference proceeding to determine whether Ligand or Roche is entitled to a patent by having been first to invent the common subject matter. The Company cannot be assured of a favorable outcome in the interference proceeding because of factors not known at this time upon which the outcome may depend. In addition, the interference proceeding may delay the decision of the PTO regarding the Company's application with claims covering the Panretin

capsules and gel products. While the Company believes that the Roche patent does not cover the use of Panretin capsules and gel to treat leukemias such as APL and sarcomas such as KS, or the treatment of skin diseases such as psoriasis, if the Company does not prevail in the interference proceeding, the Roche patent might block the Company's use of Panretin capsules and gel in certain cancers, and the Company may not be able to obtain patent protection for the Panretin capsules and gel products.

Ligand also relies upon trade secrets, know-how, continuing technological innovations and licensing opportunities to develop and maintain its competitive position. There can be no assurance that others will not independently develop substantially equivalent proprietary information or otherwise gain access to or disclose such information regarding Ligand. It is Ligand's policy to require its employees, certain contractors, consultants, members of its Scientific Advisory Board and parties to collaborative agreements to execute confidentiality agreements upon the commencement of employment or consulting relationships or a collaboration with Ligand. These agreements may be breached by the other parties to the agreements, or they may not provide meaningful protection of Ligand's trade secrets or adequate remedies in the event of unauthorized use or disclosure of such information. As a result of these and other factors Ligand's trade secrets may become known or be independently discovered by its competitors.

Lack of Manufacturing Capability; Reliance on Third-Party Manufacturers. Ligand currently has no manufacturing facilities and, accordingly, relies on third parties including Marathon and its collaborative partners, for clinical or commercial production of any compounds under consideration as products. Ligand is currently constructing and validating a cGMP pilot manufacturing capability in order to produce sufficient quantities of products for preclinical testing and initial clinical trials. If Ligand is unable to develop or contract on acceptable terms for manufacturing services, Ligand's ability to conduct preclinical testing and human clinical trials will be adversely affected, resulting in the delay of submission of products for regulatory approval and delay of initiation of new development programs, which in turn could materially impair Ligand's competitive position. Although drugs acting through IRs and STATs have been manufactured on a commercial scale by other companies, there can be no assurance that Ligand will be able to manufacture its products on a commercial scale or that such products can be manufactured by Ligand or any other party on behalf of Ligand at costs or in quantities to make commercially viable products.

Under a Service Agreement which expires January 31, 1999, Seragen depends on Marathon's ability to provide certain services relating to product research, development, manufacturing, clinical trials, quality control and quality assurance. The Marathon employees providing such services are comprised primarily of former employees of Seragen. In addition, neither Seragen nor Marathon, have ever engaged in large-scale manufacturing.

Limited Sales and Marketing Capability. The creation of infrastructure to commercialize pharmaceutical products is a difficult, expensive and time-consuming process. Ligand currently has no sales and only limited marketing capability outside Canada. In Canada, Ligand has been appointed as the sole distributor of two oncology products, Proleukin, which

was developed by Cetus Oncology Corporation and PHOTOFRIN, which was developed by QLT PhotoTherapeutics, Inc. To market any of its products directly, the Company will need to develop a marketing and sales force with technical expertise and distribution capability or contract with other pharmaceutical and/or health care companies with distribution systems and direct sales forces. The Company may not be able to establish direct or indirect sales and distribution capabilities or may not be successful in gaining market acceptance for proprietary products or for other products. To the extent the Company enters into co-promotion or other licensing arrangements, any revenues received by the Company will be dependent on the efforts of third parties, and there can be no assurance that any such efforts will be successful.

Substantial Competition; Risk of Technological Obsolescence. Some of the drugs which Ligand is developing will compete with existing therapies. In addition, a number of companies are pursuing the development of novel pharmaceuticals which

target the same diseases that Ligand is targeting as well as IR-related and STAT-related approaches to drug discovery and development. Many of Ligand's existing or potential competitors, particularly large pharmaceutical companies, have substantially greater financial, technical and human resources than Ligand and may be better equipped to develop, manufacture and market products. In addition, many of these companies have extensive experience in preclinical testing and human clinical trials, obtaining FDA and other regulatory approvals and manufacturing and marketing pharmaceutical products. Academic institutions, governmental agencies and other public and private research organizations are conducting research to develop technologies and products that may compete with those under development by the Company. These institutions are becoming increasingly aware of the commercial value of their findings and are becoming more active in seeking patent protection and licensing arrangements to collect royalties for the use of technology that they have developed. These institutions also may market competitive commercial products on their own or through joint ventures and will compete with the Company in recruiting highly qualified scientific personnel. Any of these companies, academic institutions, government agencies or research organizations may develop and introduce products and processes competitive with or superior to those of Ligand. The development by others of new treatment methods for those indications for which Ligand is developing products could render Ligand's products noncompetitive or obsolete.

Ligand's products under development target a broad range of markets. Ligand's competition will be determined in part by the potential indications for which Ligand's products are developed and ultimately approved by regulatory authorities. For certain of Ligand's potential products, an important factor in competition may be the timing of market introduction of Ligand's or competitors' products. Accordingly, the relative speed at which Ligand or its existing or future corporate partners can develop products, complete the clinical trials and regulatory approval processes, and supply commercial quantities of the products to the market is expected to be an important competitive factor. Ligand expects that competition among products approved for sale will be based, among other things, on product efficacy, safety, reliability, availability, price and patent position.

Ligand's competitive position also depends upon its ability to attract and retain qualified personnel, obtain patent protection or otherwise develop proprietary products or processes, and secure sufficient capital resources.

Extensive Government Regulation; No Assurance of Regulatory Approval. The manufacturing and marketing of Ligand's products and its ongoing research and development activities are subject to and regulation for safety and efficacy by numerous governmental authorities in the United States and other countries. Prior to marketing, any drug developed by the Company must undergo rigorous preclinical and clinical testing and an extensive regulatory approval process mandated by the FDA and equivalent foreign authorities. These processes can take a number of years and require the expenditure of substantial resources.

The time required for completing such testing and obtaining such approvals is uncertain, and there is no assurance that any such approval will be obtained. The Company or its collaborative partners may decide to replace a compound in testing with a modified or optimized compound, thus extending the test period. In addition, delays or rejections may be encountered based upon changes in FDA policy during the period of product development and FDA review of each submitted new drug application or product license application. Similar delays may also be encountered in other countries. There can be no assurance that even after such time and expenditures, regulatory approval will be obtained for any products developed by the Company. Moreover, prior to receiving FDA or equivalent foreign authority approval to market its products, the Company may be required to demonstrate that its products represent improved forms of treatment over existing therapies. If regulatory approval of a product is granted, such approval may entail limitations on the indicated uses for which the product may be marketed. Further, even if such regulatory approval is obtained, a marketed product, its manufacturer and its manufacturing facilities are subject to continual review and periodic inspections, and subsequent

discovery of previously unknown problems with a product, manufacturer or facility may result in restrictions on such product or manufacturer, including withdrawal of the product from the market.

Dependence on Third-Party Reimbursement and Health Care Reform. Ligand's commercial success will be heavily dependent upon the availability of reimbursement for the use of any products developed by the Company or its collaborative partners. There can be no assurance that Medicare and third-party payors will authorize or otherwise budget reimbursement for the prescription of any of Ligand's potential products. Additionally, third-party payors, including Medicare, are increasingly challenging the prices charged for medical products and services and may require additional cost-benefit analysis data from the Company in order to demonstrate the cost-effectiveness of its products. There can be no assurance that the Company will be able to provide such data in order to gain market acceptance of its products with respect to pricing and reimbursement.

In the United States, the Company expects that there will continue to be a number of federal and state proposals to implement government control of pricing and profitability of prescription pharmaceuticals. In addition, increasing emphasis on managed health care will continue to put pressure on such pricing. Cost control initiatives could decrease the price that the Company or any of its collaborative partners or other licensees receives for any drugs it or they may discover or develop in the future and, by preventing the recovery of development costs, which could be substantial, and an appropriate profit margin, could have a material adverse effect on the Company. Further, to the extent that cost control initiatives have a material adverse effect on the Company's collaborative partners, the Company's ability to commercialize its products and to realize royalties may be adversely affected. Furthermore, federal and state regulations govern or influence the reimbursement to health care providers of fees and capital equipment costs in connection with medical treatment of certain patients. If any actions are taken by federal and/or state governments, such actions could adversely affect the prospects for sales of the Company's products. There can be no assurance that action taken by federal and/or state governments, if any, with regard to health care reform will not have a material adverse effect on the Company.

Product Liability and Insurance Risks. Ligand's business exposes it to potential product liability risks which are inherent in the testing, manufacturing and marketing of human therapeutic products. Certain of the compounds the Company is investigating could be injurious to humans. For example, retinoids as a class are known to contain compounds which can cause birth defects. Ligand currently has limited product liability insurance; however, there can be no assurance that Ligand will be able to maintain such insurance on acceptable terms or that such insurance will provide adequate coverage against potential liabilities. The Company expects to procure additional insurance when its products progress to a later stage of development and if any rights to later-stage products are in-licensed in the future. To the extent that product liability insurance, if available, does not cover potential claims, the Company will be required to self-insure the risks associated with such claims. A successful product liability claim or series of claims brought against the Company could have a material adverse effect on the Company's business.

Dependence on Key Employees. Ligand is highly dependent on the principal members of its scientific and management staff, the loss of whose services might impede the achievement of development objectives. Furthermore, Ligand is currently experiencing a period of rapid growth which requires the hiring of significant numbers of scientific, management and operational personnel. Accordingly, recruiting and retaining qualified management, operations and scientific personnel to perform research and development work in the future will also be critical to Ligand's success. Although Ligand believes it will be successful in attracting and retaining skilled and experienced management, operational and scientific personnel, there can be no assurance that Ligand will be able to attract and retain such personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies, universities and other research institutions for such personnel.

Use of Hazardous Materials. Ligand's research and development involves the controlled use of hazardous materials, chemicals and various radioactive compounds. For example, retinoids as a class are known to contain compounds which can cause birth defects. Although the Company believes that its current safety procedures for handling and disposing of such materials, chemicals and compounds comply with the standards prescribed by state and federal regulations, the risk of accidental contamination or injury from these materials cannot be completely eliminated. In the event of any accident, the Company could be held liable for any damages that result and any such liability could be significant.

The Company may incur substantial costs to comply with environmental regulations. Any such event could have a material adverse effect on the Company's business.

Volatility of Stock Price. The market prices and trading volumes for securities of emerging companies, like Ligand, have historically been highly volatile and have experienced significant fluctuations unrelated to the operating performance of such companies. Future announcements concerning the Company or its competitors may have a significant impact on the market price of the Common Stock. Such announcements might include the results of research, development testing, technological innovations, new commercial products, government regulation, receipt of regulatory approvals by competitors, failure to receive regulatory approvals by Ligand, developments concerning proprietary rights, litigation or public concern as to the safety of the products.

Absence of Cash Dividends. No cash dividends have been paid on the Company's Common Stock to date, and Ligand does not anticipate paying cash dividends in the foreseeable future.

Effect of Shareholder Rights Plan and Certain Anti-Takeover Provisions. In September 1996, the Company's Board of Directors adopted a preferred shares rights plan (the "Shareholder Rights Plan") which provides for a dividend distribution of one preferred share purchase right (a "Right") on each outstanding share of the Company's Common Stock. Each Right entitles stockholders to buy 1/1000th of a share of Ligand Series A Participating Preferred Stock at an exercise price of $100, subject to adjustment. The Rights will become exercisable following the tenth day after a person or group announces acquisition of 20% or more of the Company's Common Stock, or announces commencement of a tender offer, the consummation of which would result in ownership by the person or group of 20% or more of the Company's Common Stock. The Company will be entitled to redeem the Rights at $0.01 per Right at any time on or before the earlier of the tenth day following acquisition by a person or group of 20% or more of the Company's Common Stock and September 13, 2006. In connection with the Elan transactions, the Company amended the Shareholder Rights Plan to exclude Elan's ownership of Ligand securities, in certain circumstances, from the operation of the plan.

Ligand's Amended and Restated Certificate of Incorporation (the "Certificate of Incorporation") includes a provision that requires the approval of the holders of 66 2/3% of Ligand's voting stock as a condition to a merger or certain other business transactions with, or proposed by, a holder of 15% or more of Ligand's voting stock, except in cases where certain directors approve the transaction or certain minimum price criteria and other procedural requirements are met (the "Fair Price Provision"). The Certificate of Incorporation also requires that any action required or permitted to be taken by stockholders of Ligand must be effected at a duly called annual or special meeting of stockholders and may not be effected by any consent in writing. In addition, special meetings of the stockholders of Ligand may be called only by the Board of Directors, the Chairman of the Board or the President of Ligand or by any person or persons holding shares representing at least 10% of the outstanding Common Stock of the Company. The Shareholder Rights Plan, the Fair Price Provision and other charter provisions may discourage certain types of transactions involving an actual or potential change in control of Ligand, including transactions in which the stockholders might otherwise receive a premium for their shares over then current market prices, and may limit the ability of the stockholders to approve transactions that they may deem to be in their best interests. In addition, the Board of Directors has the authority to fix the rights and preferences of and issue shares of preferred stock, which may have the effect of delaying or preventing a change in control of Ligand without action by the stockholders.

PART II. OTHER INFORMATION

ITEM 2. CHANGES IN SECURITIES AND USE OF PROCEEDS

On November 9, 1998 (the "Closing"), the Company completed the issuance and sale

of an aggregate of 2,145,923 shares of the Company's Common Stock (the "Shares") to an affiliate of Elan, a non-U.S. entity (the "Investor"). The Shares were issued pursuant to a stock purchase agreement at $11.65 per Share. 1,716,738 of the Shares, representing an aggregate consideration of $20.0 million, were paid by the Investor in cash. The remaining 429,185 Shares, representing an aggregate consideration of $5.0 million, were issued by the Company for payment of certain licensing fees. There were no underwriting discounts or commissions. On the Closing, the Investor also purchased from the Company $40.0 million in issue price of Zero Coupon Convertible Senior Notes, due 2008 with an 8.0% per annum yield to maturity (the "Notes"), pursuant to a securities purchase agreement. Of these Notes, $30.0 million are convertible into the Company's Common Stock at $14.00 per share and the balance of $10 million are convertible into the Company's Common Stock at a price which is the average of the closing prices of the Company's Common Stock for the 20 trading days immediately prior to the issuance of the Notes, plus a premium; however, in no event will the conversion price be less than $14.00 per share or more than $20.00 per share. The Company received $30.0 million in cash under the Notes. The remaining $10.0 million in Notes were issued by the Company for payment of certain licensing fees. There were no underwriting discounts or commissions.

The offers and sales of the Shares and the Notes to the Investor were made pursuant to a claim of exemption under Regulation S promulgated by the Securities and Exchange Commission. The sales of the Shares and the Notes to the Investor were made in "Offshore Transactions" (as defined in Regulation S) and no "Directed Selling Efforts" (as defined in Regulation S) were made by the Company or any of its affiliates. The Investor represented and warranted among other things, that it was not a "U.S. Persons" (as defined in Regulation S), and that it was purchasing the Shares and the Notes for investment only and not with a view to distribution. Appropriate legends in compliance with Regulation S were affixed to the certificates for the Shares and the Notes. In addition, the Company did not use any general advertisement or solicitation in connection with the offer or sale of the Shares or the Notes to the Investor.

ITEM 5. OTHER INFORMATION

The information set forth in Item 2, Part II is hereby incorporated by reference.

ITEM 6. (A) EXHIBITS

Exhibit 3.1(1) Amended and Restated Certificate of Incorporation of the Company (filed as Exhibit 3.2).

Exhibit 3.2(1) Bylaws of the Company, as amended (filed as Exhibit 3.3).

Exhibit 3.3(2) Certificate of Designation of Rights, Preferences and Privileges of Series A Participating Preferred Stock of Ligand Pharmaceuticals Incorporated (Exhibit 3.1).

Exhibit 10.1 Secured Promissory Note, dated March 7, 1997, in the face amount of $3,650,000, payable to the Company by Nexus Equity VI LLC.

Exhibit 10.2 Amended memorandum of Lease effective March 7, 1997, between the Company and Nexus Equity VI LLC.

Exhibit 10.3 First Amendment to Lease, dated March 7, 1997, between the Company and Nexus Equity VI LLC.

Exhibit 10.4 First Amendment to secured Promissory Note, dated March 7, 1997, payable to the Nexus Equity VI LLC.

Exhibit 10.5* Letter of Agreement dated September 28, 1998 among the Company, Elan Corporation, plc and Elan International Services, Ltd.

Exhibit 10.6* Stock Purchase Agreement dated September 30, 1998 between the Company and Elan International Services, Ltd.

Exhibit 10.7 Tenth Addendum to Registration Rights Agreement dated September 30, 1998 between the Company and Elan International Services Ltd.

Exhibit 27.1 Financial Data Schedule

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

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

* Certain confidential portions of these Exhibits were omitted by means of marking such portions with an asterisk (the "Mark"). These Exhibits have been filed separately with the Secretary of the Commission without the Mark pursuant to the Company's Application Requesting Confidential Treatment under Rule 24b-2 of the Securities Exchange Act of 1934.

ITEM 6. (B) REPORTS ON FORMS 8-K

The Company filed a Report on Form 8-K on August 25, 1998 relating to the Seragen Merger transaction.

The Company filed a Report on Form 8-K/A on September 25, 1998 relating to the Seragen Merger transaction.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Ligand Pharmaceuticals Incorporated

Date: November 16, 1998 By /s/ PAUL V. MAIER

Paul V. Maier
Senior Vice President and Chief Financial Officer

EXHIBIT 10.1

SECURED PROMISSORY NOTE

$3,650,000.00 + Additional Advances San Diego, California
March 7, 1997

FOR VALUE RECEIVED, Nexus Equity VI LLC, a California limited liability company ("Borrower") promises to pay, in lawful money of the United States of America, to the order of LIGAND PHARMACEUTICALS INCORPORATED, a Delaware corporation ("Lender"), at 9393 Towne Centre Drive, San Diego, California 92121, or at such other place as Lender may designate in writing from time to time, the principal sum of Three Million Six Hundred Fifty Thousand Dollars ($3,650,000.00) or so much thereof as shall be from time to time disbursed hereunder, plus such additional advances as may be made pursuant to the terms of the Loan Agreement (as defined below),of principal with interest on the disbursed but unpaid principal balance payable at the rate and in the manner provided below (the "Loan"). This Secured Promissory Note (this "Note") is the promissory note referred to in the Construction Loan Agreement of even date herewith between Lender and Borrower (the "Loan Agreement") and is subject to the terms of the Loan Agreement and is entitled to the benefits of the security interests and collateral described therein. Initially capitalized terms used in this Note without definition have the meanings given them in the Loan Agreement.

1. Interest. Interest shall accrue on the disbursed but unpaid principal balances hereof from the date of disbursement until paid at the rate of eight and one-half percent (8.5%) per annum. Interest for a portion of any month shall be calculated on the basis of the actual number of days in the period for which the calculation is being made.

2. Repayment. Interest accrued on outstanding principal hereunder from the date hereof through and including the Term Commencement Date (as defined below) shall be added to principal on the Term Commencement Date, at which time, the total outstanding principal, with interest thereon calculated pursuant to Section 1 above, shall be amortized over a ten (10) year period and principal and interest shall be payable in equal monthly installments beginning on the Term Commencement Date and thereafter on the first day of each succeeding calendar month and continuing until the Maturity Date (defined below) at which time the entire unpaid principal balance hereunder, together with all accrued but unpaid interest thereon, and all other sums owing under the other Loan Documents, shall be due and payable in full. The Term Commencement Date is the date defined in the Lease as the Term Commencement Date. The Maturity Date is the date which is the tenth (10th) anniversary of the Term Commencement Date. Each payment shall be credited first to the payment of any late charges or costs due hereunder, then to the payment of any interest then due and the remainder shall be credited to principal.

3. Adjustment to Repayment. Lender and Borrower acknowledge that the monthly installments of Basic Annual Rent (as defined in the Lease) to be paid by Lender (the "Monthly Rent"), as tenant, to Borrower, as landlord, under the Lease during an initial period of approximately one (1) year (the "Shortfall Period") following the Term Commencement Date will not, in all likelihood, be enough to fund Borrower's monthly payment obligation with respect to (i) the

Permanent Loan, (ii) the Loan, and (iii) the fees Borrower is obligated to pay to Nexus Properties, Inc., a California corporation, pursuant to Section 8.3 of Borrower's Operating Agreement (the "Nexus Fees"). Therefore, notwithstanding the provisions of Section 2 above, Lender and Borrower agree that the minimum monthly payment due hereunder for each month during the Shortfall Period, shall be the lesser of (i) the regularly scheduled payment of principal and interest as calculated pursuant to Section 2 above (the "Scheduled Monthly Installment"), or (ii) the balance of the Monthly Rent less (a) that month's regularly scheduled installment under the Permanent Loan and (b) that month's regularly scheduled payment of the Nexus Fees. After such the Shortfall Period, Borrower shall be obligated to pay the Scheduled Monthly Installment each month during the balance of the scheduled term of this Note (subject to reamortization as

provided herein). After the Shortfall Period, Lender shall have the right, at its election, to reamortize the total outstanding principal hereunder, with accrued but unpaid interest thereon calculated pursuant to Section 1 above, over the remainder of the scheduled term of this Note and Borrower shall repay the indebtedness evidenced by this Note pursuant to such reamortization. The provisions of this Section 3 are not intended as a waiver by Lender of repayment of any principal disbursed hereunder, any interest thereon or any other sums which may be due hereunder or under the terms of the other Loan Documents. The adjusted repayment schedule for principal and interest hereunder during the Shortfall Period the first year of the term of this Note commencing on the Term Commencement Date shall not affect Borrower's obligations to timely pay any other costs or expenses in full which may be due pursuant to the terms of this Note or the other Loan Documents.

4. Prepayment. Borrower shall not prepay outstanding principal or other sums due under this Note at any time prior to the full reconveyance of the Tokai Deed of Trust unless Borrower has received Lender's prior written approval of such prepayment. Such approval may be given or withheld by Lender in Lender's sole and absolute discretion. If such approval is given, it shall apply only to the specific prepayment identified in Lender's written approval. After the full reconveyance of the Tokai Deed of Trust, the outstanding principal balance of this Note may be prepaid in whole or in part by Borrower, without premium or penalty. Lender shall not be obligated to reamortize the repayment schedule for this Note pursuant to any prepayment unless Lender, in its sole and absolute discretion, elects to do so.

5. Security. This Note is secured by the following:

5.1 That certain Construction Deed of Trust, Assignment of Rents and Leases, Security Agreement and Fixture Filing executed by Borrower and naming Lender as beneficiary, delivered by Borrower concurrently herewith the ("Deed of Trust") which, as of the date hereof, shall be second in priority to the Tokai Deed of Trust;

5.2 Financing Statement(s) covering the chattels, fixtures, equipment and general intangibles installed or used in connection with the Project; and

5.3 That certain Assignment of Contracts, Licenses, Permits, Agreements, Warranties, Plans and Specifications executed by Borrower in favor of Lender, delivered by Borrower concurrently herewith (the "Assignment").

6. Default.

6.1 Events of Default. The occurrence of any one or more of the following shall be an event of default under this Note ("Event of Default"):

6.1.1 Borrower's failure to make any payment promptly when due of principal and/or interest, or any other sums due under any one or more of (a) the Loan Agreement, (b) this Note, (c) the Deed of Trust, (d) the Assignment, (e) the other Loan Documents, or (f) any other document or instrument executed by Borrower securing payment of, or otherwise in any way in connection with, this Note;

6.1.2 The failure of Borrower to perform any of its obligations or to make any payments promptly when due of principal, interest, or other sums due under any one or more of the Tokai Loan Documents or any loan documents executed by Borrower in connection with the Tokai Loan and/or the Permanent Loan or any other documents or instruments executed by Borrower with, or in favor of, any other construction lender for any loan obtained by Borrower in connection with the Project (collectively, with all of the documents and instruments referenced in Section 6.1.1 above, the "Documents");

6.1.3 An event of default under any one or more of the Documents;

6.1.4 An event of default by Borrower under the Lease; or

6.1.5 An event of default under any guaranty executed in connection with this Note or the Loan; any such guaranty ceases to be in full force and effect; or any guarantor of any such guaranty asserts that any such guaranty is not in full force and effect.

6.2 Remedies. Upon an Event of Default, then in addition to any other rights or remedies available to Lender, Lender may, at its option, declare the entire outstanding principal balance hereunder and accrued but unpaid interest hereunder, and all other amounts and/or payments due hereunder, and/or under the other Loan Documents, immediately due and payable notwithstanding any stated maturity date therefor and such amounts shall then be immediately due and payable. If an Event of Default occurs, and Lender elects to accelerate the Loan, or in the event that this Note is not paid in full on the Maturity Date, interest thereafter on the unpaid principal balance, accrued interest and costs incurred shall be payable at the rate set forth in Section 1 above plus five percent (5%) per annum. If an Event of Default occurs, Lender may also pursue any other rights or remedies provided hereunder, in any of the other Loan Documents or conferred upon Lender at law or in equity. Borrower agrees that acceptance by Lender of any performance which does not

strictly comply with the terms of this Note shall not be deemed to be a waiver of any of Lender's rights hereunder.

6.3 Late Payment. Borrower recognizes that any default in making any payments when due herein will result in Lender incurring additional expense in servicing the Loan not contemplated hereunder, the exact amount of which will be extremely difficult to ascertain. Such expense will include, but not be limited to, processing and accounting charges, in addition to the loss to Lender of the use of money due, and in frustration to Lender in meeting its other commitments. Borrower agrees that if for any reason it fails to make any payments required herein, including the amount due at the Maturity Date, within fifteen (15) days after the due date, Lender shall be entitled to damages for the detriment caused thereby, the extent of which damages are extremely difficult and impractical to ascertain. Borrower therefor agrees that a sum equal to five percent (5%) of such delinquent payment is a reasonable estimate of such damages and Borrower agrees to pay such sum upon demand by Lender. Acceptance of such late charge by Lender shall in no event constitute a waiver of Borrower's default with respect to such overdue amount nor prevent the Lender from exercising any of the other rights and remedies granted hereunder. The acceptance by Lender of any payment under this Note after the date that such payment is due shall not constitute a waiver of the right to require prompt payment when due of any succeeding payments or to declare a default as herein provided for any failure to so pay. Acceptance by Lender of the payment of a portion of any installment at any time that such installment is due and payable in its entirety shall neither cure nor excuse the default caused by failure to pay the whole of such installment and shall not constitute a waiver of Lender's right to require full payment when due of all future or succeeding installments.

7. Restrictions on Transfer or Encumbrance; Acceleration. The Deed of Trust provides in part:

> "Neither the Trust Estate nor any part thereof or interest therein shall be encumbered, sold (including sale by contract or installment sale), conveyed, or otherwise transferred either by Trustor or by operation of law, without Beneficiary's prior written consent, nor without Beneficiary's prior written consent shall there be any change in the ownership of any stock in a corporate Trustor, in the ownership of any general partnership interest in any general or limited partnership Trustor, in the ownership of any membership interest in a limited liability company or in the ownership of any beneficial interests in any other Trustor which is not a natural person or persons. Any such action without Beneficiary's prior written consent shall constitute an event of default hereunder and shall be deemed to increase the risk to Beneficiary, and Beneficiary may, at its option, declare all sums secured hereby immediately due and payable notwithstanding any stated maturity date therefor or may, in its sole and absolute discretion, consent to such change in title, occupancy or ownership."

8. Collection Expenses. Borrower shall reimburse Lender on demand for

all reasonable and necessary attorneys' fees and other costs and expenses incurred in collecting or enforcing this

Note and protecting or realizing on any collateral, together with interest at the default rate provided in Section 6.2 above. Without limitation, such fees and costs shall include attorneys' and other fees, costs and expenses incurred with or without suit and in any appeal, any proceedings, bankruptcy action, state receivership, and any post-judgment collection proceedings.

9. Waivers. Borrower waives diligence, presentment and demand for payment, notice of dishonor, protest and notice of protest.

10. Governing Law. This Note shall be construed, enforced and otherwise governed by the laws of the internal State of California.

11. Binding Effect. This Note shall bind the successors and assigns of Borrower and all endorsers hereto and shall inure to the benefit of Lender, and Lender's successors and assigns. This Note may not be modified except by written agreement signed by both Lender and Borrower.

12. Notices. Any notice to Borrower under this Note shall be to Borrower's address in the Loan Agreement and shall be deemed received as set forth therein.

13. Maximum Interest Rate. In no event shall the interest rate on this Note be higher than the maximum rate permitted by applicable law, if any. All agreements between Borrower and Lender herein are expressly limited so that in no event whatsoever, whether by reason of advancement of the proceeds hereof, acceleration of maturity of the unpaid principal balance hereof, or otherwise, shall the amount paid or agreed to be paid to Lender for the use, forbearance or detention of the money to be advanced hereunder exceed the highest lawful rate permissible under the applicable usury law. If, from any circumstances whatsoever, fulfillment of any provision hereof or any other agreement relating to this Note, shall involve transcending the limit of validity prescribed by law which a court of competent jurisdiction may deem applicable thereto, then ipso facto, the obligation to be fulfilled shall be reduced to the limit of such validity, and if from any circumstance, Lender shall ever receive as interest an amount in excess of such maximum interest rate, if any, such amount shall be refunded to Borrower. This provision shall control every other provision of all agreements between Borrower and Lender.

14. Severability. The invalidity of any one or more covenants, phrases, clauses, sentences or paragraphs of this Note shall not affect the remaining portions of this Note or any part thereof, and the same shall be construed as if such invalid covenants, phrases, clauses, sentences or paragraphs, if any had not been inserted herein.

15. Time of Essence. Time is of the essence herein.

16. Guaranty. Borrower's payment obligations under this Note are unconditionally guaranteed by each of Michael J. Reidy, R. Darrell Gary and Nexus Properties, Inc., a California corporation.

17. Authority. Each person signing this document on behalf of Borrower warrants that such person is duly authorized to sign and deliver this Note on behalf of Borrower and that this Note is binding on Borrower in accordance with its terms.

BORROWER:

NEXUS EQUITY VI LLC, a California

limited liability company

By: Nexus Properties, Inc., a California
corporation
Its: Manager

By: /s/ Michael J. Reidy

Michael J. Reidy
Chief Executive Officer

EXHIBIT 10.2

RECORDING REQUESTED BY:)
)
Nexus Properties, Inc.)
)
WHEN RECORDED, RETURN TO:)
)
Nexus Properties, Inc.)
4350 La Jolla Village Dr., Suite 930)
San Diego, CA 992122)
)
- ---
APN 340-180-05

AMENDED MEMORANDUM OF LEASE

This AMENDED MEMORANDUM OF LEASE ("Memorandum") is effective as of March 7, 1997, by and between NEXUS EQUITY VI LLC, a California limited liability company ("Landlord"), and LIGAND PHARMACEUTICALS, INC., a Delaware corporation ("Tenant").

NOW, THEREFORE, the parties hereto agree as follows:

1. Lease of Premises. Pursuant to that certain Lease of even date herewith ("Lease"), Landlord hereby leases to Tenant for a term of seventeen (17) years, commencing on January 1, 1998, the Term Commencement Date as defined in the Lease, on the terms and conditions set forth in the Lease, all of which are made a part of this Amended Memorandum as though fully set forth herein, those certain premises located on and including real property ("Real Property") located in the City of San Diego, County of San Diego, State of California, more particularly described as follows:

> Parcel 2 of Parcel Map 17826, in the City of San Diego, County of San Diego, State of California, according to Map thereof, filed in the Office of the County Recorder of San Diego County, February 18, 1997

2. Right of First Refusal to Purchase Premises. Pursuant to the Lease, Landlord hereby grants to Tenant the right to acquire ("Right of First Refusal") the Real Property, which may be exercised prior to the expiration or earlier termination of the term of the Lease on the terms and conditions set forth therein.

3. Purpose of This Memorandum. This Amended Memorandum is executed for the purpose of being recorded, in order to give notice of the Lease and Right of First Refusal. This Amended Memorandum is not a complete summary of the terms and conditions of the Lease, and is subject to, and shall not be used to interpret or modify, the Lease or Right of First Refusal.

The parties hereto have entered into this Amended Memorandum of Lease as of the date first written above.

This Amended Memorandum amends in its entirety that certain Memorandum of Lease of even date recorded with the Office of the Recorder of San Diego County, California, on March 11, 1997, as Document No. 1997-0105347.

LANDLORD:

NEXUS EQUITY VI LLC
A California Limited Liability Company
By Nexus Properties, Inc.
Its Manager

By: /s/ MICHAEL J. REIDY

Michael J. Reidy
Chief Executive Officer

TENANT:

LIGAND PHARMACEUTICALS, INC.
A Delaware corporation

By: /s/ PAUL V. MAIER

Paul V. Maier
Senior Vice President and Chief Financial Officer

STATE OF CALIFORNIA)
) ss.
COUNTY OF SAN DIEGO)

On April 9, 1998, before me, the undersigned Notary Public in and for said County and State, personally appeared

Paul V. Maier
- ---

[X] personally known to me
or
[ ]

the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

Witness my hand and official seal.

/s/ [SIG]

Signature of Notary.

[NOTARY PUBLIC SEAL]

STATE OF CALIFORNIA)
) ss.
COUNTY OF SAN DIEGO)

On April 9, 1998, before me, the undersigned Notary Public in and for said County and State, personally appeared

Michael J. Reidy
- ---

[X] personally known to me
or
[ ]

the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

Witness my hand and official seal.

/s/ [SIG]

Signature of Notary

[NOTARY PUBLIC SEAL]

EXHIBIT 10.3

FIRST AMENDMENT TO LEASE

NEXUS VI/LIGAND PHARMACEUTICALS, INC.

THAT CERTAIN LEASE ("Lease") made as of March 7, 1997, by and between NEXUS EQUITY VI LLC, a California limited liability company ("Landlord"), and LIGAND PHARMACEUTICALS, INC., a Delaware corporation ("Tenant"), for the real property described below, is hereby amended as follows:

1. Section 2.1.4 of the Lease is amended to read as follows:

   (a) Term Commencement Date: January 1, 1998

   (b) Term Expiration Date: Seventeen (17) years from the Term Commencement Date

2. Article 40 of the Lease is deleted in its entirety.

The Premises which are the subject of the Lease consist of (i) that certain real property legally described as Parcel 2 of Parcel Map 17826, in the City of San Diego, County of San Diego, State of California, according to Map thereof, filed in the Office of the County Recorder of San Diego County, February 18, 1997, (ii) the entirety of the building constructed on the real property, and (iii) all landscaping, drainage, irrigation, lighting, parking facilities, walkways, driveways and other improvements and appurtenances related thereto, including, but not limited to, ingress and egress to the public right-of-way.

All terms with an initial capital letter herein shall have the same meaning as is given to them in the Lease.

In all other respects, the Lease shall remain in full force and effect as originally written.

IN WITNESS WHEREOF, the parties hereto have executed this First Amendment to Lease effective March 7, 1997.

LANDLORD:

NEXUS EQUITY VI LLC
A California Limited Liability Company
By Nexus Properties, Inc.
Its Manager

By: /s/ MICHAEL J. REIDY

Michael J. Reidy
Chief Executive Officer

TENANT:

LIGAND PHARMACEUTICALS, INC.
A Delaware corporation

By: /s/ PAUL V. MAIER

Paul V. Maier
Senior Vice President and Chief Financial Officer

EXHIBIT 10.4

FIRST AMENDMENT
TO
SECURED PROMISSORY NOTE

THAT CERTAIN SECURED PROMISSORY NOTE dated March 7, 1997, in the original principal amount of $3,650,000, payable by NEXUS EQUITY VI LLC, a California limited liability company ("Borrower"), to LIGAND PHARMACEUTICALS INCORPORATED, a Delaware corporation ("Lender"), is amended as follows:

Paragraph 1 is deleted, and the following is substituted in its place:

"1. Interest. Interest shall accrue on the disbursed but unpaid principal balances hereof from the Term Commencement Date of the Lease, as defined in the following Paragraph 2 of this Secured Promissory Note, until paid at the rate of eight and one-half percent (8.5%) per annum. Interest for a portion of any month shall be calculated on the basis of the actual number of days in the period for which the calculation is being made."

Paragraph 2 is deleted, and the following is substituted in its place:

"2. Repayment. At the Term Commencement Date (as defined below), the total outstanding principal, with interest thereon calculated pursuant to Section 1 above, shall be amortized over a ten (10) year period and principal and interest shall be payable in equal monthly installments beginning on the first day of the month following the Term Commencement Date and thereafter on the first day of each succeeding calendar month and continuing until the Maturity Date (defined below) at which time the entire unpaid principal balance hereunder, together with all accrued but unpaid interest thereon, and all other sums owing under the other Loan Documents, shall be due and payable in full. The Term Commencement Date is the date defined in the Lease as the Term Commencement Date. The Maturity Date is the date which is the tenth (10th) anniversary of the Term Commencement Date. Each payment shall be credited first to the payment of any late charges or costs due hereunder, then to the payment of any interest then due and the remainder shall be credited to principal."

In all other respects, the Secured Promissory Note shall remain in full force and affect.

Executed effective March 7, 1997.

BORROWER

NEXUS EQUITY VI LLC
A California Limited Liability Company
By Nexus Properties, Inc.
A California Corporation
Its Manager

By: /s/ MICHAEL J. REIDY

Michael J. Reidy
Chief Executive Officer

LENDER

LIGAND PHARMACEUTICALS INCORPORATED
A Delaware corporation

By: /s/ PAUL V. MAIER

Paul V. Maier
Senior Vice President and
Chief Financial Officer

EXHIBIT 10.5

ELAN CORPORATION, PLC
LINCOLN HOUSE
LINCOLN PLACE
DUBLIN 2, IRELAND

ELAN INTERNATIONAL SERVICES, LTD.
102 ST. JAMES COURT
FLATTS, SMITHS PARISH
BERMUDA FL 04

September 28, 1998

Ligand Pharmaceuticals Incorporated
10275 Science Center Drive
San Diego, California 92121

Attention: David E. Robinson

Re: License and Financing Transaction

Ladies and Gentlemen:

This letter of intent (the "Letter of Intent") confirms the agreement reached by ELAN CORPORATION, PLC, a public limited company organized under the laws of Ireland ("Elan"), ELAN INTERNATIONAL SERVICES, LTD., a Bermuda corporation and a wholly-owned subsidiary of Elan ("EIS"), and LIGAND PHARMACEUTICALS INCORPORATED, a Delaware corporation ("Ligand"), with respect to (i) the purchase by EIS of an aggregate of 1,716,738 shares of common stock, par value $0.001 per share, of Ligand (the "Common Stock") at a purchase price of $11.65 per share, (ii) the purchase by EIS of Zero Coupon Convertible Senior Notes due 2008 (the "Notes") at an aggregate issue price of up to $110.0 million and (iii) the licensing by Elan of certain intellectual property to Ligand. This Letter of Intent shall be binding on the parties hereto and sets forth the basic terms upon which the parties have agreed. The full terms of the transactions contemplated hereby shall be set forth in definitive agreements to be prepared as described below.

The parties agree as follows:

1. License. Elan and Ligand shall enter into a license on terms and conditions substantially in accordance with those set forth in the term sheet attached hereto as Exhibit A. The parties acknowledge that Exhibit A sets forth only the basic terms of the understanding between the parties and is subject to the further negotiation and preparation of a definitive license agreement (the "License Agreement") which shall contain additional terms and conditions customary for transactions of this type. The parties agree to act in good faith to negotiate,

execute and deliver the License Agreement on or before October 31, 1998, or such other date as the parties shall mutually agree (the "Closing Date").

2. Purchase of Common Stock and Notes. EIS shall purchase from Ligand and Ligand shall sell to EIS the Common Stock and the Notes on terms and conditions substantially in accordance with those set forth in the term sheets attached hereto as Exhibits B and C, respectively. The parties acknowledge that each of Exhibit B and C sets forth only the basic terms of the understanding between the parties and is subject to the further negotiation and preparation of definitive securities purchase and related agreements relating to the Initial Shares (as defined in Exhibit B hereto) (the "Initial Purchase Agreement") and the Additional Shares (as defined in Exhibit B hereto) and the Notes (the "Additional Purchase Agreement" and, together with Initial Purchase Agreement, the "Purchase Agreements"), which shall contain additional terms and conditions customary for transactions of this type. The parties agree to act in good faith to negotiate, execute and deliver the Initial Purchase Agreement on or before September 30, 1998 and the Additional Purchase Agreement on or before the Closing Date. The Purchase Agreements and the License Agreement are collectively referred to herein as the "Definitive Agreements."

3. Certain Conditions. (a) The obligation of Elan and EIS to consummate

the transaction contemplated by the Definitive Agreements shall be subject to conditions precedent customary for transactions of such type, including, but not limited to, the following: (1)(a) Ligand shall have executed and delivered and issued to EIS, the applicable Purchase Agreement, and such other reasonable and customary documents and instruments as provided therein or as EIS may otherwise reasonably request with respect to the transactions contemplated by Exhibits B and C hereto, (b) Ligand shall have executed and delivered the Tenth Addendum to the Amended Registration Rights Agreement, dated as of June 24, 1994, among Ligand and the persons party thereto (the "Registration Rights Agreement"), providing for the registration rights set forth in Exhibit B hereto and (c) with respect to the transactions contemplated by the Additional Purchase Agreement and the License Agreement, Ligand shall have executed and delivered the License Agreement, and such other reasonable and customary documents and instruments as provided therein or as Elan may otherwise reasonably request in respect of the transactions contemplated by Exhibit A hereto, which, in the case of each of clauses (a), (b) and (c), when duly executed and delivered by Ligand shall be valid, binding and enforceable and in full force and effect, subject to bankruptcy, insolvency, reorganization, moratorium or other similar laws now or hereafter in effect relating to creditors' rights generally and to general principles of equity, and there shall be no breach or default by Ligand thereunder; (2) there shall not have occurred from the date hereof through and including the Initial Closing Date (as defined in Exhibit B) or the Closing Date, as the case may be, any material adverse change or event that could reasonably be expected to result in a material adverse change in the business, assets, liabilities (contingent or otherwise), operations, condition (financial or otherwise), solvency, properties, prospects or material agreements of Ligand and its subsidiaries, taken as a whole (a "Material Adverse Change"); (3) Ligand shall not have breached or defaulted in any of its

material obligations hereunder and thereunder and its representations herein and therein shall be true and correct in all material respects, as if made on and as of the Initial Closing Date or the Closing Date, as the case may be; (4) no consent, approval or filing (with any governmental authority or otherwise) on the part of Ligand shall be required for the execution, delivery or performance of the Definitive Agreements or the Registration Rights Agreement, or, if required, such approval shall have been obtained and any applicable waiting periods in respect thereof shall have elapsed; and (5) with respect to the transactions contemplated by the Additional Purchase Agreement and the License Agreement, that certain Preferred Share Rights Agreement, dated as of September 13, 1996, between Ligand and Wells Fargo Bank, N.A., as amended from time to time (the "Rights Agreement"), shall have been amended in form and substance reasonably satisfactory to Elan, so that the transactions contemplated by the Definitive Agreements will not require the issuance of any Rights (as defined in the Rights Agreement) thereunder.

(b) The obligation of Ligand to consummate the transaction contemplated by the Definitive Agreements shall be subject to conditions precedent customary for transactions of such type, including, but not limited to, the following: (1)(a) EIS shall have executed and delivered to Ligand the applicable Purchase Agreement, and such other reasonable and customary documents and instruments as provided therein or as Ligand may otherwise reasonably request with respect to the transactions contemplated by Exhibits B and C hereto, (b) EIS shall have executed and delivered the Registration Rights Agreement and (c) with respect to the transactions contemplated by the Additional Purchase Agreement and the License Agreement, Elan shall have executed and delivered the License Agreement, and such other reasonable and customary documents and instruments as provided therein or as Ligand may otherwise reasonably request in respect of the transactions contemplated by Exhibit A hereto, which, in the case of each of clauses (a), (b) and (c), when duly executed and delivered by Elan or EIS, as the case may be, shall be valid, binding and enforceable and in full force and effect, subject to bankruptcy, insolvency, reorganization, moratorium or other similar laws now or hereafter in effect relating to creditors' rights generally and to general principles of equity, and there shall be no breach or default by Elan or EIS, as the case may be, thereunder; (2) neither Elan nor EIS shall have breached or defaulted in any of its material obligations hereunder and thereunder and its representations herein and therein shall be true and correct in all material respects, as if made on and as of the Initial Closing Date or the Closing Date, as the case may be; and (3) no consent, approval or filing (with any governmental authority or otherwise) on the part of Elan or EIS shall be required for the execution, delivery or performance of the Definitive Agreements, or, if required, such approval shall have been obtained and any applicable waiting periods in respect thereof shall have elapsed.

(c) In the event that the Definitive Agreements shall not have been executed and delivered on or prior to the later of (i) October 31, 1998 and (ii) the expiration of the waiting period under the Hart-Scott-Rodino Antitrust

Improvements Act of 1976, as amended (including as a result of the material breach or default hereunder by either EIS or Elan, on the one hand, or

Ligand, on the other hand), the non-defaulting party or parties shall have the right to terminate this Letter of Intent by written notice to the other(s), whereupon the transactions contemplated hereby shall be canceled and of no further force and effect; provided that, notwithstanding the termination of this Letter of Intent, each party shall remain liable to the other for or in respect of any breach or default which shall have occurred prior to such date.

4. Representations and Certain Covenants. (a) Ligand represents to Elan and EIS the following: (i) Ligand has full corporate power and authority to execute, deliver and perform its obligations under this Letter of Intent, the Definitive Agreements and the Registration Rights Agreement and to consummate the transactions contemplated hereby and thereby, and this Letter of Intent has been duly executed and delivered and constitutes the legal and valid obligation of Ligand and is enforceable against Ligand in accordance with its terms, subject to bankruptcy, insolvency, reorganization, moratorium or other similar laws now or hereafter in effect relating to creditors' rights generally and to general principles of equity; (ii) the Common Stock and the Notes contemplated to be issued by Exhibits B and C hereto have been or will be duly and validly authorized and when issued will be fully paid and non-assessable and free from any and all options, warrants and preemptive and other rights (except as otherwise provided herein); (iii) Ligand is not in default in any material respect of its charter or by-laws, any applicable laws or regulations or any contract or agreement binding upon or affecting it or its properties or assets and the execution, delivery and performance of this Letter of Intent and the transactions contemplated hereby will not result in any such violation; and (iv) since December 31, 1996, the Company has timely filed with the Securities and Exchange Commission (the "Commission") all forms, reports, schedules, statements and other documents required to be filed by it (such documents, as supplemented and amended since the time of filing, collectively, the "SEC Documents"); the SEC Documents, including any financial statements or schedules included therein, at the time filed (and, in the case of registration statements and proxy statements, on the dates of effectiveness and the dates of mailing, respectively) (x) did not contain any untrue statement of material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances in which they were made, not misleading, and (y) complied in all material respects with the applicable requirements of the Securities Act of 1933, as amended (the "Securities Act"), and the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as the case may be; the financial statements of Ligand included in the SEC Documents at the time filed (and, in the case of registration statements and proxy statements, on the dates of effectiveness and dates of mailing, respectively) complied as to form in all material respects with applicable accounting requirements and with the published rules and regulations of the Commission with respect thereto, were prepared in accordance with generally accepted accounting principles applied on a consistent basis during the periods indicated (except as indicated in the notes thereto), and fairly present (subject, in the case of unaudited interim financial statements, to normal, recurring year-end audit adjustments consistent with past practice), in all material respects, the consolidated financial position of Ligand and its subsidiaries as at the dates thereof and the consolidated results of operations and

cash flows for the periods then ended; since the date of the last SEC Document prior to the date hereof, there has been no Material Adverse Change.

(b) Elan and EIS, jointly and severally, represent to Ligand the following: (i) each of Elan and EIS has full corporate power and authority to execute, deliver and perform its obligations under this Letter of Intent, the Definitive Agreements and the Registration Rights Agreement, as the case may be, and to consummate the transactions contemplated hereby and thereby, and this Letter of Intent has been duly executed and delivered and constitutes the legal and valid obligation of Elan and EIS and is enforceable against Elan and EIS in accordance with its terms, subject to bankruptcy, insolvency, reorganization, moratorium or other similar laws now or hereafter in effect relating to creditors' rights generally and to general principles of equity; (ii) neither Elan nor EIS is in default in any material respect of its charter or by-laws, any applicable laws or regulations or any contract or agreement binding upon or affecting it or its properties or assets and the execution, delivery and performance of this Letter of Intent and the transactions contemplated hereby

will not result in any such violation and (iii) neither Elan nor EIS is a "U.S. person," as defined in Regulation S under the Securities Act.

(c) Ligand shall not, prior to the earlier of (x) the Closing Date and (y) the abandonment or termination of the transactions contemplated hereby, as provided in Section 3 above, without the prior written consent of Elan, (i) make, pay or declare any dividend or distribution to any equity holder (in such capacity) or redeem any of its capital stock; provided that the payment by Ligand of cash to holders of Ligand warrants outstanding on the date hereof in connection with and upon the exercise of such warrants shall, under no circumstances, be prohibited by this clause (i); (ii) vary its business practices, in any material respect, from past practices; (iii) enter into any financing, joint venture, license or similar arrangement; provided that Ligand may enter into joint venture, licensing or similar arrangements in any country other than the United States, the United Kingdom, Germany, Japan or France; or (iv) suffer or permit to be incurred any material liability, obligation, lien or encumbrance against any of its properties or assets, except in the ordinary course of business and consistent with past practice.

(d) Ligand shall, prior to the earlier of (x) the Closing Date and (y) the abandonment or termination of the transactions contemplated hereby, as provided in Section 3 above, afford to the employees, agents and authorized representatives of Elan and EIS reasonable access at reasonable times, upon reasonable prior notice, to Ligand 's properties, offices, files, agreements, books and records as may be necessary in order that Elan and EIS may have a full opportunity to conduct such investigations and due diligence reviews as they shall deem necessary in connection with the transactions contemplated herein.

(e) Elan shall, prior to the earlier of (x) the Closing Date and (y) the abandonment or termination of the transactions contemplated hereby, as provided in Section 3 above, afford to the employees, agents and authorized representatives of Ligand reasonable access at reasonable times, upon reasonable prior notice, to Elan's files, agreements, books and records relating to Elan's intellectual property to be licensed to Ligand, as may be necessary in order that Ligand

may have a full opportunity to conduct such investigations and due diligence reviews as it shall deem necessary in connection with the transactions contemplated by Exhibit A hereto.

(f) Each of Ligand, Elan and EIS shall use their respective commercially reasonable efforts to complete the Definitive Agreements and close the transactions contemplated hereby and thereby as soon as practicable, and in any event not later than October 31, 1998.

5. Confidentiality and Non-disclosure. From and after the date of this Letter of Intent, none of EIS, Elan or Ligand shall, except as required by applicable law or judicial or administrative process, disclose to any person or entity, publicly or privately, this Letter of Intent or the substance of the transactions contemplated hereby or the involvement of the parties with each other as contemplated hereby, without the prior written consent of the other party.

6. Miscellaneous. This Letter of Intent (a) shall be governed by and construed in accordance with the internal laws of the State of New York, without regard to principles of conflicts of laws and, in connection therewith, each party consents to the non-exclusive jurisdiction of any Federal or state court sitting in the County, City and State of New York over any dispute arising from this Letter of Intent; (b) shall not be assigned or delegated by Elan or EIS, on the one hand, or Ligand, on the other hand, without the consent of the other party, except that each of Elan and EIS shall have the right to assign or delegate such rights and/or obligations to any affiliate that is not a "U.S. person," as defined in Regulation S under the Securities Act, and, subject to the foregoing, shall be binding upon the parties' respective successors and assigns; (c) may be executed in counterparts and delivered by facsimile transmission; and (d) together with the Definitive Agreements and the Registration Rights Agreement, constitutes the entire agreement among the parties and supersedes all prior agreements or understandings among the parties.

Please indicate your approval to the foregoing by signing a copy of this Letter of Intent where indicated below.

Very truly yours,

ELAN CORPORATION, PLC

By: /s/ illegible

Name:
Title:

ELAN INTERNATIONAL SERVICES, LTD.

By: /s/ Kevin Insley

Name: Kevin Insley
Title: President and Chief Financial Officer

Agreed to:

LIGAND PHARMACEUTICALS INCORPORATED

By: /s/ David E. Robinson

Name: David E. Robinson
Title: Chairman, President & CEO

EXHIBIT A

TERM SHEET(1)
LIGAND LICENSE

LICENSE An exclusive license (the "License") from Elan Pharmaceutical Technologies, a division of Elan Corporation, plc ("Elan"), to Ligand Pharmaceuticals Incorporated (collectively "Ligand") of Elan's patent rights and know-how ("Intellectual Property") required to package, use, promote, distribute, offer for sale and sell Elan's once-daily solid oral dosage form of morphine (the "Product").

For the avoidance of doubt, Elan's Intellectual Property shall exclude patent rights and know-how owned and licensed by *** *** ***

PRODUCT PRESENTATIONS *** capsules.

*** Ligand and its affiliates undertake *** *** *** *** in the Territory during the Term and for *** thereafter.

TRADEMARK Elan shall grant to Ligand a non-exclusive royalty free license in the Territory (as defined below) for the Term to use Elan's Morphelan(TM) trademark (the "Trademark") solely for the purposes of exercising its rights and performing its obligations under this License.

COMMERCIALIZATION Ligand will diligently pursue the commercialization of the Product and shall use all *** efforts to market and promote the Product in the Territory and in doing so, shall use the same level of effort as with other similar products of similar sales potential which it markets.

Within *** of the submission of the New Drug Application

- ----------

(1) Capitalized terms used in this Term Sheet and not otherwise defined herein shall have the meanings set forth in Letter of Intent to which this Term

Sheet is attached.

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

or its foreign equivalent (the "NDA") in each country of the Territory, Elan and Ligand shall agree upon appropriate due diligence obligations on Ligand for marketing the Product including a promotional support budget and minimum sales figures for the Product for the *** following commercial launch of the Product having regard to standard industry practices.

In the event that the parties are unable to agree upon such due diligence obligations for the Product within the time period as set out above, the parties shall appoint an arbitrator who is technically knowledgeable in the pharmaceutical industry to choose either Elan's proposed terms or Ligand's proposed terms on the basis of which terms he determines to be closer to standard industry practice.

Ligand shall make a full scale commercial launch of the Product in each country of the Territory within *** of NDA approval, including marketing approvals, where applicable, being granted in such country. Elan shall not unreasonably withhold its agreement to a request by Ligand for an extension of the said *** period if there are legitimate commercial reasons for such an extension or Elan is unable to timely supply Product for launch.

CO-PROMOTION ELAN

For the period from the date of execution of the Definitive Agreements up until *** of the Product in each country of the Territory, Elan shall have a *** to co-promote the Product in such country of the Territory for *** *** and on other terms to be agreed in good faith between the parties and having regard to standard industry practices in such country of the Territory.

LIGAND

For the period from the date of execution of the Definitive Agreements up until *** *** for the Product in each Member State of the European Union (excluding Ireland and the United Kingdom), whether on an individual approval basis or through the European centralized procedure, Ligand shall have a *** to co-promote the Product in such Member State of the European Union for ***

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

*** on terms to be agreed in good faith between the parties and having regard to standard industry practices in such Member State of the European Union; provided that Ligand has established an appropriate sales force in such Member State.

In the event that the parties are unable to agree upon the terms for co-promotion of the Product by either party as set out above, the parties shall appoint an arbitrator who is technically knowledgeable in the pharmaceutical industry to choose either Elan's proposed terms or Ligand's proposed terms for the co-promotion on the basis of which terms he determines to be closer to standard industry practice.

PROJECT TEAM Elan and Ligand shall establish a project team (on which they shall have equal representation) to supervise the

day-to-day activities related to the co-operative aspects of the research, development and commercialization of the Product. Disputes within the project team that cannot be resolved by consensus will be resolved by a management committee team (on which they shall have equal representation) from Ligand and Elan. If such management committee team cannot resolve the matter, the dispute will be referred to a designated senior officer of each of Elan and Ligand.

LICENSED TERRITORY United States of America and its territories and Canada (the "Territory").

TERM The greater of (a) the life of the patent rights in the relevant country or countries within the Territory and (b) ***

Not later than *** prior to the expiration of the Term for a given country, Elan and Ligand shall enter into a long-term supply agreement upon terms and conditions to be mutually agreed between the parties. If the parties fail to enter into such a long-term supply agreement, Elan shall grant Ligand a license to the know-how to manufacture the Product upon terms and conditions to be mutually agreed between the parties.

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

SUBLICENSE AND ASSIGNMENT RIGHTS *** shall *** ***

Neither party shall be entitled to assign this agreement without the prior written consent of the other party, save that either party may assign the License to their respective affiliates provided that there is not an adverse tax consequence for the other party.

CERTAIN CHANGES OF CONTROL In the event that (a) a technological competitor to Elan or its affiliates *** shall, directly or indirectly, acquire ***% or more of the capital stock of Ligand, or otherwise control or influence in any material respect their management or business, or (b) any other person or entity shall acquire ***% or more of the voting stock of Ligand, or otherwise merge, consolidate or enter into any similar transaction (or binding agreement in respect thereof) with any of such entities, the License, at *** *** provided, however, that the foregoing shall not apply in relation to any exercise of any options by Elan as contemplated by the definitive documents.

LICENSE ROYALTIES PAYABLE BY LIGAND TO ELAN In consideration of the rights and license of the Elan patent rights for the Product, Ligand shall pay the following amounts to Elan:

$5,000,000 in cash or in Common Stock (valued at $11.65 per share), at Ligand's option, upon signing of the License;

$10,000,000 payable through an increase in the Notes, as described in Exhibit C to the Letter of Intent, upon signing of the License;

$*** in cash or in Common Stock (valued at a price per share equal to the ***
***
***
***
*** and

$*** in cash or in Common Stock (valued at a price per share equal to the ***

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

*** *** *** at Ligand's option, upon ***

PATENTS The substantive documents shall contain mutually-agreeable provisions on filing, prosecution, enforcement and maintenance.

REGULATORY APPROVALS Regulatory approvals for the Product in the Territory shall be prosecuted and owned by Elan.

SUPPLY OF PRODUCT Ligand shall purchase the Product exclusively from Elan.

Product shall be supplied to Ligand in finished market packs Ex Works the manufacturing facility designated by Elan.

Elan shall advise Ligand of a minimum batch size for the manufacture and supply of each dosage strength of Product.

Ligand shall provide quarterly forecast updates on a rolling *** basis to Elan. The *** of such forecast will be binding.

In the event of a failure to supply (to be defined) by Elan, Elan shall grant to Ligand a production license to manufacture the Product.

PRICE OF PRODUCT The price to be charged by Elan to Ligand for the supply of Product for commercial sale in the Territory shall be:

- ***% of NSP for the *** *** for Product in the Territory;

- ***% of NSP for the *** *** for Product in the Territory; and

- ***% of NSP for *** during the Term of the Agreement.

Product for distribution as *** promotional samples shall be supplied by Elan to Ligand at *** ***

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

In no event shall Elan be required to supply Product for commercial sale to Ligand *** ***

NSP shall mean in the case of Product sold by Ligand or an affiliate, that sum determined by *** *** for the Product by Ligand or, its affiliate, as the case may be, in accordance with standard accounting principles, a maximum deduction of ***% to cover the following:-

(a) customs duties or other taxes (excluding income or corporation tax), directly related to the sale of the Product which are paid by Ligand or its affiliates as the case may be;

(b) a discount from the gross sales proceeds to cover such normal costs as are incurred by Ligand or its affiliates, as the case may be, in respect of transport, shipping insurance, returns, discounts directly related to the sale of the Product.

In Market shall mean the sale of the Product in the Territory by Ligand or its Affiliates, to an unaffiliated third party, including but not limited to a

wholesaler, chain store, distributor, managed care organization, hospital or pharmacy.

Fully Allocated Cost shall include direct labour, direct materials and supplies, variable labor, overhead and attributable administration, quality control, quality assurance and other costs; such costs to be calculated in accordance with ***

PRODUCT SUPPORT Elan shall be responsible, ***, for the completion of the clinical studies for the Product listed in Schedule I, which are currently in progress. For the avoidance of doubt, Ligand shall be responsible for the cost of all development work and/or clinical trials on the Product in addition to such ongoing clinical studies. ***

Ligand shall commit to undertake additional clinical

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

expenditure, including ***
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*** which shall include direct labor, overhead and attributable administration, quality control, quality assurance and other costs, calculated in accordance with *** during the *** following submission of the NDA in the United States.

CUSTOMARY TERMS The License will contain customary terms, including terms and conditions relating to payments; patent rights and related protection and prosecutions; auditing and review rights, confidentiality; representations and warranties; indemnities; and other customary provisions.

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

SCHEDULE I

MORPHLEAN CLINICAL DEVELOPMENT PROGRAM

<TABLE>
<CAPTION>

STUDY I.D.	TRIAL NAME	LOCATION	COMPARATOR	STUDY DESIGN	VOLUNTEERS/ PATIENTS	CRO	ESTIMATED START	ESTIMATED COMPLETE	STATUS/ COMMENTS
<S>	<C>	<C>	<C>	<C>	<C>	<C>	<C>	<C>	<C>

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</TABLE>

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

EXHIBIT B

TERM SHEET(1)
COMMON STOCK

INITIAL CLOSING On September 30, 1998 (the "Initial Closing Date"), Ligand will sell to EIS and EIS will purchase from Ligand 1,278,970 shares of Common Stock (the "Initial Shares") at a purchase price of $11.65 per share, subject to customary anti-dilution adjustments for, among other things, stock splits, stock dividends and similar transactions that occur between the date of the Letter of

Intent and the Initial Closing Date.

ADDITIONAL CLOSING On the Closing Date, Ligand will sell to EIS and EIS will purchase from Ligand, 437,768 shares of Common Stock, (the "Additional Shares" and, together with the Initial Shares, the "Shares") at a purchase price of $11.65 per share, subject to customary anti-dilution adjustment for, among other things, stock splits, stock dividends and similar transactions that occur between the date of the Letter of Intent and the Closing Date.

REGISTRATION RIGHTS Elan, EIS and Ligand shall enter into the Registration Rights Agreement, providing to Elan and EIS the registration rights set forth therein with respect to the Shares and all shares of Common Stock issued or issuable by Ligand under the License Agreement and upon the conversion of the Notes. Notwithstanding the foregoing, Elan, EIS and Ligand shall, prior to the termination of the Registration Rights Agreement in accordance with Section 1.17 thereof, enter into a new registration rights agreement (the "New Registration Rights Agreement"), to be effective upon such termination, having terms and conditions identical to those in the Registration Rights Agreement and providing registration rights for the Shares and the Common Stock issued or issuable by Ligand under the License Agreement and upon conversion of the Notes. The New Registration Rights Agreement shall expire on the later of (i) December 31, 2003 and (ii) the date on which no Notes are outstanding.

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(1) Capitalized terms used in this Term Sheet and not otherwise defined herein shall have the meaning set forth in Letter of Intent to which this Term Sheet is attached.

STANDSTILL For a period of *** after the Closing Date, neither Elan nor any of its affiliates shall, without the consent of Ligand, acquire beneficial ownership of any Common Stock or any securities of Ligand convertible into or exchangeable for Common Stock, or any other rights to acquire Common Stock, if, after giving effect to such acquisition, Elan and its affiliates would own or otherwise have the right to acquire more than 25.0% of the outstanding Common Stock, on a fully diluted basis; provided that this provision shall terminate and be of no further force and effect upon the acquisition of, or public announcement of an intent to acquire, beneficial ownership (as defined under Rule 13d-3 of the Exchange Act) by any person or Group (as defined in Exhibit C to the Letter of Intent), of more than ***% of the outstanding Common Stock; provided that, at any time on or after the second anniversary of the Closing Date, Elan and its affiliates may communicate with a committee of Ligand's then-independent directors regarding a negotiated acquisition of all, but not less than all, of the Common Stock then outstanding.

RESTRICTIONS ON TRANSFER From the date hereof until the *** of the Closing Date, Elan shall not, and shall not permit any of its affiliates to, without the consent of Ligand, directly or indirectly, sell, offer to sell, contract to sell, grant any option to purchase or otherwise transfer or dispose of any of the Additional Shares, except for the sale or transfer of Additional Shares among Elan and its affiliates; provided that this provision shall terminate and be of no further force and effect with respect to the Initial Shares in the event that the Letter of Intent is abandoned or terminated in accordance with Section 3 thereof.

PREEMPTIVE RIGHTS The Shares, together with the shares of Common Stock issued to EIS under the License Agreement and upon conversion of the Notes, shall possess preemptive rights.

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

BOARD REPRESENTATION So long as Elan and its affiliates own not less than 15.0% of the outstanding Common Stock (assuming the conversion of all Notes owned by Elan and its affiliates), Elan shall be entitled to designate one director (the "Elan Designee") to Ligand's board of directors. Ligand shall use its best efforts to cause and maintain the election of the Elan Designee to the Ligand board of directors.

CONDITIONS The purchase of the Shares shall be subject to conditions precedent customary for transactions of this type, including, but not limited to, those set forth in the Letter of Intent.

EXHIBIT C

TERM SHEET(1)
ZERO COUPON CONVERTIBLE SENIOR NOTES
DUE 2008

THE NOTES Zero Coupon Convertible Senior Notes due 2008 (the "Notes").

ISSUE PRICE The Notes will have an issue price (the "Issue Price") representing a yield to maturity of 8.0% per annum (computed on a semi-annual bond equivalent basis).

INITIAL FUNDING On the Closing Date, Ligand will issue to EIS and EIS will purchase from Ligand, Notes at the Issue Price of $30,000,000 (the "Initial Notes").

SUBSEQUENT FUNDING Ligand may, upon *** on or prior to December 31, 1999, upon not less than 60 days' prior written notice to Elan, cause EIS to purchase additional Notes at the Issue Price of up to an aggregate of $80,000,000 (the "Additional Notes"); provided that, the proceeds to Ligand resulting from any such purchase shall be used by Ligand solely to (i) make a $10,000,000 payment to Elan in connection with the execution and delivery of the License Agreement, (ii) make the remaining milestone payments, if any, due to the stockholders, creditors and other obligees of Seragen, Inc. ("Seragen"), in accordance with that certain Agreement and Plan of Reorganization, dated as of May 11, 1998, among Seragen, Ligand and Knight Acquisition Corp., (iii) pay the purchase price for the assets of Marathon Biopharmaceuticals, LLC ("Marathon"), in accordance with that certain Option and Asset Purchase Agreement, date as of May 11, 1998, among Ligand, Marathon, 520 Commonwealth Avenue Real Estate Corp. and 660 Corporation and (iv) otherwise finance the development of Ligand's business principally through product, technology and other acquisitions. The purchase by EIS of any Additional Note shall be conditioned upon the receipt by Elan of written notice stating in reasonable detail the proposed use by Ligand of the proceeds to be received from such purchase and, in the event that Ligand proposes to use such proceeds (a) for the purposes set forth in

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(1) Capitalized terms used in this Term Sheet and not otherwise defined herein shall have the meaning set forth in Letter of Intent to which this Term Sheet is attached.

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clauses (ii) or (iii) of the immediately preceding sentence, Elan shall have completed, to its reasonable satisfaction, a confirmatory due diligence investigation relating thereto or (b) for the purposes set forth in clause (iv) of the immediately preceding sentence, Elan, in its sole discretion, shall have consented in writing to such use. Notwithstanding the foregoing, in no event shall EIS be obligated to purchase Notes, the aggregate Issue Price of which exceeds $110,000,000.

DENOMINATIONS; FORM The Notes will be issued in minimum denominations of $1,000 principal amount at maturity and integral multiples thereof. The Initial Note will be represented by one physical note and each Additional Note, if any, issued to EIS will be represented by one physical note.

INTEREST No periodic interest payments will be made on the Notes.

CONVERSION-INITIAL NOTES The Issue Price of the Initial Note, together with all accrued original issue discount thereon, will be convertible into Common Stock, at the option of EIS, at any time on or prior to maturity, unless previously redeemed or otherwise purchased by Ligand, at a conversion rate equal to $14.00 per share. The conversion rate for the Initial Note will be subject to customary adjustments upon the occurrence of certain events.

CONVERSION-ADDITIONAL NOTES The Issue Price of any Additional Note, together with all accrued original issue discount thereon, will be convertible into Common Stock, at the option of EIS, at any time on or prior to maturity, unless previously redeemed or otherwise purchased by Ligand, at a per share conversion rate equal to (i)

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the date of issuance of such Additional Note plus (ii) a premium equal to the ***

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provided that such conversion rate shall in no event be less than $14.00 per share or greater than $20.00 per share. The conversion rate for such Additional Note will be subject to customary adjustments upon the occurrence of certain events.

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RANKING The Notes will be general unsecured obligations of Ligand, ranking pari passu in right of payment with all existing and future unsubordinated indebtedness of Ligand and senior in right of payment to all existing and future subordinated indebtedness of Ligand.

SINKING FUND None.

OPTIONAL REDEMPTION The Notes will not be redeemable by Ligand prior to the third anniversary of the Closing Date. On and after such date, the Notes will be redeemable for cash at any time at the option of Ligand, in whole or in part, at a redemption price equal to the Issue Price thereof plus accrued original issue discount thereon through the

date of redemption.

In addition, upon a Change of Control (as defined below) of Elan occurring prior to the third anniversary of the Closing Date, Ligand may, at its option, within 30 days following such Change of Control, upon not less than 10 days' prior written notice, (i) purchase all, but not less than all, of the Initial Shares (provided that the Letter of Intent shall not have been abandoned or terminated in accordance with Section 3 thereof), the Additional Shares and the shares of Common Stock received by Elan or its affiliates upon conversion of the Notes and in lieu of cash payments under the License Agreement, in each case, then owned by Elan and its affiliates and (ii) redeem the Notes, in whole but not in part, in each case, for a cash purchase price determined in accordance with this paragraph; provided that, Ligand shall be required to both purchase such Common Stock and redeem all of the Notes if any are so purchased or redeemed. The purchase price per share for the Common Stock shall be the greater of

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The Notes shall not be convertible during the period from the date of such Change of Control until the earlier of (i) notice by Ligand that it does not intend to repurchase the Notes and (ii) the date of redemption; provided that the failure by Ligand to deliver a notice of repurchase to Elan on or before the 20th calendar day following such Change of Control shall constitute a notice that Ligand does not intend to repurchase the Notes.

For purposes of this Term Sheet, a "Change of Control" with respect to Elan or Ligand (in each case, the "company") will be deemed to have occurred at such time as (i) any person or group of related persons for purposes of Section 13(d) of the Exchange Act ("Group") becomes the beneficial owner (as defined under Rule 13d-3 under the Exchange Act), directly or indirectly, of 50.0% or more of the total voting power of the common stock of the company, (ii) there shall be consummated any consolidation or merger of the company in which the company is not the continuing or surviving corporation or pursuant to which the common stock of the company would be converted into cash, securities or other property, other than a merger or consolidation of the company in which the holders of the common stock of the company outstanding immediately prior to the consolidation or merger hold, directly or indirectly, at least a majority of the common stock of the surviving corporation immediately after such consolidation or merger or (iii) during any period of two consecutive years, individuals who at the beginning of such period constituted the board of directors of the company (together with any new directors whose election by such board of directors or whose nomination for election by the shareholders of the company has been approved by a majority of the directors then still in office who either were directors at the beginning of such period or whose election or recommendation for election was previously so approved) cease to constitute a majority of the board of directors of the company.

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PURCHASE AT THE OPTION OF THE EIS

The Notes will be purchased by Ligand, at the option of EIS, on each of the fourth and seventh anniversaries of the Closing Date, for a purchase price in cash equal to the Issue Price thereof plus accrued original issue discount thereon through the date of purchase; provided that Ligand, at its option, may elect to pay such purchase price in shares of Common Stock (based upon a quotient obtained by dividing (i) the amount of cash to which EIS would have been entitled had Ligand elected to pay the purchase price in cash by (ii) the ***

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In addition, upon a Change of Control of Ligand, the Notes will be purchased for cash by Ligand, at the option of EIS, for a change of control purchase price equal to the Issue Price plus accrued original issue discount thereon through the date of purchase.

CONDITIONS

The conditions to the purchase of the Initial Note and the Additional Note, if any, by EIS shall be subject to conditions precedent customary for transactions of this type including, but not limited to, those set forth in the Letter of Intent.

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EXHIBIT 10.6

STOCK PURCHASE AGREEMENT

STOCK PURCHASE AGREEMENT (the "Agreement"), dated as of September 30, 1998, by and between Ligand Pharmaceuticals Incorporated, a Delaware corporation (the "Company"), and Elan International Services, Ltd., a Bermuda corporation (the "Purchaser").

RECITALS

WHEREAS, the Company, the Purchaser and Elan Corporation, plc, a public limited company organized under the laws of Ireland and the parent of the Purchaser ("Elan"), have entered into a binding letter of intent, dated as of September 29, 1998 (the "Letter of Intent");

WHEREAS, pursuant to the Letter of Intent, the Purchaser has agreed to purchase from the Company shares of the Company's common stock, par value $0.001 per share (the "Common Stock"), on the terms and subject to the conditions set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth herein and for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

AGREEMENT

SECTION 1. Purchase and Sale of Common Stock. On the basis of the representations, warranties, agreements and covenants herein contained and subject to the terms and conditions set forth herein, at the Closing (as defined in Section 2(a)) the Company shall sell to the Purchaser, and the Purchaser shall purchase from the Company, 1,278,970 shares of Common Stock (the "Shares") at a purchase price equal to $11.65 per share (the "Purchase Price").

SECTION 2. Closing.

(a) The closing of the sale and purchase of the Shares (the "Closing") shall take place at the offices of Cahill Gordon & Reindel, 80 Pine Street, New York, NY 10005, at 2:00 PM, New York City time, on the date hereof, or such other time and place as the Company and the Purchaser may agree. The

time at which the Closing is concluded is herein called the "Closing Date."

(b) At the Closing, the Company shall deliver to the Purchaser a certificate or certificates, registered in the name of the Purchaser, or such other name or names as the Purchaser may direct in writing, representing the Shares, against payment of the Purchase Price, by certified or official bank check payable in immediately available funds to the order of the Company or by wire transfer in immediately available funds to an account designated in writing by the Company.

SECTION 3. Representations of the Company. Except as otherwise set forth in the Schedule of Exceptions attached hereto, the Company represents and warrants to and agrees with the Purchaser as follows:

(a) Each of the Company and the Subsidiaries (as defined in paragraph (d) of this Section 3) is duly incorporated, validly existing and in good standing under the laws of its jurisdiction of organization and has all requisite corporate power and authority to own its properties and conduct its business as now being conducted. Each of the Company and the Subsidiaries is duly qualified to do business as a foreign corporation and is in good standing in all other jurisdictions where the ownership or leasing of its properties or the conduct of its business requires such qualification, except where the failure to be so qualified would not, individually or in the aggregate, have a material adverse effect on the business, assets, liabilities (contingent or

otherwise), operations, condition (financial or otherwise), solvency, properties, prospects or material agreements of the Company and its Subsidiaries, taken as a whole (any such event, a "Material Adverse Effect").

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

(c) The Company has all requisite corporate power and authority to execute, deliver and perform its obligations under the Registration Rights Agreement (as defined in Section 6(d)). The Registration Rights Agreement has been duly and validly authorized by the Company and, when executed and delivered by the Company, will constitute a valid and legally binding agreement of the Company enforceable against the Company in accordance with its terms, except that (A) the enforcement thereof may be subject to (i) bankruptcy, insolvency, reorganization, moratorium or other similar laws now or hereafter in effect relating to creditors' rights generally and (ii) general principles of equity and the discretion of the court before which any proceeding therefor may be brought and (B) any rights to indemnity or contribution thereunder may be limited by federal and state securities laws and public policy considerations.

(d) The authorized, issued and outstanding capitalization of the Company consists of: (i) 80,000,000 shares of Common Stock, of which 39,309,031 shares were issued and outstanding as of July 31, 1998, and (ii) 5,000,000 shares of convertible preferred stock (80,000 shares of which have been designated as "Series A Participating Preferred Stock"), of which no shares are issued and outstanding; all of the Subsidiaries of the Company are listed on Schedule 3(d)(i) hereto (each, a "Subsidiary" and collectively, the "Subsidiaries"); all of the outstanding shares of capital stock of the Company and the Subsidiaries have been duly authorized and validly issued, are fully paid and nonassessable and were not issued in violation of any preemptive or similar rights; all of the outstanding shares of capital stock of the Subsidiaries are owned, directly or indirectly, by the Company, free and clear of all liens, encumbrances, equities and claims or restrictions on transferability (other than those imposed by the Securities Act of 1933, as amended (the "Securities Act") and the securities or "Blue Sky" laws of certain jurisdictions) or voting; except as described in the SEC Reports (as defined in paragraph (i) of this Section 3) or as otherwise set forth on Schedule 3(d)(ii) hereto, there are no (i) options, warrants or other rights to purchase, (ii) agreements or other obligations to issue or (iii) other rights to convert any obligation into or exchange any securities for, shares of capital stock of or ownership interests in the Company or any of the Subsidiaries; except for the Subsidiaries, the Company does not own, directly or indirectly, any shares of capital stock or any other equity or long-term debt securities or have any equity interest in any firm, partnership, joint venture or other entity.

(e) The Shares, when issued, sold and delivered to the Purchaser at the Closing against payment therefor in accordance with the terms of this Agreement, will be duly and validly issued, fully paid and nonassessable, will not be issued in violation of any preemptive or similar rights and will be free of any liens, encumbrances, restrictions on transfer other than those imposed by the Securities Act and applicable state securities or "Blue Sky" laws.

(f) No consent, approval, authorization or order of any court or governmental agency or body, or third party is required for the issuance and sale by the Company of the Shares or the consummation by the Company of the other transactions contemplated hereby, except that no representation or

warranty is made with respect to filings required by the Hart-Scott Rodino Antitrust Improvements Act of 1976, as amended, with respect to transactions contemplated by the Letter of Intent. None of the Company or the Subsidiaries is (i) in violation of its certificate of incorporation or bylaws, (ii) in breach or violation of any statute, judgment, decree, order, rule or regulation applicable to it or any of its properties or assets, except for any such breach or violation which would not, individually or in the aggregate, have a Material Adverse Effect, or (iii) in breach of or default under (nor has any event occurred which, with notice or passage of time or both, would constitute a default under) or in violation of any of the terms or provisions of any indenture, mortgage, deed of trust, loan agreement, note, lease, license, franchise agreement, permit, certificate, contract or other agreement or instrument to which any of them is a party or to which any of them or their respective properties or assets is subject (collectively, "Contracts"), except for any such breach, default, violation or event which would not, individually or in the aggregate, have a Material Adverse Effect.

(g) None of the Company, the Subsidiaries, any of their respective Affiliates (as defined in Rule 501(b) of Regulation D under the Securities Act) or any person acting on its or their behalf has engaged in any directed selling efforts (as that term is defined in Regulation S under the Securities Act ("Regulation S")) with respect to the Common Stock; the Company, the Subsidiaries and their respective Affiliates and any person acting on its or their behalf have complied with the offering restrictions requirements of Regulation S.

(h) The execution, delivery and performance by the Company of this Agreement and the Registration Rights Agreement and the consummation by the Company of the transactions contem-

plated hereby and thereby (including, without limitation, the issuance and sale of the Shares to the Purchaser) will not conflict with or constitute or result in a breach of or a default under (or an event which with notice or passage of time or both would constitute a default under) or violation of any of (i) the terms or provisions of any Contract, except for any such conflict, breach, violation, default or event which would not, individually or in the aggregate, have a Material Adverse Effect, (ii) the certificate of incorporation or bylaws of the Company or any of the Subsidiaries, or (iii) (assuming compliance with all applicable state securities or "Blue Sky" laws and assuming the accuracy of the representations and warranties of the Purchaser set forth in Section 4 of this Agreement) any statute, judgment, decree, order, rule or regulation applicable to the Company or any of the Subsidiaries or any of their respective properties or assets, except for any such conflict, breach or violation which would not, individually or in the aggregate, have a Material Adverse Effect.

(i) The Company has filed with the Securities and Exchange Commission (the "SEC") all required forms, reports, registration statements and documents required to be filed by it with the SEC since December 31, 1996 (collectively, the "SEC Reports"), all of which complied as to form when filed in all material respects with the applicable provisions of the Securities Act and the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as the case may be. As of their respective dates, the SEC Reports (including all exhibits and schedules thereto and documents incorporated by reference therein) did not contain any untrue statement of a material fact or omit 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.

(j) The audited consolidated financial statements and unaudited consolidated interim financial statements of the Company and the Subsidiaries included or incorporated by reference in any of the SEC Reports have been prepared in accordance with generally accepted accounting principles applied on a consistent basis during the periods involved, except as otherwise stated therein, and present fairly, in all material respects, the consolidated financial position of the Company and the Subsidiaries at the dates thereof and the consolidated results of operations and cash flows for the periods then ended (subject, in the case of any unaudited interim financial statements, to normal year-end adjustments and to the extent they include footnotes or may be condensed or summary statements) and such

audited financial statements are accompanied by an unqualified opinion thereon by the Company's independent auditors.

(k) Except as set forth on Schedule 3(k), there is not pending or, to the knowledge of the Company, threatened any action, suit, proceeding, inquiry or investigation to which the Company or any of the Subsidiaries is a party, or to which the property or assets of the Company or any of the Subsidiaries are subject, before or brought by any court, arbitrator or governmental agency or body which, if determined adversely to the Company or any such Subsidiary, would, individually or in the aggregate, have a Material Adverse Effect, or which seeks to restrain, enjoin, prevent the consummation of or otherwise challenge the issuance or sale of the Shares to be sold hereunder or the consummation of the other transactions contemplated by this Agreement.

(l) Each of the Company and the Subsidiaries possesses all licenses, permits, certificates, consents, orders, approvals and other authorizations from, and has made all declarations and filings with, all federal, state, local and other governmental authorities, all self-regulatory organizations and all courts and other tribunals presently required or necessary to own or lease, as the case may be, and to operate its respective properties and to carry on its respective businesses as now conducted and as proposed to be conducted ("Permits"), except where the failure to obtain such Permits would not, individually or in the aggregate, have a Material Adverse Effect and except as disclosed in the SEC Reports; each of the Company and the Subsidiaries has fulfilled and performed all of its obligations with respect to such Permits and no event has occurred which allows, or after notice or lapse of time would allow, revocation or termination thereof or results in any other material impairment of the rights of the holder of any such Permit; and none of the Company or the Subsidiaries has received any notice of any proceeding relating to revocation or modification of any such Permit, except where such revocation or modification would not, individually or in the aggregate, have a Material Adverse Effect.

(m) Since June 30, 1998, (i) except as set forth on Schedule 3(m), none of the Company or the Subsidiaries has incurred any liabilities or obligations, direct or contingent, or entered into or agreed to enter into any transactions or contracts (written or oral) not in the ordinary course of business, which liabilities, obligations, transactions or contracts would, individually or in the aggregate, be material to the business, assets, liabilities (contingent or otherwise), opera-

tions, condition (financial or otherwise), solvency or prospects of the Company and the Subsidiaries, taken as a whole, (ii) none of the Company or the Subsidiaries has purchased any of its outstanding capital stock, nor declared, paid or otherwise made any dividend or distribution of any kind on its capital stock (other than with respect to the Subsidiaries, the purchase of, or dividend or distribution on, capital stock owned by the Company) and (iii) there shall not have been any material change in the capital stock or long-term indebtedness of the Company or the Subsidiaries.

(n) Each of the Company and the Subsidiaries has filed all necessary federal, state and foreign income and franchise tax returns, except where the failure to so file such returns would not, individually or in the aggregate, have a Material Adverse Effect, and has paid all taxes shown as due thereon; and other than tax deficiencies which the Company or any Subsidiary is contesting in good faith and for which the Company or such Subsidiary has provided adequate reserves, there is no tax deficiency that has been asserted against the Company or any of the Subsidiaries that would, individually or in the aggregate, have a Material Adverse Effect.

(o) Each of the Company and the Subsidiaries has good and marketable title to all real property and good title to all personal property owned by it and good and marketable title to all leasehold estates in the real and personal property being leased by it free and clear of all liens, charges,

encumbrances or restrictions, except as set forth on Schedule 3(o) and except to the extent the failure to have such title or the existence of such liens, charges, encumbrances or restrictions would not, individually or in the aggregate, have a Material Adverse Effect.

(p) Each of the Contracts is valid and enforceable against the Company or the Subsidiaries, as the case may be, and is valid and enforceable against the other party or parties thereto and the Company is not, and has no actual knowledge that any other party is, in default under or in respect of any such Contract, with only such exceptions as would not, individually or in the aggregate, have a Material Adverse Effect.

(q) Each of the Company and the Subsidiaries owns or possesses adequate licenses or other valid rights to use all patents and applications therefore, trademarks, service marks, trade names, copyrights and know-how (collectively "Proprietary Rights") necessary to conduct the businesses now or proposed to be conducted by it, except for such lack of or defects in own-

ership as would not, individually or in the aggregate, have a Material Adverse Effect. None of the Company or the Subsidiaries has received any notice that any Proprietary Rights have been declared unenforceable or otherwise invalid by any court or governmental agency other than notices relating to Proprietary Rights the loss of which would not, individually or in the aggregate, have a Material Adverse Effect. Except as set forth on Schedule 3(q), none of the Company or the Subsidiaries has received any notice of infringement of or conflict with (or knows of any such infringement of or conflict with) asserted rights of others with respect to any Proprietary Rights which, if such assertion of infringement or conflict were sustained, would have a Material Adverse Effect.

(r) Except as would not, individually or in the aggregate, have a Material Adverse Effect (A) each of the Company and the Subsidiaries is in compliance with and not subject to liability under applicable Environmental Laws (as defined below), (B) each of the Company and the Subsidiaries has made all filings and provided all notices required under any applicable Environmental Law, and has and is in compliance with all Permits required under any applicable Environmental Laws and each of them is in full force and effect, (C) there is no civil, criminal or administrative action, suit, demand, claim, hearing, notice of violation, investigation, proceeding, notice or demand letter or request for information pending or, to the knowledge of the Company or the Subsidiaries, threatened against the Company or any Subsidiary under any Environmental Law, (D) no lien, charge, encumbrance or restriction has been recorded under any Environmental Law with respect to any assets, facility or property owned, operated, leased or controlled by the Company or any Subsidiary, (E) none of the Company or the Subsidiaries has received notice that it has been identified as a potentially responsible party under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("CERCLA"), or any comparable state law, (F) no property or facility of the Company or any Subsidiary is (i) listed or proposed for listing on the National Priorities List under CERCLA or (ii) listed in the Comprehensive Environmental Response, Compensation and Liability Information System List promulgated pursuant to CERCLA, or on any comparable list maintained by any state or local governmental authority.

For purposes of this Agreement, "Environmental Laws" means the common law and all applicable federal, state and local laws or regulations, codes, orders, decrees, judgments or injunctions issued, promulgated, approved or entered thereunder, relating to pollution or protection of public or employee

health and safety or the environment, including, without limitation, laws relating to (i) emissions, discharges, releases or threatened releases of hazardous materials into the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata), (ii) the manufacture, processing, distribution, use, generation, treatment, storage, disposal, transport or handling of hazardous materials, and (iii) underground and aboveground storage tanks and related piping, and emissions, discharges, releases or threatened releases therefrom.

(s) There is no strike, labor dispute, slowdown or work stoppage with the employees of the Company or the Subsidiaries which is pending or, to the knowledge of the Company or the Subsidiaries, threatened.

(t) Each of the Company and the Subsidiaries carries insurance in such amounts and covering such risks as is adequate for the conduct of its business and the value of its properties.

(u) None of the Company or the Subsidiaries has any liability for any prohibited transaction or funding deficiency or any complete or partial withdrawal liability with respect to any pension, profit sharing or other plan which is subject to the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), to which the Company or any Subsidiary makes or ever has made a contribution and in which any employee of the Company or any Subsidiary is or has ever been a participant. With respect to such plans, the Company and the Subsidiaries are in compliance in all material respects with all applicable provisions of ERISA.

(v) Each of the Company and the Subsidiaries (i) makes and keeps accurate books and records and (ii) maintains internal accounting controls which provide reasonable assurance that (A) transactions are executed in accordance with management's authorization, (B) transactions are recorded as necessary to permit preparation of its financial statements and to maintain accountability for its assets, (C) access to its assets is permitted only in accordance with management's authorization and (D) the reported accountability for its assets is compared with existing assets at reasonable intervals.

(w) Except as provided in the Registration Rights Agreement, the Company has not granted or agreed to grant any registration rights to any person or entity.

(x) Under the Preferred Share Rights Agreement, dated as of September 13, 1996, between the Company and Wells Fargo Bank, N.A., as amended to the date hereof (the "Rights Agreement"), none of the execution of this Agreement or the Registration Rights Agreement, or the consummation of the transactions contemplated hereby or thereby, will cause a "distribution date" to occur or cause rights issued thereunder to become exercisable.

(y) Except as otherwise disclosed to the Purchaser, no person has or will have, as a result of the transactions contemplated by this Agreement, any right, interest or valid claim against or upon the Company for any commission, fee or other compensation as a finder or broker because of any act by the Company or of any agent of the Company. The Company will pay, and hold the Purchaser harmless against, any liability, loss or expense (including, without limitation, reasonable attorneys' fees and out-of-pocket expenses) arising in connection with any claim for any such commission, fee or other compensation.

SECTION 4. Representations of the Purchaser. The Purchaser represents and warrants to and agrees with the Company as follows:

(a) The Purchaser has all requisite corporate power and authority to execute, deliver and perform its obligations under this Agreement. This Agreement has been duly and validly authorized by the Purchaser and, when executed and delivered by the Purchaser, will constitute a valid and legally binding agreement of the Purchaser enforceable against the Purchaser in accordance with its terms, except that the enforcement hereof may be subject to (i) bankruptcy, insolvency, reorganization, moratorium or other similar laws now or hereafter in effect relating to creditors' rights generally and (ii) general principles of equity and the discretion of the court before which any proceeding therefor may be brought.

(b) The Purchaser has all requisite corporate power and authority to execute, deliver and perform its obligations under the Registration Rights Agreement. The Registration Rights Agreement has been duly and validly authorized by the Purchaser and, when executed and delivered by the Purchaser, will constitute a valid and legally binding agreement of the Purchaser enforceable against the Purchaser in accordance with its terms, except that (A)

the enforcement thereof may be subject to (i) bankruptcy, insolvency, reorganization, moratorium or other similar laws now or hereafter in effect relating to

creditors' rights generally and (ii) general principles of equity and the discretion of the court before which any proceeding therefor may be brought and (B) any rights to indemnity or contribution thereunder may be limited by federal and state securities laws and public policy considerations.

(c) The Purchaser acknowledges that the Shares have not been registered under the Securities Act or any other applicable securities laws, are being sold in a transaction not requiring registration under the Securities Act and, unless so registered, may not be offered, sold or otherwise transferred except in compliance with the registration requirements of the Securities Act or any other applicable securities law, pursuant to an exemption therefrom or in a transaction not subject thereto and in each case in compliance with the conditions for transfer set forth in paragraph (e) of this Section 4.

(d) The Purchaser is outside the United States and is not a "U.S. person" (as such term is defined in Regulation S) and is purchasing the Shares for its own account.

(e) Until the expiration of the "one-year distribution compliance period" within the meaning of Rule 903 of Regulation S, the Purchaser will not sell or otherwise transfer the Shares except (i) to the Company or its Subsidiaries, (ii) pursuant to an effective registration statement which has been declared effective under the Securities Act, (iii) in an offshore transaction in accordance with Rule 904 of Regulation S or (iv) pursuant to any other available exemption from the registration requirements of the Securities Act, including Rule 144 thereunder ("Rule 144"). After the expiration of such "one-year distribution compliance period," the Purchaser will not sell or otherwise transfer the Shares except pursuant to registration under the Securities Act or an available exemption therefrom and, in any case, in accordance with the provisions of Regulation S and applicable state securities laws.

(f) The Purchaser understands that the certificates representing the Shares will, so long as appropriate, bear the following legend:

> THE SHARES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), MAY NOT BE SOLD, TRANSFERRED OR OTHERWISE DISPOSED OF IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT UNDER THE ACT OR PURSUANT TO A VALID EXEMPTION THEREFROM AND HAVE BEEN SOLD IN RELIANCE ON THE EXEMPTION FROM REGISTRATION PROVIDED

> BY REGULATION S UNDER THE ACT ("REGULATION S"). THE SHARES REPRESENTED BY THIS CERTIFICATE MAY NOT BE SOLD, TRANSFERRED OR OTHERWISE DISPOSED OF EXCEPT IN ACCORDANCE WITH THE PROVISIONS OF REGULATION S (SECTION 230.901 THROUGH SECTION 230.905, AND PRELIMINARY NOTES). HEDGING TRANSACTIONS INVOLVING THE SHARES REPRESENTED BY THIS CERTIFICATE MAY NOT BE CONDUCTED UNLESS IN COMPLIANCE WITH THE ACT.
>
> THE TRANSFER OF THE SHARES REPRESENTED BY THIS CERTIFICATE IS SUBJECT TO THE CONDITIONS SPECIFIED IN A STOCK PURCHASE AGREEMENT, DATED AS OF SEPTEMBER 30, 1998, BETWEEN THE COMPANY AND ELAN INTERNATIONAL SERVICES, LTD., AND THE COMPANY RESERVES THE RIGHT TO REFUSE THE TRANSFER OF SUCH SHARES UNTIL SUCH CONDITIONS HAVE BEEN FULFILLED WITH RESPECT TO SUCH TRANSFER. A COPY OF SUCH CONDITIONS WILL BE FURNISHED BY THE COMPANY TO THE HOLDER HEREOF WITHOUT CHARGE.

(g) The Purchaser agrees that the Company shall be entitled to make a notation on its records and give instructions to any transfer agent of the Shares in order to implement the restrictions on transfer set forth in this Agreement.

(h) The Purchaser acknowledges that, in making the decision to purchase the Shares, it has relied solely upon independent investigations made by it and not upon any representations made by the Company with respect to the Company or the Shares. The Purchaser acknowledges that it is a sophisticated investor and that an investment in the Shares involves a high degree of risk. The Purchaser further acknowledges that the Purchase Price may or may not exceed the latest publicly quoted per share "asked" price of the Common Stock.

(i) The Purchaser is purchasing the Shares for its own account for the purpose of investment and not (i) with a view to, or for sale in connection with, any distribution thereof or (ii) for the account or on behalf of any "U.S. person" (as such term is defined in Regulation S). The Purchaser understands, acknowledges and agrees that it must bear the economic risk of its investment in the Shares for an indefinite period of time and that prior to any offer or sale of such securities, the Company may require, as a condition to effecting a transfer of the Shares, an opinion of counsel to Purchaser, acceptable to the Company, as to the registration or exemption therefrom under the Securities Act.

(j) The Purchaser was not formed specifically for the purpose of acquiring the Shares purchased pursuant to this Agreement.

(k) Neither the Purchaser nor any of its affiliates directly or indirectly have within the past 90 days nor will such persons for a period of one year from the Closing Date directly or indirectly enter into any short selling of any equity security of the Company (including, without limitation, the Common Stock) or any hedging transaction with respect to any equity security of the Company, including, without limitation, puts, calls, or other option transactions, option writing and equity swaps, unless in compliance with the Securities Act.

SECTION 5. Conditions to Company's and Purchaser's Obligations. The respective obligation of each of the Company and the Purchaser to consummate the purchase and sale of the Shares pursuant to Section 1 of this Agreement shall be subject to the satisfaction of the following conditions at or prior to the Closing Date:

(a) The sale of the Shares hereunder shall not be enjoined (temporarily or permanently) on the Closing Date.

(b) All consents, approvals, authorizations and orders of any court or governmental agency or body, or third party required in connection with the execution and delivery of this Agreement and the Registration Rights Agreement and the consummation of the transactions contemplated hereby and thereby shall have been obtained.

SECTION 6. Conditions to Purchaser's Obligations. The obligation of the Purchaser to purchase the Shares pursuant to Section 1 of this Agreement shall, in its sole discretion, be subject to satisfaction or waiver of the following conditions at or prior to the Closing Date:

(a) Each of the representations and warranties of the Company set forth in Section 3 hereof shall be true and correct on and as of the date hereof and on and as of the Closing Date as if made on and as of the Closing Date, except to the extent that such representations and warranties expressly relate to an earlier date; the statements of the Company's officers made pursuant to any certificate delivered in accordance with the provisions hereof shall be true and correct on and as of the date made and on and as of the Closing Date; the Company shall have performed all covenants and agreements and satisfied all conditions on its part to be performed or satisfied

hereunder at or prior to the Closing Date; since June 30, 1998, and except as disclosed in SEC Reports filed since such date, there shall have been no event or development, and no information shall have become known, that, individually

or in the aggregate, has or would be reasonably likely to have a Material Adverse Effect.

(b) On the Closing Date, the Purchaser shall have received the opinion, dated as of the Closing Date and addressed to the Purchaser, of Brobeck, Phleger & Harrison LLP, counsel for the Company, substantially in the form attached hereto as Exhibit A.

(c) The Purchaser shall have received a certificate of the Company, dated the Closing Date, signed on behalf of the Company by its Chief Executive Officer and the Chief Financial Officer, to the effect that:

(i) The representations and warranties of the Company contained in this Agreement are true and correct on and as of the date hereof and on and as of the Closing Date, except to the extent that such representations and warranties expressly relate to an earlier time, and the Company has performed all covenants and agreements and satisfied all conditions on its part to be performed or satisfied hereunder at or prior to the Closing Date;

(ii) At the Closing Date and since June 30, 1998, no event or development has occurred, and no information has become known, that, individually or in the aggregate, has or would be reasonably likely to have a Material Adverse Effect; and

(iii) The sale of the Shares hereunder has not been enjoined (temporarily or permanently).

(d) On the Closing Date, the Purchaser shall have received the Tenth Addendum to the Amended Registration Rights Agreement, dated as of June 24, 1994, by and among the Company and those entities party thereto (the "Registration Rights Agreement"), providing for the registration rights for the Shares upon the terms and conditions set forth therein and such agreement shall be in full force and effect at all times from and after the Closing Date.

All such documents, certificates, schedules or instruments delivered pursuant to this Agreement will comply with the provisions hereof only if they are reasonably satisfactory

in all material respects to the Purchaser and counsel for the Purchaser.

SECTION 7. Conditions to Company's Obligations.

The obligation of the Company to issue and sell the Shares pursuant to Section 1 of this Agreement shall, in its sole discretion, be subject to satisfaction or waiver of the following conditions at or prior to the Closing Date:

(a) Each of the representations and warranties of the Purchaser set forth in Section 4 hereof shall be true and correct on and as of the date hereof and on and as of the Closing Date as if made on and as of the Closing Date, except to the extent that such representations and warranties expressly relate to an earlier date; the statements of the Purchaser's officers made pursuant to any certificate delivered in accordance with the provisions hereof shall be true and correct on and as of the date made and on and as of the Closing Date; the Purchaser shall have performed all covenants and agreements and satisfied all conditions on its part to be performed or satisfied hereunder at or prior to the Closing Date.

(b) The Company shall have received a certificate of the Purchaser, dated the Closing Date, signed on behalf of the Purchaser by its President and Chief Financial Officer, to the effect that the representations and warranties of the Purchaser contained in this Agreement are true and correct on and as of the date hereof and on and as of the Closing Date, except to the extent that such representations and warranties expressly relate to an earlier time, and the Purchaser has performed all covenants and agreements and satisfied all conditions on its part to be performed or satisfied hereunder at or prior to the Closing Date.

(c) The Purchaser shall have delivered the Purchase Price in accordance with Section 2(b) hereof.

All such documents, certificates, schedules or instruments delivered pursuant to this Agreement will comply with the provisions hereof only if they are reasonably satisfactory in all material respects to the Company and counsel for the Company.

SECTION 8. Covenants of the Company.

(a) The Company agrees that, prior to the termination of all rights provided for in the Registration Rights Agreement in accordance with Section 1.17 thereof, the Company will prepare, execute and deliver to the Purchaser a registration rights agreement (the "New Registration Rights Agreement"), to be effective upon such termination, providing registration rights for the Shares on substantially identical terms and conditions as those provided for in the Registration Rights Agreement. The New Registration Rights Agreement shall expire on December 31, 2003.

(b) Subject to the terms and conditions specified in this paragraph (b), the Company hereby grants to the Purchaser a right to purchase up to the number of Additional Shares (as defined below) in connection with any Transaction (as defined below) undertaken by the Company.

(i) Each time the Company proposes to offer, sell or otherwise issue shares of any class of its capital stock or securities convertible into or exercisable or exchangeable for a class of capital stock ("Capital Stock"), in a public or private transaction (a "Transaction"), the Company shall deliver a notice in person, by air courier or by facsimile ("Notice") to the Purchaser stating (a) the Company's bona fide intention to undertake such Transaction, (b) the number of shares of Capital Stock to be offered in the Transaction (the "Transaction Shares"), (c) the number of Additional Shares up to which the Purchaser may elect to purchase in such Transaction (which would be added to the Transaction Shares), and (d) the price and terms, if any, upon which it proposes to offer, sell or otherwise issue Capital Stock in the Transaction.

(ii) Within 10 business days after giving of the Notice, the Purchaser may elect to purchase, at the price and on the terms specified in the Notice, up to the number of Additional Shares set forth in the Notice. The number of shares of Capital Stock ("Additional Shares") that the Purchaser may elect to purchase and include in the Transaction shall be calculated as follows:

$$\text{Additional Shares} = \text{Transaction Shares} \times \frac{\text{Transaction Shares}}{1 - X\%}$$

X% represents the percentage (stated as a decimal) of the outstanding shares of Common Stock then held by the Purchaser (assuming the conversion exercise or exchange of all Capital Stock then held by the Purchaser and acquired pursuant to this paragraph (b)).

In the event that the price or terms upon which the Company proposes to offer, sell or otherwise issue Capital Stock in the Transaction or the number of Transaction Shares to be included in such Transaction changes for any reason (other than including the Additional Shares) after the Notice is delivered to the Purchaser, the number of Additional Shares shall, with respect to a change in the number of Transaction Shares, be recalculated using the new number of Transaction Shares and, in any case, the Company shall promptly provide a revised Notice to the Purchaser reflecting such recalculated Additional Shares and any change to such price or terms. If the Company proposes to offer, sell or issue

any Capital Stock for consideration other than cash, the Purchaser may exercise the right set forth in this paragraph (b) and purchase Additional Shares for cash at a per share purchase price equal to (i)(a) the face amount of any cash received for such Capital Stock plus (b) the fair market value of the non-cash consideration expressly received for such Capital Stock divided by (ii) the number of Transaction Shares issued in such Transaction (excluding any Additional Shares). The fair market value of any such non-cash consideration shall be determined by an independent appraisal firm of nationally-recognized standing chosen jointly by the Company and the Purchaser.

(iii) The right of the Purchaser in this paragraph (b) shall not be applicable to (a) the issuance or sale of Capital Stock under any plan, agreement or arrangement applicable only to employees, directors or consultants and approved by the Company's board of directors or (b) the issuance of securities pursuant to the conversion, exercise or exchange of convertible, exercisable or exchangeable securities.

(iv) The Purchaser's rights and obligations under this paragraph (b) shall not be assignable, except that such rights may be assigned by the Purchaser to any Affiliate that agrees in writing to be bound by the provisions of this paragraph (b).

(v) Notwithstanding anything to the contrary in this paragraph (b), the provisions of this paragraph (b) shall terminate and be of no further force and effect upon the earlier of (i) the termination of the Letter of Intent pursuant to Section 3(c) thereof and (ii) the consummation of (x) any consolidation of the Company with, or merger of the Company with or into, any person (including any individual, partnership, joint venture, corporation, trust or group thereof) ("Person") other than a consolidation or merger pursuant to which the stockholders of the Company immediately prior to such consolidation or merger own more than 50% of the outstanding securities entitled to vote in the election of directors of the surviving Person after such consolidation or merger or (y) any sale, transfer or conveyance of all or substantially all of the assets of the Company.

(c) Upon the later of (i) the termination of all rights under the Registration Rights Agreement and (ii) the expiration of the New Registration Rights Agreement, and so long as Purchaser continues to hold any Shares, in order to permit the Purchaser to sell the Shares (subject to Section 9(a) hereof), from time to time, pursuant to Rule 144, or any successor to such rule or any other rule or regulation of the SEC that may at any time permit the Purchaser to sell the Shares without registration, the Company shall:

(i) make and keep public information available, as those terms are understood and defined in Rule 144, at all times during which the Company is subject to the reporting requirements of the Securities Act or the Exchange Act;

(ii) use its best efforts to file with the SEC in a timely manner all reports and other documents required to be filed by the Company under the Securities Act or the Exchange Act (at all times during which it is subject to such reporting requirements thereof); and

(iii) (x) furnish to the Purchaser promptly upon request, a written statement by the Company as to its compliance with the reporting requirements of the Securities Act and the Exchange Act (at any time during which it is subject to such to such reporting requirements), a copy of the most recent annual or quarterly report of the Company, and such other reports and documents of the Company and other information in the possession of or reasonably obtainable by the Company as the Purchaser may reasonably request in availing itself of Rule 144, or any successor

to such rule or any other rule or regulation of the SEC that may at any time permit the Purchaser to sell the Shares without registration and (y) take any action (including cooperating with the Purchaser to cause the transfer agent for the Common Stock to remove any restrictive legend on the certificates evidencing the Shares) as shall be reasonably requested by the Purchaser or which shall otherwise facilitate the sale of the Shares from time to time by the Purchaser pursuant to Rule 144, or any successor to such rule or any other rule or regulation of the SEC that may at any time permit the Purchaser to sell the Shares without registration.

SECTION 9. Covenants of the Purchaser.

(a) The Purchaser agrees that, during the period beginning on the date of this Agreement and ending on the later of (i) September 30, 2000 and (ii) the *** after the consummation of the transactions contemplated by the Letter of Intent, it shall not, and shall not permit any of its Affiliates (as defined below) to, directly or indirectly, without the prior written consent of the Company, sell, offer to sell, contract to sell, grant any option to purchase or otherwise transfer or dispose of ("Transfer"), the Shares; provided that Elan may Transfer the Shares to any of its Affiliates and any Affiliate of Elan may Transfer the Shares to Elan or to any other Affiliate of Elan, subject to the Purchaser's agreements set forth in Section 4 of this Agreement.

(b) For purposes of this Section 9, the term "Affiliate" shall mean, with respect to any specified person or entity, any other person or entity controlling, controlled by, or under common control with such specified person or entity. For purposes of this definition, "control" means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a person or entity, whether through the ownership of voting securities, by contract or otherwise; and the terms "controlling" and "controlled" have meanings correlative of the foregoing.

(c) Notwithstanding anything to the contrary in this Section 9, the provisions of this Section 9 shall terminate and be of no further force and effect upon the termination of the Letter of Intent pursuant to Section 3(c) thereof.

SECTION 10. Notices. Any notices or other communications required or permitted hereunder shall be sufficiently given if

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

delivered personally or sent by telex, nationally recognized overnight delivery service, facsimile (receipt confirmed), registered or certified mail, postage prepaid, addressed as follows or to such other address of which the parties may have given written notice:

(i) if to the Company, to:

Ligand Pharmaceuticals Incorporated
10275 Science Center Drive
San Diego, California 92121
Attn: General Counsel
Fax No.: (619) 550-1825

with a copy to:

Brobeck, Phleger & Harrison LLP
550 West C Street, Suite 1300
San Diego, California 92101-3532
Attn: Faye H. Russell, Esq.
Fax No.: (619) 234-3848

(ii) if to the Purchaser, to:

Elan International Services, Ltd.
102 St. James Court
Flatts Smiths FL 04

Bermuda
Attn: President
Fax No.: (441) 292-2224

with a copy to:

Cahill Gordon & Reindel
80 Pine Street
New York, New York 10005
Attn: William M. Hartnett, Esq.
Fax No.: (212) 269-5420

(iii) (a) on the date delivered, if delivered by facsimile or personally; (b) on the day after the notice is delivered into the possession and control of a nationally recognized overnight delivery service, duly marked for delivery to the receiving party; or (c) three business days after being sent, if sent by registered or certified mail.

SECTION 11. Successors and Assigns. This Agreement shall bind and inure to the benefit of the parties hereto and their

respective successors and assigns, except that neither the Purchaser nor the Company may assign its obligations hereunder without the prior written consent of the other party; provided that the Purchaser may assign any of its rights and obligations hereunder to Elan or any Affiliate of Elan, subject to the Purchaser's agreements set forth in Section 4 of this Agreement; provided, further, that the Company may assign its obligations hereunder in connection with the transfer or sale of all or substantially all of its assets, or in the event of its merger or consolidation with or into another entity in a transaction in which the Company is not the surviving entity. Any assignment in contravention of this Section 11 shall be void. No assignment shall release the Purchaser or the Company from any obligation or liability under this Agreement unless expressly agreed to by the non-assigning party.

SECTION 12. Entire Agreement; Amendments. This Agreement and the other writings referred to herein or delivered pursuant hereto contain the entire understanding and agreement between the parties hereto with respect to the subject matter hereof and supersedes all prior oral and written and all contemporaneous oral negotiations, commitments and understandings between such parties. This Agreement may be amended only by a written amendment executed by both parties.

SECTION 13. Severability. Any provision of this Agreement which is invalid, illegal or unenforceable in any jurisdiction shall, as to that jurisdiction, be ineffective to the extent of such invalidity, illegality or unenforceability, without affecting in any way the remaining provisions hereof in such jurisdiction or rendering that or any other provision of this Agreement invalid, illegal or unenforceable in any other jurisdiction.

SECTION 14. Expenses. Except as otherwise expressly provided herein, the Purchaser and the Company will pay the respective fees and expenses (including, without limitation, legal and accounting fees and expenses) incurred by each of them in connection with the transactions contemplated hereby.

SECTION 15. Survival of Representations and Warranties. All representations and warranties made in this Agreement or any other instrument or document delivered in connection herewith or therewith, shall survive the execution and delivery hereof or thereof for a period of two (2) years.

SECTION 16. Waiver. No failure or delay on the part of a party hereto in exercising any right, power or remedy hereunder shall operate as a waiver thereof; nor shall any single or partial exercise of any such right, power or remedy preclude any other or further exercise thereof or the exercise of any other right, power or remedy hereunder.

SECTION 17. Further Assurances. From and after the date of this Agreement, upon the reasonable request of one party hereto, the other party hereto shall execute and deliver such instruments, documents and other writings as may be necessary or desirable to confirm and carry out and to effectuate fully the intent and purposes of this Agreement.

SECTION 18. GOVERNING LAW. THE VALIDITY AND INTERPRETATION OF THIS AGREEMENT, AND THE TERMS AND CONDITIONS SET FORTH HEREIN SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK APPLICABLE TO CONTRACTS MADE AND TO BE PERFORMED WHOLLY THEREIN, WITHOUT GIVING EFFECT TO ANY PROVISIONS THEREOF RELATING TO CONFLICTS OF LAW.

SECTION 19. Section Headings. The section headings are for the convenience of the parties and in no way alter, modify, amend, limit, or restrict the contractual obligations of the parties.

SECTION 20. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which shall be one and the same document.

IN WITNESS WHEREOF, this Agreement has been duly executed under seal by the parties hereto and delivered as of the date first above written.

LIGAND PHARMACEUTICALS INCORPORATED

By: /s/ DAVID E. ROBINSON

Name: David E. Robinson
Title: President and Chief Executive Officer

ELAN INTERNATIONAL SERVICES, LTD.

By: /s/ KEVIN INSLEY

Name: Kevin Insley
Title: President and Chief Financial Officer

EXHIBIT A

Opinion of Brobeck, Phleger & Harrison LLP

EXHIBIT 10.7

TENTH ADDENDUM TO AMENDED REGISTRATION RIGHTS AGREEMENT

This Tenth Addendum ("Addendum") to the Amended Registration Rights Agreement dated June 24, 1994, as amended through the date hereof ("Registration Rights Agreement") between Ligand Pharmaceuticals Incorporated (the "Company") and Elan International Services, Ltd. ("Investor") is effective as of September 30, 1998.

RECITALS

A. As of the date hereof, the Company has issued 1,278,970 shares of the Company's Common Stock (the "Shares") to Investor pursuant to Section 1 of that certain Stock Purchase Agreement dated the date hereof among the Company and Investor (the "Purchase Agreement").

B. This Addendum serves to include the Shares within the definition of "Registrable Securities" under the Registration Rights Agreement and to modify Schedule A to the Registration Rights Agreement to include such Shares, all pursuant to Section 2.6(a) of the Registration Rights Agreement.

NOW, THEREFORE, in consideration of the mutual promises and covenants set forth in the Registration Rights Agreement, the parties agree as follows:

1. Section 1.1, paragraph (f) of the Registration Rights Agreement is hereby restated in its entirety as follows:

> "(f) The term "Registrable Securities" means (i) the Common Stock issuable or issued upon exercise of those warrants issued to certain Existing Investors and pursuant to which such Existing Investors were previously granted registration rights by the Company, (ii) the shares of Common Stock (or the shares of such other class of stock into which the Common Stock is converted) issuable upon conversion of those certain Unsecured Convertible Promissory Notes issued to American Home Products Corporation pursuant to the Stock and Note Purchase Agreement dated September 2, 1994, (iii) the 35,957 shares of Common Stock issuable or issued upon exercise of the Warrant issued to Genentech, Inc. in connection with the merger of L.G. Acquisition Corp., a wholly-owned subsidiary of the Company, with and into Glycomed Incorporated, which shares are reflected on Schedule A attached to the Fourth Addendum to this Agreement, (iv) the 164,474 shares of Common Stock (or that number of shares of such other class of stock into which the Common Stock is converted) issued to S.R. One Limited pursuant to a Stock and Note Purchase Agreement dated February 3, 1995 (the "Stock and Note Purchase Agreement"), which shares are reflected on Schedule A attached to the Eighth Addendum to this Agreement, and the shares of Common Stock (or the shares of such other class of stock into which the Common Stock is converted) issuable upon conversion of those certain Unsecured Convertible Promissory Notes dated October 30, 1997 (the "Notes") issued pursuant to the Stock and Note Purchase Agreement (and upon such conversion of the Notes, Schedule A shall be updated to include such shares), (v) the 274,423 shares of Common Stock (or that number of shares of such other class of stock into which the Common Stock is converted) issued to SmithKline Beecham plc pursuant to a Stock Purchase Agreement dated April 24, 1998 (the "Stock Purchase Agreement"), which shares are reflected on Schedule A attached to the Ninth Addendum to this Agreement, and the shares of Common Stock (or the shares of such other class of stock into which the Common Stock is converted) issuable upon conversion of that certain Warrant (the "Warrant") issued pursuant to the Stock Purchase Agreement (and upon such conversion of the Warrant, Schedule A shall be updated to include such shares), (vi) the 1,278,970 shares of Common Stock (or that number of shares of such other class of stock into which the Common Stock is converted) issued to the Investor pursuant to the Purchase Agreement, and (vii) any Common Stock of the Company issued as (or issuable upon the conversion or exercise of any warrant, right or other security which is issued as) a dividend or

other distribution with respect to, or in exchange for or in replacement of the shares referenced in (i), (ii), (iii), (iv), (v) and (vi) above, excluding in all cases, however, any Registrable Securities sold by a person in a transaction in which rights under this Agreement are not assigned."

2. Schedule A of the Registration Rights Agreement is hereby restated in its entirety as attached to this Addendum.

3. This Addendum may be executed in one or more counterparts.

4. This Addendum shall be binding upon the Company, Investor and each holder of Registrable Securities and each future holder of Registrable Securities pursuant to Section 2.6(a) of the Registration Rights Agreement.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

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

ELAN INTERNATIONAL SERVICES, LTD.

By: _____

Title: _____

LIGAND PHARMACEUTICALS INCORPORATED

By: _____

Title: _____

[SIGNATURE PAGE TO TENTH ADDENDUM TO AMENDED REGISTRATION RIGHTS AGREEMENT]

SCHEDULE A

to

Tenth Addendum to

Amended Registration Rights Agreement

<TABLE>
<CAPTION>

NAME	SHARES ISSUED

American Home Products Corporation	374,626
American Home Products Corporation	374,626
American Home Products Corporation	249,749
American Home Products Corporation	124,875
Aspen Venture Partners, L.P.	2,659
Elan International Services, Ltd.	1,278,970
Enterprise Partners	3,745
Genentech, Inc.	35,957
Kleiner Perkins Caufield & Byers	7,688
ML Venture Partners II, L.P.	2,417
S.R. One, Limited	164,474
SmithKline Beecham	274,423
Venrock Associates	3,441
Venrock Associates II, L.P.	1,540
Windsor Venture Lease Partners Ltd., Inc.	283
TOTAL:	2,899,473

</TABLE>

<TABLE> <S> <C>

<ARTICLE> 5
<LEGEND>
THIS SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM SEC FORM 10-Q FOR THE NINE MONTHS ENDED SEPTEMBER 30, 1998 AND IS QUALIFIED IN ITS ENTIRETY BY REFERENCE TO SUCH FINANCIAL STATEMENTS.
(IN THOUSANDS EXCEPT EARNINGS PER SHARE)
</LEGEND>

<S> <C>
<PERIOD-TYPE> 9-MOS
<FISCAL-YEAR-END> DEC-31-1998
<PERIOD-START> JAN-01-1998
<PERIOD-END> SEP-30-1998
<CASH> 24,939
<SECURITIES> 18,661<F4>
<RECEIVABLES> 0
<ALLOWANCES> 0
<INVENTORY> 1,533
<CURRENT-ASSETS> 45,952
<PP&E> 48,060
<DEPRECIATION> 17,673
<TOTAL-ASSETS> 125,736
<CURRENT-LIABILITIES> 18,706
<BONDS> 99,727<F1>
<PREFERRED-MANDATORY> 0
<PREFERRED> 0
<COMMON> 43
<OTHER-SE> 7,170<F2>
<TOTAL-LIABILITY-AND-EQUITY> 125,736
<SALES> 103
<TOTAL-REVENUES> 13,399
<CGS> 183
<TOTAL-COSTS> 10,936<F3>
<OTHER-EXPENSES> 38,286
<LOSS-PROVISION> 0
<INTEREST-EXPENSE> 5,886
<INCOME-PRETAX> (77,227)
<INCOME-TAX> 0
<INCOME-CONTINUING> (77,227)
<DISCONTINUED> 0
<EXTRAORDINARY> 0
<CHANGES> 0
<NET-INCOME> (77,227)
<EPS-PRIMARY> (1.97)
<EPS-DILUTED> (1.97)
<FN>
<F1>INCLUDES BONDS, MORTGAGES AND OTHER LONG-TERM DEBT, INCLUDING CAPITALIZED LEASES.
<F2>INCLUDES ADDITIONAL PAID IN CAPITAL, OTHER ADDITIONAL CAPITAL AND RETAINED EARNINGS, APPROPRIATED AND UNAPPROPRIATED.
<F3>PER CHIEF ACCOUNTANT AT THE SEC, THIS AMOUNT EXCLUDES SALES AND G&A EXPENSES, INCLUDES COSTS AND EXPENSES APPLICABLE TO SALES AND REVENUES, AND TANGIBLE COSTS OF GOODS SOLD.
<F4>INCLUDES RESTRICTED CASH.
</FN>

</TABLE>