

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

MARK ONE

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE  
SECURITIES EXCHANGE ACT OF 1934

FOR THE QUARTERLY PERIOD ENDED JUNE 30, 1997 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 (I.R.S. EMPLOYER  
INCORPORATION OR ORGANIZATION) IDENTIFICATION NO.)

9393 TOWNE CENTRE DRIVE 92121  
SAN DIEGO, CA (ZIP CODE)  
(ADDRESS OF PRINCIPAL EXECUTIVE OFFICES)

REGISTRANT'S TELEPHONE NUMBER, INCLUDING AREA CODE: (619)535-3900

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

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As of July 31, 1997 the registrant had 32,859,502 shares of Common Stock outstanding.

LIGAND PHARMACEUTICALS INCORPORATED  
QUARTERLY REPORT

FORM 10-Q

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PART I. FINANCIAL INFORMATION

ITEM 1 FINANCIAL STATEMENTS

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

<CAPTION>

	June 30, 1997	December 31, 1996
	-----	-----
	(Unaudited)	
<S>	<C>	<C>
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 17,723	\$ 34,830
Short-term investments	42,546	45,822
Receivable from a related party	2,980	3,087
Other current assets	1,147	1,706
	-----	-----
Total current assets	64,396	85,445
Restricted short-term investments	3,295	3,527
Property and equipment, net	14,981	11,680
Notes receivable from officers and employees	535	534
Other assets	4,565	954
	-----	-----
	\$ 87,772	\$ 102,140
	=====	=====

LIABILITIES AND STOCKHOLDERS' EQUITY

Current liabilities:		
Accounts payable	\$ 3,235	\$ 4,137
Accrued liabilities	5,587	4,870
Deferred revenue	1,395	2,151
Current portion of obligations under capital leases	2,924	2,607

Total current liabilities	13,141	13,765
Long-term obligations under capital leases	8,733	8,711
Convertible subordinated debentures	35,290	33,953
Convertible note	7,500	11,250
Stockholders' equity:		
Convertible preferred stock, \$.001 par value; 5,000,000 shares authorized; no shares issued or outstanding	-- --	-- --
Common stock, \$.001 par value; 80,000,000 shares authorized; 32,565,088 shares and 31,799,617 shares issued at June 30, 1997 and December 31, 1996, respectively	33	32
Paid-in capital	222,854	214,887
Warrant subscription receivable	(1,468)	(2,453)
Adjustment for unrealized gains (losses) on available-for-sale securities	(47)	(78)
Accumulated deficit	(198,147)	(177,594)
Deferred compensation and consulting fees	(106)	(322)
	23,119	34,472
Less treasury stock, at cost (1,114 shares at June 30, 1997 and December 31, 1996)	(11)	(11)
Total stockholders' equity	23,108	34,461
	\$ 87,772	\$ 102,140

</TABLE>

SEE ACCOMPANYING NOTES.

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<TABLE>

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

<CAPTION>

	Three Months Ended		Six Months Ended	
	June 30,	June 30,	June 30,	June 30,
	1997	1996	1997	1996
<S>	<C>	<C>	<C>	<C>
Revenues:				
Collaborative research and development:				
Related parties	\$ 6,247	\$ 4,026	\$ 12,213	\$ 7,262
Unrelated parties	3,552	4,403	7,289	9,878
Other	117	61	226	118
	9,916	8,490	19,728	17,258
Costs and expenses:				
Research and development	16,689	14,811	33,315	27,081
Selling, general and administrative	2,559	2,554	4,878	5,172
Total operating expenses	19,248	17,365	38,193	32,253
Loss from operations	(9,332)	(8,875)	(18,465)	(14,995)

Interest income	933	902	2,002	1,999
Interest expense	(2,015)	(2,067)	(4,090)	(4,124)
Net loss	<u>\$(10,414)</u>	<u>\$(10,040)</u>	<u>\$(20,553)</u>	<u>\$(17,120)</u>
Net loss per share	<u>\$ (.32)</u>	<u>\$ (.36)</u>	<u>\$ (.64)</u>	<u>\$ (.61)</u>
Shares used in computing net loss per share	<u>32,520</u>	<u>28,071</u>	<u>32,259</u>	<u>27,990</u>

</TABLE>

SEE ACCOMPANYING NOTES.

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<TABLE>

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

<CAPTION>

	Six Months Ended	
	June 30,	
	1997	1996
	-----	-----
	<C>	<C>
<b>OPERATING ACTIVITIES</b>		
Net loss	\$ (20,553)	\$ (17,120)
Adjustments to reconcile net loss to net cash used by operating activities:		
Depreciation and amortization	1,951	1,914
Amortization of notes receivable from officers and employees	124	129
Amortization of deferred compensation and consulting fees	216	254
Amortization of warrant subscription receivable	985	806
Accretion of debt discount	1,337	1,337
Company stock received for milestone revenue	-- --	(438)
Change in operating assets and liabilities:		
Other current assets	558	(207)
Receivable from a related party	107	308
Accounts payable and accrued liabilities	(185)	(2,584)
Deferred revenue	(756)	(594)
Net cash used in operating activities	<u>(16,216)</u>	<u>(16,195)</u>
<b>INVESTING ACTIVITIES</b>		
Purchase of short-term investments	(16,364)	(35,127)
Proceeds from short-term investments	19,671	43,352
Increase in notes receivable from officers and employees	(125)	(180)
Increase in deposits and other assets	(3,670)	-- --
Decrease in deposits and other assets	59	64
Purchase of property and equipment	(3,512)	(252)
Net cash (used in) provided by investing activities	<u>(3,941)</u>	<u>7,857</u>
<b>FINANCING ACTIVITIES</b>		
Principal payments on obligations under capital leases	(1,400)	(1,039)
Net change in restricted short-term investments	232	3,013

Net proceeds from sale of common stock	4,218	1,629
Net cash provided by financing activities	3,050	3,603
Net decrease in cash and cash equivalents	(17,107)	(4,735)
Cash and cash equivalents at beginning of period	34,830	15,963
Cash and cash equivalents at end of period	\$ 17,723	\$ 11,228

SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:

Interest paid	\$ 2,678	\$ 2,742
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SUPPLEMENTAL SCHEDULE OF NON-CASH INVESTING AND FINANCING ACTIVITIES:

Additions to obligations under capital leases	\$ 1,739	\$ 1,313
Conversion of note to common stock	\$ 3,750	-- --

</TABLE>

LIGAND PHARMACEUTICALS INCORPORATED  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(UNAUDITED)

JUNE 30, 1997

1. BASIS OF PRESENTATION

The consolidated financial statements of Ligand Pharmaceuticals Incorporated (the "Company") for the three and six months ended June 30, 1997 and 1996 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 June 30, 1997 and the consolidated results of operations for the three and six months ended June 30, 1997 and 1996. The results of operations for the period ended June 30, 1997 are not necessarily indicative of the results to be expected for the year ending December 31, 1997. 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, 1996 included in the Ligand Pharmaceuticals Incorporated Form 10-K filed with the Securities and Exchange Commission.

In February 1997, the Financial Accounting Standards Board issued Statement No. 128, "Earnings Per Share", which is effective for fiscal periods ending after December 15, 1997. At that time, the Company will be required to change the method currently used to compute earnings per share and to restate all prior periods presented. Under the new requirements for calculating primary earnings per share, which will be renamed basic earnings per share, stock options, warrants and convertible securities will always be excluded. The impact of Statement 128 on the calculation of basic and diluted earnings per share for the quarters ended June 30, 1997 and 1996 will have no effect.

2. NET LOSS PER SHARE

Net loss per share is computed using the weighted average number of common shares outstanding.

3. CONVERSION OF CONVERTIBLE NOTE

In March 1997, and again in July 1997, the Company converted \$3.8

million and \$2.5 million, respectively, of the convertible notes outstanding with American Home Products Corporation, into 374,626 and 249,749 shares, respectively, of the Company's Common Stock at a \$10.01 conversion price.

#### 4. COLLABORATION EQUITY INVESTMENT

In February 1997, a third installment equity investment of \$2.5 million was made by SmithKline Beecham Corporation as a result of its election to expand the scope of research under its research agreement with the Company.

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## 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 drug discovery and development programs. The Company has been unprofitable since its inception and expects to incur substantial additional operating losses for the next several years, due to continued requirements for research and development, preclinical testing, clinical trials, regulatory activities, establishment of manufacturing processes and sales and marketing capabilities. The Company expects that losses will fluctuate from quarter to quarter as a result of differences in the timing of expenses incurred and the revenues earned from collaborative arrangements. Some of these fluctuations may be significant. As of June 30, 1997, the Company's accumulated deficit was approximately \$198.1 million.

### RESULTS OF OPERATIONS

#### THREE MONTHS ENDED JUNE 30, 1997 ("1997"), COMPARED WITH THREE MONTHS ENDED JUNE 30, 1996 ("1996")

The Company had revenues of \$9.9 million for 1997 compared to revenues of \$8.5 million for 1996. The net increase in revenues is primarily due to increased revenues from Allergan Ligand Retinoid Therapeutics, Inc. ("ALRT"), a company formed by Ligand and Allergan, Inc. ("Allergan") to conduct research and development activities, offset by initial milestone revenues received from Pfizer Inc. ("Pfizer") in 1996. Revenues in 1997 were derived from the Company's research and development agreements with (i) ALRT of \$6.2 million, (ii) American Home Products Corporation ("AHP") of \$1.1 million, (iii) SmithKline Beecham Corporation ("SmithKline Beecham") of \$792,000, (iv) Sankyo Company Ltd. ("Sankyo") of \$687,000, (v) Abbott Laboratories ("Abbott") of \$540,000, (vi) Glaxo-Wellcome plc ("Glaxo") of \$407,000, as well as from product sales of Ligand Pharmaceuticals (Canada) Incorporated ("Ligand (Canada)") in-licensed products of \$117,000. Revenues in 1996 were derived from the Company's research and development agreements with (i) ALRT of \$4.0 million, (ii) AHP of \$1.5 million, (iii) Abbott of \$725,000, (iv) Sankyo of \$666,000, (v) SmithKline Beecham of \$596,000, (vi) Glaxo of \$514,000, as well as from milestone revenue from Pfizer of \$438,000, and product sales of Ligand

(Canada) in-licensed products of \$60,000.

For 1997, research and development expenses increased to \$16.7 million from \$14.8 million in 1996. These expenses increased primarily due to expansion of the Company's clinical and development programs, as well as related additions of clinical and development personnel. Selling, general and administrative expenses were \$2.6 million in both 1997 and 1996. The 1997 selling, general and administrative expenses reflect personnel additions to support expanded clinical and development programs, however, the total 1996 expenses were comparable to 1997 due to higher legal expenses incurred in 1996 related to the settlement of future product rights litigation. Interest income increased to \$933,000 in 1997 from \$902,000 in 1996. The slight increase was due to the completion of a public offering with net proceeds of approximately \$35.2 million in October 1996 and increased research revenues, offset by usage of cash to support expansion activities. Interest expense was \$2.0 million in 1997 and \$2.1 million in 1996, and consisted of interest required by the Company's wholly-owned subsidiary, Glycomed Incorporated, under its Convertible Subordinated Debentures ("Debentures"), accretion of debt discount under the Debentures, and capital lease obligations used to finance equipment.

SIX MONTHS ENDED JUNE 30, 1997 ("1997"), COMPARED WITH SIX MONTHS ENDED JUNE 30, 1996 ("1996")

The Company had revenues of \$19.7 million for 1997 compared to revenues of \$17.3 million for 1996. The increase in revenues is primarily due to increased revenues from ALRT, offset by decreased revenues from the research and development agreement with AHP, due to a one time payment of \$1.5 million in 1996, which expanded and amended the research and development agreement. Revenues in 1997 were derived from the Company's research and development agreements with (i) ALRT of \$12.2 million, (ii) AHP of \$2.4 million, (iii) SmithKline Beecham of \$1.5 million, (iv) Sankyo of \$1.4 million, (v) Abbott of \$1.1 million, (vi) Glaxo of \$899,000 and product sales of Ligand (Canada) in-

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licensed products of \$226,000. Revenues in 1996 were derived from the Company's research and development agreements with (i) ALRT of \$7.3 million, (ii) AHP of \$4.4 million, (iii) Abbott of \$1.4 million, (iv) Sankyo of \$1.4 million, (v) SmithKline Beecham of \$1.2 million, (vi) Glaxo of \$1.1 million, as well as from milestone revenue from Pfizer of \$438,000 and products sales of Ligand (Canada) in-licensed products of \$118,000.

For 1997, research and development expenses increased to \$33.3 million from \$27.1 million in 1996. These expenses increased primarily due to expansion of the Company's clinical and development programs, as well as related additions of clinical and development personnel. Selling, general and administrative expenses decreased to \$4.9 million in 1997 from \$5.2 million in 1996. The decrease was primarily attributable to higher legal expenses incurred in 1996 related to the settlement of future product rights litigation, offset by additions to personnel to support expanded clinical and development programs. Interest income was \$2.0 million in 1997 and 1996. Interest expense was \$4.1 million in 1997 and 1996, and consisted of interest required under the Debentures, accretion of debt discount of the Debentures and capital lease obligations used to finance equipment.

#### 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 June 1997, the Company has raised \$162.5 million from sales of equity securities: \$78.2 million from the Company's public offerings and an aggregate of \$84.3 million from private placements and the exercise of options and warrants.

In March 1997 and again in July 1997, the Company converted \$3.8 million and \$2.5 million, respectively, of the convertible notes outstanding to AHP into 374,626 and 249,749 shares, respectively, of the Company's Common Stock at a \$10.01 conversion price.

In February 1997, a third installment equity investment of \$2.5 million was provided to the Company by SmithKline Beecham as a result of their election to expand the scope of research under its research agreement with the Company.

As of June 30, 1997, the Company had acquired an aggregate of \$23.2 million in property, laboratory and office equipment, and \$4.7 million in tenant leasehold improvements, substantially all of which has been funded through capital lease and equipment note obligations and which also includes laboratory and office equipment acquired in the Glycomed merger. 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. At the end of 1997, one of the Company's main operating lease agreements for office and research facilities expires, at which time the Company plans to move into its second build-to-suit facility. In March 1997, the Company entered into a long-term lease, related to the build-to-suit facility and loaned the construction partnership \$3.7 million which will be paid back with interest over a 10 year period. 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 include up to an additional \$4.5 million.

Working capital decreased to \$51.3 million as of June 30, 1997, from \$71.7 million at the end of 1996. The decrease in working capital resulted from an increase in cash from collaborative research agreements and equity investments, offset by an increase in operating expenses, as described above, semi-annual interest payments due on the Debentures and interest paid on convertible notes. For the same reasons, cash and cash equivalents, short-term investments, and restricted cash decreased to \$63.6 million at June 30, 1997 from \$84.2 million at December 31, 1996. The Company primarily invests its cash in United States government and investment grade corporate debt securities.

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 1998, assuming the Company does not exercise either the option to acquire certain assets related to Oral and Topical Panretin (ALRT1057) (the "ALRT1057 Option") or an option to acquire all the outstanding shares of ALRT callable common stock (the "ALRT Stock Purchase Option") which were granted to Ligand and Allergan as part of the ALRT formation. Based on the current level of product development expenditures, ALRT could use substantially all of its funds available for research and development in late 1997 or early 1998, which would require Ligand to exercise the ALRT Stock Purchase Option within a certain period of time or provide operating funds to ALRT or Ligand would lose rights to products being developed by ALRT. The Company has made no determination concerning the exercise of either the ALRT1057 Option or the ALRT Stock Purchase Option. See "Risk and Uncertainties-Exercise of Panretin (ALRT 1057) Option and ALRT Stock Purchase Option".



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.

## RISKS AND UNCERTAINTIES

THE FOLLOWING ARE AMONG THE FACTORS THAT SHOULD ALSO BE CONSIDERED CAREFULLY IN EVALUATING LIGAND AND ITS WHOLLY-OWNED SUBSIDIARIES GLYCOMED INC. AND LIGAND (CANADA) INC. ("LIGAND" OR THE "COMPANY") AND ITS BUSINESS.

### EARLY STAGE OF PRODUCT DEVELOPMENT; TECHNOLOGICAL UNCERTAINTY.

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 for at least several years, if at all.

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 Signal Transducers and Activators of Transcription ("STATs") technologies. 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. 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. No assurance can be given that the Company's product development efforts will be successful, that required regulatory approvals from the FDA or equivalent foreign authorities for any indication will be obtained or that any products, if introduced, will be capable of being produced in commercial quantities at reasonable costs or will be successfully marketed. 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, there can be no assurance that the Company will be able to develop such capabilities or successfully market such products.

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 June 30, 1997, Ligand had an accumulated deficit of approximately \$198.1 million. To date, substantially all of Ligand's revenues have consisted of amounts received under collaborative arrangements. The Company expects to incur additional losses at least over the next several years and expects losses to increase as the Company's research and development efforts and clinical

trials progress.

The discovery and development 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. There can be no assurance that Ligand independently or through its collaborations will 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

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and existing sources of funding will be adequate to satisfy its anticipated capital requirements through 1998, assuming the Company does not exercise for cash its options to acquire either the assets related to Oral Panretin (ALRT1057) and Topical Panretin (ALRT1057) or the outstanding callable common stock of ALRT. Based on the current level of product development expenditures, ALRT could use substantially all of its funds available for research and development in late 1997 or early 1998, which would require Ligand to exercise the ALRT Stock Purchase Option within a certain period of time or provide operating funds to ALRT or Ligand would lose rights to products being developed by ALRT. The Company has made no determination concerning the exercise of either the ALRT1057 Option or the ALRT Stock Purchase Option.

Glycomed's outstanding indebtedness includes \$50 million principal amount of 7 1/2% Convertible Subordinated Debentures Due 2003 (the "Debentures"). There can be no assurance that Glycomed will 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.

The Company expects that it will seek any additional capital needed to fund its operations through new collaborations, the extension of existing collaborations, or through public or private equity or debt financings. There can be no assurance that additional financing will be available on acceptable terms, if at all. Any inability of the Company to obtain additional financing or of Glycomed to service its obligations under the Debentures could have a material adverse effect on the Company.

**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, and there can be no assurance that clinical trials of any product under development will demonstrate the safety and efficacy of such product or will 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. 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 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. 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, and there can be no assurance that such corporate partners' rights to control aspects of such programs will not 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 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 SmithKline Beecham, AHP, Abbott, Sankyo, Glaxo, ALRT (which collaboration continues the work previously undertaken with Allergan through the Allergan Ligand Joint Venture) and Pfizer. These collaborations provide Ligand with funding and research and development resources for potential products for the treatment or control of 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. There can be no assurance that the Company's collaborations will continue or that the collaborations will be successful. In addition, there can be no assurance that Ligand's collaborators will 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 Ligand.

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.

**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, there can be no assurance that Ligand would be 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, 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 exclusively licensed over 190 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. There can be no assurance that patents will issue from any of these applications or, if patents do issue, that claims allowed will be sufficient to protect Ligand's technology. In addition, Ligand is the owner or exclusive licensee of rights covered by approximately 150 worldwide patents issued or allowed to it or to The Salk Institute of Biological Studies, Baylor College of Medicine and other licensors. Further, there can be no assurance that any patents issued to Ligand or to licensors of Ligand's technology will not 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, or that the rights granted under any such patents will 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.

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. 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 (ALRT1057)) 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's rights under its patent application have been exclusively licensed to ALRT. Ligand and ALRT are currently investigating the scope and validity of this patent to determine its impact upon the Oral and Topical Panretin (ALRT1057) products. The PTO has informed Ligand that the overlapping claims are patentable to Ligand and stated its intention to initiate 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 Oral and Topical Panretin (ALRT1057) products. While the Company believes that the Roche patent does not cover the use of Oral and Topical Panretin (ALRT1057) to treat leukemias such as APL and sarcomas such as KS, or the treatment of skin diseases such as psoriasis, if the Company and ALRT do not prevail in the interference proceeding, the Roche patent might block the Company's use of Oral and Topical Panretin (ALRT1057) in certain cancers, and the Company may not be able to obtain patent protection for the Oral and Topical Panretin (ALRT1057) 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. There can be no assurance that these agreements will not be breached, that they will provide meaningful protection of Ligand's trade secrets or adequate remedies in the event of unauthorized use or disclosure of such information or that Ligand's trade secrets will not otherwise become known or be independently discovered by its competitors.

#### EXERCISE OF PANRETIN (ALRT 1057) OPTION AND ALRT STOCK PURCHASE

OPTION. As part of the public offering in June 1995 by the Company and ALRT of 3,250,000 units with aggregate proceeds of \$32.5 million (the "ALRT Offering"), all of the technologies that had been previously developed by the Allergan-Ligand Joint Venture (the "Joint Venture"), formed and owned 50 percent by each of Ligand and Allergan, were contributed to ALRT, an off-balance sheet entity. In exchange for Ligand's and Allergan's contributions of cash and technology, they each received the ALRT1057 Option. The ALRT1057 Option is exercisable at prices ranging from \$21.4 million to \$36.2 million (of which \$18.7 million to \$31.7 million is payable by Ligand) at any time beginning June 1997 and ending the earlier of 90 days after regulatory approval for the commercial sale of Oral or Topical Panretin (ALRT1057) and June 2000. The ALRT1057 Option must be exercised by both Ligand and Allergan. As a result, Ligand can exercise the ALRT1057 Option only if Ligand and Allergan each conclude that the exercise of the ALRT1057 Option is in both of their best interests. In addition, Ligand received the ALRT Stock Purchase Option. The ALRT Stock Purchase Option is exercisable at prices ranging from \$71.4 million to \$120.7 million at any time between June 1997 and June 2000. If Ligand exercises the ALRT Stock Purchase Option, Allergan has an option to purchase an undivided 50% interest in all of the assets of ALRT at prices ranging from \$8.9 million to \$15.0 million. The purchase prices for the ALRT1057 Option and the ALRT Stock Purchase Option may be paid by Ligand and Allergan in shares of Common Stock, Allergan common stock, cash or any combination thereof. If Ligand exercises the ALRT1057 Option or the ALRT Stock Purchase Option, it will be required to make a substantial cash payment or to issue shares of Common Stock, or both. Any cash payment would reduce Ligand's capital resources. The Company may not have sufficient capital resources to exercise the ALRT1057 Option or the ALRT Stock Purchase Option for cash, which will require the Company to issue shares of Common Stock to exercise either of such options. Any payment in shares of

time. The exercise of the ALRT1057 Option may result in, and the exercise of the ALRT Stock Purchase Option will likely require, the recording of a significant charge to the Company's earnings. Based on the current level of product development expenditures, ALRT has announced it could use substantially all of the funds available for research and development in late 1997 or early 1998, which would require Ligand to exercise the ALRT Stock Purchase Option within a certain period of time or provide operating funds to ALRT or Ligand would lose rights to products being developed by ALRT.

In addition, continuation of development and commercialization of Oral and Topical Panretin (ALRT1057) and other products under development by ALRT may require substantial additional expenditures by Ligand. If Ligand does not exercise the ALRT1057 Option or ALRT Stock Purchase Option prior to expiration, the Company may lose valuable rights, including rights to Oral and Topical Panretin (ALRT1057) and other ALRT assets. Ligand and Allergan also have the option to provide funding for the development of ALRT products in certain circumstances. In the event that such funding is not provided and other funds available to ALRT are less than \$10.0 million, the contractual relationship among ALRT, Allergan and Ligand may be terminated by ALRT. In such an event, ALRT would retain its rights to the products currently under development by ALRT, which could have a material adverse effect on Ligand. As of the date of this filing, Ligand has no plans to provide additional funding to ALRT and has made no determination concerning the exercise of either the ALRT1057 Option or the ALRT Stock Purchase Option.

**LACK OF MANUFACTURING CAPABILITY; RELIANCE ON THIRD-PARTY MANUFACTURERS.** Ligand currently has no manufacturing facilities and, accordingly, relies on third parties, including 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.

**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(R), which was developed by Cetus Oncology Corporation and PHOTOFRIN(R), 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. There can be no assurance that the Company will be able to establish direct or indirect sales and distribution capabilities or 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, STAT-related and complex carbohydrate-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.

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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 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.

**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.

**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, 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 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 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 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 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 Common Stock and September 13, 2006.

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. 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

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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.

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PART II. OTHER INFORMATION

ITEM 4 SUBMISSIONS OF MATTERS TO A VOTE OF SECURITY HOLDERS

The Company's Annual Meeting of Stockholders was held on May 21, 1997. The following elections and proposals were approved at the Company's Annual Meeting:

<TABLE>

<CAPTION>

	VOTES				
	VOTES FOR	VOTES AGAINST	VOTES WITHHELD	ABSTAIN- ING	BROKER NONVOTE
	-----	-----	-----	-----	-----

<S>                      <C>                      <C>                      <C>                      <C>                      <C>

1. Election of a Board of Directors. The total number of votes cast for, or withheld for each nominee was as follows:

Henry F. Blissenbach	26,983,209	---	355,266	---	---
Alexander D. Cross, Ph.D.	26,973,230	---	365,245	---	---
John Groom	26,161,642	---	1,176,833	---	---
Irving S. Johnson, Ph.D.	27,001,393	---	337,082	---	---
Carl C. Peck	26,971,761	---	366,714	---	---
David E. Robinson	26,638,287	---	700,188	---	---
William C. Shepherd	27,019,443	---	319,032	---	---

2. Amendment of 1992 Stock Option/ Stock Issuance Plan to increase the authorized number of shares of Common Stock from 6,428,457 to 7,303,457.                      21,590,393    4,973,104    ---    99,897    675,081

- |  |   |
|--|---|
| 3. Amendment of the 1992 Employee Stock Purchase Plan, to increase the authorized number of shares of Common Stock available for issuance under such plan from 166,500 to 206,500. | 25,105,073 1,672,140 -- -- 87,625 473,637 |
| 4. Ratification of the appointment of Ernst & Young LLP as the independent auditors for the fiscal year ending December 31, 1997.  | 27,145,766 75,342 -- -- 40,265 77,102     |

</TABLE>

ITEM 6 (A) EXHIBITS

Exhibit 27.0 Financial Data Schedule

Exhibit 10.162 Limited Extension of Collaborative Technology Research, Option and Development Agreement between Ligand Pharmaceuticals and Sankyo Company Limited, dated June 24, 1997.

Exhibit 10.163 Extension of Master Lease Agreement between Lease Management Services and Ligand Pharmaceuticals dated July 29, 1997.

ITEM 6 (B) REPORTS ON FORMS 8-K

None.

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LIGAND PHARMACEUTICALS INCORPORATED

JUNE 30, 1997

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

August 13, 1997 /s/ Paul V. Maier

Date: ----- By -----

Paul V. Maier  
Senior Vice President and Chief Financial Officer

[LEASE MANAGEMENT SERVICES, INC. LETTERHEAD]

[SEAL]

July 29, 1997

Mr. Dennis Genge  
Executive Director of Finance  
LIGAND PHARMACEUTICALS, INC.  
9393 Towne Centre Drive, Suite 100  
San Diego CA 92121

Dear Dennis:

We are pleased to confirm credit approval for LIGAND PHARMACEUTICALS, INC.

LESSEE: LIGAND PHARMACEUTICALS, INC.

LESSOR: Lease Management Services, Inc.

EQUIPMENT: A lease line extension of \$4,500,000 to finance equipment and related sales tax as per the attached list. All equipment is subject to Lessor's final approval. This line extension does NOT include any warrants, deposits, or negative covenant provisions.

LEASE TERM: Sixty (60) months.

RENTAL FACTOR: 1.952% of equipment cost payable monthly in advance for each lease schedule.

The yield in this transaction will be adjusted relative to any increase in comparable term U.S. Treasury maturities. The payment factor for each schedule will be set at the time it is documented and will be fixed for the term. The payment factors above are based on the average of the Federal Reserve 3- and 5-year treasuries (6.72%) for the week ending 4/25/97.

Mr. Dennis Genge  
7/29/97  
Page 2

LEASE TYPE: Net lease - insurance, personal property taxes and maintenance paid by Lessee.

END OF LEASE: At the end of the lease term, equipment will be purchased for 10% of original, aggregate equipment cost.

CONTINGENCIES: 1) Standard documentation satisfactory to Lessee and Lessor.

- 2) Release against this lease credit line are contingent upon no material adverse in Borrower's financial condition, management, operations, or business prospects. This credit line, unless extended in writing, expires 6/30/98. In the event the lease line is not fully utilized by the expiration date, Lessor agrees to extend the takedown period to 12/31/98, subject to credit approval.
- 3) Throughout the lease term, Lessee shall provide quarterly financials within 45 days of each month-end, and annually, an audited statement within 120 days of

each fiscal year end. All such financial statements to be prepared using generally accepted accounting principles and to be in compliance with SEC regulations.

- 4) Complete equipment specifications to be provided to Lessor before each takedown. Invoices must be less than 45 days old or funded within 45 days of credit approval.

All equipment to be located at Lessee's various San Diego, California, facilities. Custom equipment; software in excess of \$450,000; upgrades to equipment to which Lessor does not have clear title or first security interest; disposables; "soft costs" such as freight, plumbing, wiring, labor or installation; and leasehold or tenant improvements are excluded from this line.

- 5) This is a statement of mutual intent and not an agreement to Lease. The terms set forth above are not therefore binding until a lease agreement is executed between Lessor and Lessee for specific items of equipment.

Mr. Dennis Genge

7/29/97

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COMMITMENT FEE: We are in receipt of your \$45,000.00 commitment fee which shall be fully credited pro-rata to rentals due. All or a portion of said fee will be forfeited if this transaction is approved by Lessor and not executed by Lessee as called for in this proposal.

We're very pleased to help finance your equipment needs and promise to give you the best service in the industry.

Sincerely,

/s/ Stephanie K. Wagner

Stephanie K. Wagner  
Vice President Marketing

SKW:clb

[LEASE MANAGEMENT SERVICES, INC. LETTERHEAD]

[SEAL]

July 29, 1997

Mr. Dennis Genge  
Executive Director of Finance  
LIGAND PHARMACEUTICALS, INC.  
9393 Towne Centre Drive, Suite 100  
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LEASE TERM: Sixty (60) months.

RENTAL FACTOR: 1.952% of equipment cost payable monthly in advance for each lease schedule.

The yield in this transaction will be adjusted relative to any increase in comparable term U.S. Treasury maturities. The payment factor for each schedule will be set at the time it is documented and will be fixed for the term. The payment factors above are based on the average of the Federal Reserve 3- and 5-year treasuries (6.72%) for the week ending 4/25/97.

Mr. Dennis Genge  
7/29/97  
Page 2

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2) Release against this lease credit line are contingent upon no material adverse in Borrower's financial condition, management, operations, or business prospects. This credit line, unless extended in writing, expires 6/30/98. In the event the lease line is not fully utilized by the expiration date, Lessor agrees to extend the takedown period to 12/31/98, subject to credit approval.

3) Throughout the lease term, Lessee shall provide quarterly financials within 45 days of each month-end, and annually, an audited statement within 120 days of

each fiscal year end. All such financial statements to be prepared using generally accepted accounting principles and to be in compliance with SEC regulations.

- 4) Complete equipment specifications to be provided to Lessor before each takedown. Invoices must be less than 45 days old or funded within 45 days of credit approval.

All equipment to be located at Lessee's various San Diego, California, facilities. Custom equipment; software in excess of \$450,000; upgrades to equipment to which Lessor does not have clear title or first security interest; disposables; "soft costs" such as freight, plumbing, wiring, labor or installation; and leasehold or tenant improvements are excluded from this line.

- 5) This is a statement of mutual intent and not an agreement to Lease. The terms set forth above are not therefore binding until a lease agreement is executed between Lessor and Lessee for specific items of equipment.

Mr. Dennis Genge

7/29/97

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COMMITMENT FEE: We are in receipt of your \$45,000.00 commitment fee which shall be fully credited pro-rata to rentals due. All or a portion of said fee will be forfeited if this transaction is approved by Lessor and not executed by Lessee as called for in this proposal.

We're very pleased to help finance your equipment needs and promise to give you the best service in the industry.

Sincerely,

/s/ Stephanie K. Wagner

Stephanie K. Wagner  
Vice President Marketing

SKW:clb



<TABLE> <S> <C>

<ARTICLE> 5

<LEGEND>

This schedule contains summary financial information extracted from SEC Form 10Q for the six months ended June 30, 1997 and is qualified in its entirety by reference to such financial statements.

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