UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): October 1, 2020

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

Delaware	**001-33093**	**77-0160744**
(State or Other Jurisdiction of Incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

3911 Sorrento Valley Boulevard, Suite 110
San Diego, CA **94608**
(Address of Principal Executive Offices) **(Zip Code)**

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

N/A
(Former Name or Former Address, if Changed Since Last Report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, par value $0.001 per share	**LGND**	**The Nasdaq Global Market**

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933(§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934(§240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 1.01. Entry into a Material Definitive Agreement.

Prior to the effective time of the completion of the acquisition of Pfenex Inc. ("Pfenex") by Ligand Pharmaceuticals Incorporated ("Ligand") by consummating a merger of Pelican Acquisition Sub, Inc. ("Purchaser"), a wholly-owned subsidiary of Ligand, with and into Pfenex (the "Merger"), and in connection with the acceptance for payment by Purchaser of all of the shares of Pfenex common stock, par value $0.001 per share (the "Shares"), validly tendered and not properly withdrawn pursuant to the Offer (as defined below), Ligand and a duly qualified rights agent, American Stock Transfer & Trust Company, LLC, entered into a contingent value rights agreement on September 30, 2020 (as it may be amended from time to time, the "CVR Agreement"). Pursuant to the CVR Agreement, each Share held by the stockholders immediately prior to the closing of the Merger will be entitled to receive one non-transferrable contractual right (a "CVR") entitling such holder to receive, subject to the achievement of the CVR Payment Milestone (as defined below), an amount in cash equal to $2.00.

The CVR Agreement provides that the required milestone shall be achieved upon, with respect to Pfenex's teriparatide injection (also referred to as PF708 or Bonsity™) (the "CVR Product"), the receipt of a notice from the U.S. Food and Drug Administration (the "FDA") that the CVR Product is therapeutically equivalent (as will be indicated by assignment of a therapeutic equivalence code that begins with an "A" in the FDA publication, *Approved Drug Products with Therapeutic Equivalence Evaluations*) with respect to the listed product, FORTEO® (teriparatide injection) (the "CVR Payment Milestone").

CVRs are complex instruments and a number of factors will determine whether any amount will actually be paid to Pfenex's stockholders in accordance with the terms of the CVR Agreement. If the milestone is not met, the CVRs will have no value. There can be no assurance that the milestone set forth in the CVR Agreement will be achieved and that the resulting payment will be required of Ligand.

The foregoing description of the CVR Agreement does not purport to be complete and is qualified in its entirety by the full text of the CVR Agreement, the form of which is attached as Exhibit 99.1 and is incorporated herein by reference.

Item 2.01. Completion of Acquisition or Disposition of Assets

Completion of Acquisition of Pfenex Inc.

As previously disclosed on August 10, 2020, Purchaser, Ligand and Pfenex entered into a definitive Agreement and Plan of Merger (the "Merger Agreement").

Pursuant to the Merger Agreement, Purchaser commenced a tender offer to acquire all of the outstanding Shares, at a price of (i) $12.00 per share, in cash (the "Cash Portion"), and (ii) a CVR pursuant to the CVR Agreement, to receive a contingent payment upon the achievement of the CVR Payment Milestone, without interest (the "CVR Portion", and together with the Cash Portion, the "Offer Price"), subject to any required tax withholding, upon the terms and subject to the conditions set forth in the Offer to Purchase, dated August 31, 2020, and the related Letter of Transmittal (which, together with the Offer to Purchase, as each may be amended or supplemented from time to time, constituted the "Offer").

The Offer expired at midnight (New York City time) at the end of the day on Tuesday, September 29, 2020. The depositary for the Offer advised Ligand and Pfenex that, as of the expiration of the Offer, a total of 24,744,327 Shares (excluding Shares with respect to which notices of guaranteed delivery were delivered) had been validly tendered and not properly withdrawn pursuant to the Offer, representing approximately 72.0% of Pfenex's then outstanding Shares (determined in accordance with the Merger Agreement). In addition, notices of guaranteed delivery were delivered with respect to approximately 2,847,227 Shares that have not yet been tendered, representing approximately 8.3% of Pfenex's then outstanding Shares. The Minimum Condition (as defined in the Merger Agreement) for the Offer was satisfied because the number of Shares validly tendered and not properly withdrawn pursuant to the Offer represented at least a majority of the Shares then outstanding (determined in accordance with the Merger Agreement and excluding from the number of tendered Shares, but not from the number of outstanding Shares, Shares tendered pursuant to guaranteed delivery procedures that have not yet been delivered in settlement or satisfaction of such guarantee). All other conditions to the Offer having also been satisfied or waived, immediately after the expiration of the Offer, Purchaser accepted all of the Shares for payment, and will promptly pay for such Shares in accordance with the terms of the Offer.

On September 30, 2020, Ligand issued a press release announcing the expiration and results of the Offer, a copy of which is attached as Exhibit (a)(5)(xi) to Amendment No. 3 to Schedule TO filed by Ligand with the Securities and Exchange Commission (the "SEC") on September 30, 2020 and is incorporated herein by reference.

Following consummation of the Offer, all conditions to the Merger set forth in the Merger Agreement had been satisfied or waived, and on October 1, 2020, upon the filing of a certificate of merger with the Secretary of State of the State of Delaware (the "Effective Time"), Ligand completed its acquisition of Pfenex by consummating the Merger without a meeting of the stockholders of Ligand or Pfenex in accordance with Section 251(h) of the General Corporation Law of the State of Delaware. As a result of the Merger, Pfenex became a wholly-owned subsidiary of Ligand.

Pursuant to the Merger Agreement, each Share issued and outstanding immediately prior to the Effective Time, other than any Shares (i) that were owned by Ligand, Purchaser or Pfenex, or by any wholly-owned subsidiary of Ligand or Purchaser, or (ii) in respect of which appraisal rights were perfected in accordance with Section 262 of the General Corporation Law of the State of Delaware, was converted into the right to receive an amount equal to the Offer Price without interest and subject to any applicable withholding taxes.

Pursuant to the Merger Agreement, each option to purchase Shares (a "Pfenex Option") with an exercise price equal to or less than the Cash Portion that remained outstanding as of immediately prior to the effective time of the Merger, whether vested or unvested, was cancelled and converted into a right to receive, with respect to each Share subject to such Pfenex Option, an amount in cash, without interest, equal to the excess, if any, of (i) the Cash Portion over the per share exercise price of such Pfenex Option, plus (ii) the CVR Portion.

The aggregate amount paid by Purchaser in the Offer and the Merger was approximately $438 million. Ligand estimates that up to an additional $78 million in the aggregate will be payable to holders of the CVRs in the event that the CVR Payment Milestone is timely achieved.

Ligand funded the acquisition of the Shares in the Offer and the Merger from its available cash on hand.

Following the consummation of the Merger, the Shares ceased to be listed on the NYSE American.

The foregoing description of the Merger Agreement (including the description of the consideration payable in connection with the Merger) is not complete and is qualified in its entirety by reference to the Merger Agreement, a copy of which was filed as Exhibit 2.1 to the Current Report on Form 8-K filed by Ligand on August 11, 2020, and is incorporated herein by reference.

Item 7.01 Regulation FD Disclosure.

On October 1, 2020, Ligand issued a press release announcing the completion of the Merger. A copy of the press release is attached hereto as Exhibit 99.3 and is incorporated herein by reference.

The information in Item 7.01 of this Current Report on Form8-K, including the press release incorporated herein by reference, is being furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, and it shall not be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or under the Exchange Act, whether made before or after the date hereof, except as expressly set forth by specific reference in such filing to this Item 7.01 of this Current Report on Form 8-K.

Item 9.01 Financial Statements and Exhibits.

(a) Financial Statements of Business Acquired

To be filed by amendment not later than 71 calendar days after the date this Current Report is required to be filed.

(b) Pro Forma Financial Information

To be filed by amendment not later than 71 calendar days after the date this Current Report is required to be filed.

(d) Exhibits.

Exhibit No.	Description
2.1*	Agreement and Plan of Merger, dated as of August 10, 2020, by and among Pfenex Inc., Ligand Pharmaceuticals Incorporated and Pelican Acquisition Sub, Inc. (incorporated herein by reference to Exhibit 2.1 to Ligand's Current Report on Form 8-K filed on August 11, 2020).
99.1	Contingent Value Rights Agreement, dated as of September 30, 2020, by and between Ligand Pharmaceuticals Incorporated and American Stock Transfer & Trust Company, LLC.
99.2	Press Release, dated September 30, 2020 (incorporated herein by reference to Exhibit (a)(5)(xi) to Amendment No. 3 to Schedule TO filed by Ligand on September 30, 2020)
99.3	Press Release, dated October 1, 2020
104	Cover Page Interactive Data File (formatted as inline XBRL contained in Exhibit 101)

* Certain schedules and annexes have been omitted in accordance with Item 601(b)(2) of Regulation S-K. A copy of any omitted schedule and/or annex will be furnished as a supplement to the U.S. Securities and Exchange Commission upon request.

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 hereunto duly authorized.

Date: October 1, 2020

LIGAND PHARMACEUTICALS INCORPORATED

/s/ Charles S. Berkman

Name: Charles S. Berkman
Title: Senior Vice President, General Counsel and Secretary

Exhibit 99.1

CONTINGENT VALUE RIGHTS AGREEMENT

This CONTINGENT VALUE RIGHTS AGREEMENT (this "**Agreement**"), dated September 30, 2020, is by and between Ligand Pharmaceuticals Incorporated, a Delaware corporation ("**Parent**") and American Stock Transfer & Trust Company, LLC, a New York limited liability trust company, as rights agent (the "**Rights Agent**").

RECITALS

A. Pfenex Inc., a Delaware corporation (the "**Company**"), Parent and Pelican Acquisition Sub, Inc., a Delaware corporation and a wholly-owned subsidiary of Parent ("**Acquisition Sub**") have entered into an Agreement and Plan of Merger, dated as of August 10, 2020 (as it may be amended or supplemented from time to time pursuant to the terms thereof, the "**Merger Agreement**"). Capitalized terms used but not otherwise defined in this Agreement shall have the meanings ascribed to them in the Merger Agreement.

B. Pursuant to the Merger Agreement, Acquisition Sub (a) has agreed to commence a tender offer (the "**Offer**") to acquire all of the outstanding shares of Company Common Stock and (b) will, following consummation of the Offer, merge with and into the Company (the "**Merger**"), with the Company surviving the Merger as a wholly owned subsidiary of Parent.

C. Pursuant to the Merger Agreement, and in accordance with the terms and conditions thereof, Parent has agreed to provide the Holders (as defined below) certain contingent value rights upon the achievement of a certain milestone as hereinafter described in accordance with the terms of this Agreement and of the Merger Agreement.

D. The Rights Agent is willing to act in connection with the issuance, transfer, exchange and payment of such contingent value rights as provided herein.

AGREEMENT

The parties to this Agreement therefore agree as follows:

ARTICLE I
CONTINGENT VALUE RIGHTS

1.1 Holders of CVRs; Appointment of Rights Agent.

(a) Pursuant to the terms of the Merger Agreement, as of the Effective Time (i) each holder of any shares of Company Common Stock that is converted into the right to receive the Merger Consideration shall, as part of such Merger Consideration, be entitled to one CVR for each such share of Company Common Stock, and (ii) each holder of any In-the-Money Company Option that is cancelled in exchange for the right to receive the excess of the Merger Consideration over the per share exercise price of each such In-the-Money Company Option shall, as part of such Merger Consideration, be entitled to receive one CVR for each share of Company Common Stock underlying each such In-the-Money Company Option. For the avoidance of doubt, no CVR shall be issued with respect to any Out-of-the-Money Company Options or any portion of In-the-Money Company Options that vest based on performance that do not vest in accordance with Section 2.8(d) of the Merger Agreement. The initial Holders shall be determined pursuant to the terms of the Merger Agreement and this Agreement, and a list of the initial Holders shall be furnished to the Rights Agent by or on behalf of Parent in accordance with Section 3.1 hereof.

(b) Parent hereby appoints the Rights Agent to act as rights agent for Parent in accordance with the express terms and conditions set forth in this Agreement, and the Rights Agent hereby accepts such appointment.

1.2 Nontransferable. CVRs may not be sold, assigned, transferred, pledged, encumbered or disposed of in any other manner, in whole or in part, other than pursuant to a Permitted Transfer, and, in the case of a Permitted Transfer, only in accordance with Section 1.3(c) hereof. Any attempted sale, assignment, transfer, pledge, encumbrance or disposition of CVRs, in whole or in part, in violation of this Section 1.2 shall be void *ab initio* and of no effect.

1.3 No Certificate; Registration; Registration of Transfer; Change of Address.

(a) CVRs shall not be evidenced by a certificate or other instrument.

(b) The Rights Agent shall keep a register (the "**CVR Register**") for the purposes of (i) identifying the Holders of CVRs and (ii) documenting CVRs and Permitted Transfers thereof, which CVR Register may be amended from time to time by the Rights Agent to reflect any changes to Holders or applicable number of CVRs as permitted hereunder, including to reflect any repurchases by Parent of CVRs. The CVR Register will initially show one position for Cede & Co. representing all of the CVRs that are issued to the former holders of shares of Company Common Stock held by DTC on behalf of the former street holders of the shares of Company Common Stock. With respect to any payments to be made under Section 1.4 below, the Rights Agent will accomplish such payment to any former street name holders of the shares of Common Stock by sending such payments to DTC. The Rights Agent will have no responsibilities whatsoever with regard to the distribution of payments by DTC to such street name holders.

(c) Without limiting the restriction on transferability set forth inSection 1.2, every request made to transfer a CVR must be in writing and accompanied by a written instrument of transfer and other requested documentation in form reasonably satisfactory to the Rights Agent, duly executed by the registered Holder or Holders thereof, or by the duly appointed legal representative, personal representative or survivor of such Holder or Holders, setting forth in reasonable detail the circumstances relating to the transfer demonstrating that such proposed transfer is a Permitted Transfer. Upon receipt of such written notice, the Rights Agent shall promptly notify Parent in writing that it has received such written notice. Upon receipt of such notice from the Rights Agent, Parent shall in good faith reasonably determine whether the transfer is a Permitted Transfer and otherwise complies with the other terms and conditions of this Agreement, and if Parent so reasonably determines that such transfer does so comply, Parent shall instruct the Rights Agent in writing to register the transfer of the applicable CVRs in the CVR Register. All duly transferred CVRs registered in the CVR Register shall be the valid obligations of Parent, evidencing the same right, and entitling the transferee to the same benefits and rights under this Agreement, as those held by the transferor. No transfer of a CVR shall be valid until registered in the CVR Register in accordance with this Agreement. The CVR Register shall be conclusive absent manifest error. Any transfer or assignment of CVRs shall be without charge (other than the cost of any transfer Tax or similar Tax or charge) to the applicable Holder. Parent and the Rights Agent may require payment from the applicable Holder or recipient of the applicable CVR of a sum sufficient to cover any stamp or other Tax or charge that is imposed in connection with any such registration of transfer and/or may require the applicable Holder or recipient of the applicable CVR to establish to the satisfaction of Parent and the Rights Agent that such stamp or other Tax or charge has been paid or is otherwise not payable.

(d) A Holder may make a written request to the Rights Agent to change such Holder's address of record in the CVR Register. Such written request must be duly executed by such Holder. Upon receipt of such written request, the Rights Agent shall promptly record the change of address in the CVR Register.

1.4 Payment Procedures.

(a) If the CVR Payment Milestone has been achieved on or prior to December 31, 2021 (the "**Expiration Date**"), then the Milestone Payments shall become due and payable. In such event, Parent or its designee shall provide prompt (and in no event later than ten Business Days after receipt of the FDA TE Achievement Notice) notice to the Rights Agent of the occurrence of the CVR Payment Milestone (the "**Milestone Occurrence Notice**"), which notice shall (i) indicate that the FDA TE Achievement Notice has been received and (ii) specify a payment date for the Milestone Payment, no later than 60 days after the date of the FDA TE Achievement Notice (the "**Payment Date**"). For the avoidance of doubt, the Milestone Payment shall only be paid, if at all, one time under this Agreement.

(b) On or before the Payment Date, Parent shall deliver to the Rights Agent an amount in cash equal to the aggregate Milestone Payment with respect to the CVRs held by all Holders, other than that portion payable to the Equity Award Holders, which aggregate amount shall be retained by Parent for payment pursuant to Section 1.4(d) below. The Rights Agent shall promptly (and in no event later than five Business Days after receipt thereof by the Rights Agent) send to each Holder at its address set forth in the CVR Register a copy of the Milestone Occurrence Notice and any letter of instruction reasonably required by the Rights Agent, and, other than with respect to Equity Award Holders, an amount in cash equal to the Milestone Payment with respect to each CVR held by such Holder. If the CVR Payment Milestone does not occur by 5:00 p.m. Eastern time on the Expiration Date, then the Holders shall have no right to receive the Milestone Payment with respect to their CVRs

(c) Parent or its designee shall provide prompt (and in no event later than ten Business Days after receipt of the FDA TE Non-Achievement Notice) notice to the Rights Agent a certificate ("**Non-Occurrence Notice**") which notice shall (i) indicate that the FDA TE Non-Achievement Notice has been received and (ii) indicate that the Milestone Payment will not be paid. The Rights Agent shall promptly (and in no event later than five Business Days after receipt thereof by the Rights Agent) send to each Holder at its address set forth in the CVR Register a copy of the Non-Occurrence Notice.

(d) With respect to the Milestone Payment that is payable pursuant to this Agreement to Holders other than Equity Award Holders, the Rights Agent shall pay the applicable amount to each of the Holders (the amount to which each Holder is entitled to receive will be based on the number of CVRs held by such Holder as reflected on the CVR Register) by check mailed to the address of each Holder as reflected on the CVR Register as of the close of business on the last Business Day prior to such payment date. With respect to any Milestone Payment that is payable to Equity Award Holders, Parent shall, within 10 days following the Payment Date, pay, or cause the Company to pay, each such Holder the applicable amount (the amount to which each Equity Award Holder is entitled to receive will be based on the number of CVRs held by such Holder as reflected on the CVR Register) through the Company's payroll system (subject to any applicable Tax withholding).

(e) Each of the Rights Agent, Parent, Acquisition Sub, any Affiliate of Parent and the Surviving Corporation shall be entitled to deduct and withhold from any amounts payable pursuant to this Agreement and pay to the applicable Taxing Authority, such amounts that each of the Rights Agent, Parent, Acquisition Sub, any Affiliate of Parent and the Surviving Corporation is required to deduct or withhold with respect to the making of such payment under the Code or any other provision of applicable Tax Laws. To the extent that such amounts are so deducted and withheld, such amounts shall be treated for all purposes of this Agreement as having been paid to the Person in respect of in respect of whom such deduction and withholding was made.

(f) The Rights Agent shall hold, as agent for Parent, any cash held by it for payment to the Holders in a non-interest bearing account at such commercial bank as Parent instructs the Rights Agent. Notwithstanding anything to the contrary herein, Parent shall be responsible for providing the Rights Agent with sufficient funds to satisfy its payment obligations to Holders.

(g) Any cash that remains undistributed to the Holders of CVRs 12 months after such payment is due (including by means of uncashed checks or invalid addresses on the CVR Register) in accordance with the terms of this Agreement, shall be delivered to Parent or its designee, within five Business Days following the expiration of such 12 month period and shall be held in trust by Parent for the benefit of the Holders. Any Holders of CVRs who have not theretofore received cash with respect to such CVRs shall thereafter look only to Parent for payment of their claim therefor (subject to abandoned property, escheat or similar Laws). Notwithstanding any other provisions of this Agreement, any portion of the cash provided by Parent to the Rights Agent that remains unclaimed after termination of this Agreement in accordance with Section 5.13 (or such earlier date immediately prior to such time as such amounts would otherwise escheat to, or become property of, any Governmental Authority) shall, to the extent permitted by Law, become the property of Parent free and clear of any claims or interest of any Person previously entitled thereto. Neither Parent, the Rights Agent nor any of their Affiliates shall be liable to any Holder for any payments delivered to a public official pursuant to any abandoned property, escheat or other similar Law.

(h) The Rights Agent shall keep copies of this Agreement available for inspection by the Holders during normal business hours at its office.

1.5 No Voting, Dividends or Interest; No Equity or Ownership Interest.

(a) CVRs shall not have any voting or dividend or consent rights, and, shall not entitle the Holders to receive notice as stockholders in respect of the meetings of stockholders or the election of directors of Parent or any or any other matter, or any other rights of any kind or nature whatsoever as a stockholder of Parent, either at Law or in equity. Except as set forth in this Agreement, interest shall not accrue on any amounts payable in respect of CVRs.

(b) CVRs shall not represent any equity or ownership interest in Parent, any constituent company to the Merger or any of their respective Affiliates. The rights of a Holder in respect of the CVRs are limited to those expressed in this Agreement and the Merger Agreement.

1.6 Ability to Abandon CVRs. A Holder may at any time, at such Holder's option, abandon all of such Holder's remaining rights in a CVR by transferring such CVR to Parent or its Affiliates without consideration therefor. Nothing in this Agreement shall prohibit Parent or any of its Affiliates from offering to acquire or acquiring any CVRs for consideration from the Holders, in private transactions or otherwise, in its sole discretion. Any CVRs acquired by Parent or any of its Affiliates shall be automatically deemed extinguished and no longer outstanding for purposes of the definition of Acting Holders.

ARTICLE II
THE RIGHTS AGENT

2.1 Certain Duties and Responsibilities of the Rights Agent.

(a) The Rights Agent shall not have any liability for any actions taken or not taken in connection with this Agreement, except to the extent such liability arises as a result of the willful misconduct, bad faith, gross negligence or fraud of the Rights Agent.

(b) The Acting Holders may direct the Rights Agent to act on behalf of the Holders in enforcing any of their rights hereunder. All rights of action of any or all Holders under this Agreement may be enforced by the Rights Agent, and any action, suit or proceeding instituted by the Rights Agent shall be brought in its name as the Rights Agent and any recovery in connection therewith shall be for the proportionate benefit of all the Holders, as their respective rights or interests may appear.

2.2 Certain Rights of the Rights Agent.

(a) The Rights Agent undertakes to perform such duties and only such duties as are specifically set forth in this Agreement, and no implied covenants or obligations shall be read into this Agreement against the Rights Agent.

(b) The Rights Agent may rely and shall be protected in acting or refraining from acting upon any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order or other paper or document believed by it in good faith to be genuine and to have been signed or presented by the proper party or parties.

(c) The Rights Agent may engage and consult with counsel of its reasonable selection and the written advice or opinion of such outside counsel shall be full and complete authorization and protection in respect of any action taken, suffered or omitted by it hereunder in good faith and in reliance thereon.

(d) Any permissive rights of the Rights Agent hereunder shall not be construed as a duty.

(e) The Rights Agent shall not be required to give any note or surety in respect of the execution of such powers or otherwise in respect of such powers.

(f) Parent agrees to indemnify the Rights Agent for, and to hold the Rights Agent harmless from and against, any loss, liability, damage or expense ("**Loss**") suffered or incurred by the Rights Agent arising out of or in connection with the Rights Agent's performance of its obligations under this Agreement, including the reasonable costs and expenses of defending the Rights Agent against any claims, charges, demands, actions or suits arising out of or in connection with such performance, except to the extent such Loss shall have been determined by a court of competent jurisdiction to have resulted from the Rights Agent's gross negligence, bad faith, willful misconduct or fraud. Parent's obligations under this Section 2.2(f) to indemnify the Rights Agent shall survive the resignation or removal of any Rights Agent and the termination of this Agreement.

(g) In addition to the indemnification provided under Section 2.2(f), but without duplication, Parent agrees (i) to pay the fees of the Rights Agent in connection with the Rights Agent's performance of its obligations hereunder, as agreed upon in writing by the Rights Agent and Parent on or prior to the date of this Agreement, and (ii) to reimburse the Rights Agent for all reasonable and documented out-of-pocket expenses, including all Taxes (other than income, receipt, franchise or similar Taxes) and governmental charges, incurred by the Rights Agent in the performance of its obligations under this Agreement.

2.3 Resignation and Removal; Appointment of Successor.

(a) The Rights Agent may resign at any time by giving written notice thereof to Parent and the Holders specifying a date when such resignation shall take effect, which notice shall be sent at least 60 days prior to the date so specified but in no event shall such resignation become effective until a successor Rights Agent has been appointed and accepted such appointment.

(b) Parent shall have the right to remove the Rights Agent at any time by specifying a date when such removal shall take effect. Notice of such removal shall be given by Parent to the Rights Agent, which notice shall be sent at least 60 days prior to the date so specified.

(c) If the Rights Agent shall resign, be removed or become incapable of acting, Parent shall promptly appoint a qualified successor Rights Agent. The successor Rights Agent so appointed shall, forthwith upon its acceptance of such appointment in accordance with this Section 2.3(c) and Section 2.4, become the Rights Agent for all purposes hereunder.

(d) Parent shall give notice of each resignation or removal of the Rights Agent and each appointment of a successor Rights Agent through the facilities of DTC in accordance with DTC's procedures and/or by mailing written notice of such event by first-class mail, postage prepaid, to the Holders as their names and addresses appear in the CVR Register. Each notice shall include the name and address of the successor Rights Agent. If Parent fails to send such notice within 10 Business Days after acceptance of appointment by a successor Rights Agent, the successor Rights Agent shall cause the notice to be mailed at the expense of Parent. Failure to give any notice provided for in this Section 2.3, however, shall not affect the legality or validity of the resignation or removal of the Rights Agent or the appointment of the successor Rights Agent, as the case may be.

2.4 Acceptance of Appointment by Successor. Every successor Rights Agent appointed hereunder shall, at or prior to such appointment, execute, acknowledge and deliver to Parent and to the retiring Rights Agent an instrument accepting such appointment and a counterpart of this Agreement, and thereupon such successor Rights Agent, without any further act, deed or conveyance, shall become vested with all the rights, powers, trusts and duties of the Rights Agent; provided that upon the request of Parent or the successor Rights Agent, such resigning or removed Rights Agent shall execute and deliver an instrument transferring to such successor Rights Agent all the rights, powers and trusts of such resigning or removed Rights Agent.

ARTICLE III
COVENANTS

3.1 List of Holders. Parent shall furnish or cause to be furnished to the Rights Agent the names and addresses of the Holders within 30 Business Days following the Effective Time. The CVRs shall, in the case of the holders of Company Common Stock, be registered in the names and addresses of the holder as set forth in the applicable letter of transmittal accompanying the Company Common Stock surrendered by the holder thereof in connection with the Offer pursuant to the Merger Agreement and in a denomination equal to the number of Company Common Stock so surrendered, and in the case of In-the-Money Company Options, be registered in the name and address of the holder set forth in the books and records of the Company at the Effective Time and in a denomination computed in accordance with the terms of the Merger Agreement.

3.2 Efforts. Parent shall, during the period from and after the Closing Date through the later of the delivery of theNon-Occurrence Notice or Milestone Occurrence Notice to the Rights Agent, exercise commercially reasonable efforts to cause the occurrence of the CVR Payment Milestone. For purposes of this Section 3.2(a), "commercially reasonable efforts" means, with respect to the CVR Payment Milestone event, the efforts and resources customarily applied by similarly situated pharmaceutical companies of comparable size and resources to secure the occurrence of such event for a product of similar potential (including commercial potential) and in similar stages of development, taking into account all relevant technical, commercial, legal, scientific and/or medical factors, including its proprietary position and profitability (including pricing and reimbursement status), issues of safety and efficacy, anticipated or actual product profile, difficulty in product development or manufacturing, anticipated or actual cost and

time to develop, anticipated or actual market conditions and economic return potential, anticipated or actual competitiveness of alternative products in the marketplace, the nature and extent of anticipated or actual market exclusivity (including patent coverage and regulatory exclusivity), the regulatory environment, including regulatory requirements involved and the reasonably expected likelihood of regulatory approval, anticipated or actual amounts of marketing and promotional expenditures required, other relevant technical, commercial, legal, scientific and/or medical factors.

ARTICLE IV
AMENDMENTS

4.1 Amendments Without Consent of Holders or Rights Agent.

(a) Parent, at any time or from time to time, may unilaterally enter into one or more amendments hereto for any of the following purposes, without the consent of any of the Holders or the Rights Agent, so long as, in the cases of clauses (ii) through (iv), such amendments do not, individually or in the aggregate, adversely affect the interests of the Holders:

(i) to evidence the appointment of another Person as a successor Rights Agent and the assumption by any successor Rights Agent of the covenants and obligations of the Rights Agent hereof in accordance with the provisions of this Agreement;

(ii) to add to the covenants of Parent such further covenants, restrictions, conditions or provisions as Parent shall determine to be for the protection of the Holders;

(iii) to cure any ambiguity, to correct or supplement any provision herein that may be defective or inconsistent with any other provision herein, or to make any other provisions with respect to matters or questions arising under this Agreement;

(iv) as may be necessary or appropriate to ensure that CVRs are not subject to registration under the Securities Act or the Exchange Act;

(v) to evidence the assignment of this Agreement by Parent as provided in Section 5.4; or

(vi) any other amendment hereto which would provide any additional rights or benefits to the Holders or that does not adversely affect the legal rights under this Agreement of any such Holder.

(b) Promptly after the execution by Parent of any amendment pursuant to the provisions of this Section 4.1, Parent shall mail (or cause the Rights Agent to mail) a notice thereof through the facilities of DTC in accordance with DTC's procedures and/or by first class mail to the Holders at their addresses as set forth on the CVR Register, setting forth in general terms the substance of such amendment.

4.2 Amendments with Consent of Holders.

(a) In addition to any amendments to this Agreement that may be made by Parent without the consent of any Holder or the Rights Agent pursuant to Section 4.1, with the consent of the Holders of not less than a majority of the outstanding CVRs, whether evidenced in writing or taken at a meeting of the Holders, Parent and the Rights Agent may enter into one or more amendments hereto for the purpose of adding, eliminating or changing any provisions of this Agreement, even if such addition, elimination or change is adverse to the interests of the Holders.

(b) Promptly after the execution by Parent and the Rights Agent of any amendment pursuant to the provisions of this Section 4.2 (but prior to the effectiveness of such amendment), Parent shall mail (or cause the Rights Agent to mail) a notice thereof through the facilities of DTC in accordance with DTC's procedures and/or by first class mail to the Holders at their addresses as set forth on the CVR Register, setting forth in general terms the substance of such amendment. Any amendment to this Agreement made pursuant to this Section 4.2 shall become effective 15 Business Days following the mailing of such notice.

4.3 Amendments Affecting Rights Agent. The Rights Agent may, but is not obligated to, enter into any such amendment that affects the Rights Agent's own rights, powers, trusts, privileges, covenants or duties under this Agreement or otherwise.

4.4 Effect of Amendments. Upon the execution of any amendment under this ARTICLE IV, this Agreement shall be modified in accordance therewith, such amendment shall form a part of this Agreement for all purposes and every Holder shall be bound thereby.

ARTICLE V
MISCELLANEOUS

5.1 Notices to Rights Agent and Parent. All notices and other communications under this Agreement shall be in writing and shall be deemed to have been duly delivered and received (i) four Business Days after being sent by registered or certified mail, return receipt requested, postage prepaid, (ii) one Business Day after being sent for next Business Day delivery, fees prepaid, via a reputable nationwide overnight courier service, (iii) immediately upon delivery by hand or (iv) on the date sent by email (except that notice given by email will not be effective unless either (A) a duplicate copy of such email notice is promptly given by one of the other methods described in this Section 5.1 or (B) the receiving party delivers a written confirmation of receipt of such notice either by email or any other method described in this Section 5.1 (excluding "out of office" or other automated replies)), in each case to the intended recipient as set forth below:

(i) if to Parent, to:
Ligand Pharmaceuticals Incorporated
3911 Sorrento Valley Boulevard, Suite 110
San Diego, CA 92121
Attention: Charles S. Berkman
E-mail: cberkman@ligand.com

with a copy (which shall not constitute notice) to:

Latham & Watkins LLP
12670 High Bluff Drive
San Diego, CA 92130
Attention: Matt Bush; R. Scott Shean
E-mail: matt.bush@lw.com; scott.shean@lw.com

(ii) if to the Rights Agent, to:

American Stock Transfer & Trust Company, LLC
6201 15th Avenue
Brooklyn, New York 11219
Attn: Corporate Actions
Tel: (718) 921-8200

with a copy (which shall not constitute notice) to:

Wilson Sonsini Goodrich & Rosati
Professional Corporation
12235 El Camino Real
San Diego, California 92130
Attention: Dan Koeppen, Zachary Myers and Ethan Lutske
E-mail: dkoeppen@wsgr.com,
zmyers@wsgr.com and
elutske@wsgr.com

5.2 Notice to Holders. All notices, requests and communications required to be given to the Holders shall be sufficiently given (unless otherwise herein expressly provided) if in writing and transmitted through the facilities of DTC in accordance with DTC's procedures and/or mailed, first-class postage prepaid, to each Holder affected by such event, at his, her or its address set forth in the CVR Register, not later than the latest date, and not earlier than the earliest date, prescribed for the giving of such notice. In any case where notice to the Holders is given by mail, neither the failure to mail such notice, nor any defect in any notice so mailed, to any particular Holder shall affect the sufficiency of such notice with respect to other Holders.

5.3 Entire Agreement. This Agreement, the Confidentiality Agreement and the Merger Agreement represent the entire understanding of Parent and the Company with reference to the CVRs, and this Agreement supersedes any and all other oral or written agreements hereto made with respect to the CVRs, except for the Merger Agreement and the Confidentiality Agreement. This Agreement represents the entire understanding of the Rights Agent with reference to the CVRs, and this Agreement supersedes any and all other oral or written agreements hereto made with respect to the CVRs, except for the Merger Agreement and the Confidentiality Agreement.

5.4 Successors and Assigns. Parent may assign, in its sole discretion and without the consent of any other party, any or all of its rights, interests and obligations hereunder to one or more its Affiliates (that are wholly owned direct or indirect Subsidiaries of Parent) (each, an "**Assignee**") and any such Assignee may thereafter assign, in its sole discretion and without the consent of any other party, any or all of its rights, interests and obligations set forth hereunder to one or more additional Assignees; provided, however, that in connection with any assignment to an Assignee, Parent shall agree to remain liable for the performance by Parent of its obligations hereunder. This Agreement shall be binding upon, and shall be enforceable by and inure solely to the benefit of, the parties to this Agreement and their respective successors and assigns. The Rights Agent may not assign this Agreement without Parent's consent. This Agreement shall not restrict Parent's or any successor's ability to merge or consolidate or enter into or consummate any Change of Control; *provided*, that in the event of a Change of Control, Parent shall cause the acquirer to assume Parent's obligations, duties and covenants under this Agreement. Any attempted assignment of this Agreement or any of such rights in violation of this Section 5.4 shall be void *ab initio* and of no effect.

5.5 Benefits of Agreement. Nothing in this Agreement, express or implied, shall give to any Person (other than the parties to this Agreement, the Holders and their permitted successors and assigns hereunder) any benefit or any legal or equitable right, remedy or claim under this Agreement or under any covenant or provision herein contained, all such covenants and provisions being for the sole benefit of the parties to this Agreement, the Holders and their permitted successors and assigns. The Holders shall have no rights hereunder except as are expressly set forth herein.

5.6 Governing Law. This Agreement shall be governed by and construed in accordance with the Laws of the State of Delaware, regardless of the Laws that might otherwise govern under applicable principles of conflicts of law thereof.

5.7 Consent to Jurisdiction; Service of Process; Venue. Each of the parties to this Agreement (a) irrevocably consents to the service of the summons and complaint and any other process (whether inside or outside the territorial jurisdiction of the Chosen Courts) in any Legal Proceeding relating to the transactions contemplated by this Agreement, for and on behalf of itself or any of its properties or assets, in accordance with Section 5.1 or in such other manner as may be permitted by applicable Law, but nothing in this Section 5.7 shall affect the right of any parties to this Agreement to serve legal process in any other manner permitted by applicable Law; (b) irrevocably and unconditionally consents and submits itself and its properties and assets in any Legal Proceeding to the exclusive jurisdiction of the Chosen Courts in the event any dispute or controversy arises out of this Agreement or the transactions contemplated in this Agreement, or for recognition and enforcement of any judgment in respect thereof; (c) agrees that it will not attempt to deny or defeat such personal jurisdiction by motion or other request for leave from any Chosen Court; (d) agrees that any Legal Proceedings arising in connection with this Agreement or the transactions contemplated in this Agreement shall be brought, tried and determined only in the Chosen Courts; (e) waives any objection that it may now or hereafter have to the venue of any such Legal Proceeding in the Chosen Courts or that such Legal Proceeding was brought in an inconvenient court and agrees not to plead or claim the same; and (f) agrees that it will not bring any Legal Proceeding relating to this Agreement or the transactions contemplated hereby or thereby in any court other than the Chosen Courts. Each of parties to this Agreement agrees that a final judgment in any Legal Proceeding in the Chosen Courts shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by applicable Law.

5.8 WAIVER OF JURY TRIAL. EACH PARTY TO THIS AGREEMENT ACKNOWLEDGES AND AGREES THAT ANY CONTROVERSY THAT MAY ARISE PURSUANT TO THIS AGREEMENT IS LIKELY TO INVOLVE COMPLICATED AND DIFFICULT ISSUES, AND THEREFORE EACH PARTY TO THIS AGREEMENT IRREVOCABLY AND UNCONDITIONALLY WAIVES ANY RIGHT THAT SUCH PARTY MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LEGAL PROCEEDING (WHETHER FOR BREACH OF CONTRACT, TORTIOUS CONDUCT OR OTHERWISE) DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS AGREEMENT. EACH PARTY TO THIS AGREEMENT ACKNOWLEDGES AND AGREES THAT (A) NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY TO THIS AGREEMENT HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER; (B) IT UNDERSTANDS AND HAS CONSIDERED THE IMPLICATIONS OF THIS WAIVER; (C) IT MAKES THIS WAIVER VOLUNTARILY; AND (D) IT HAS BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION 5.8.

5.9 Further Assurances. Subject to the provisions of this Agreement, the parties to this Agreement will, from time to time, do all acts and things and execute and deliver all such further documents and instruments, as the other parties to this Agreement may reasonably require to effectively carry out or better evidence or perfect the full intent and meaning of this Agreement.

5.10 Severability. In the event that any provision of this Agreement, or the application thereof, becomes or is declared by a court of competent jurisdiction to be illegal, void or unenforceable, the remainder of this Agreement will continue in full force and effect and the application of such provision to other persons or circumstances will be interpreted so as reasonably to effect the intent of the parties to this Agreement. The parties to this Agreement further agree to replace such void or unenforceable provision of this Agreement with a valid and enforceable provision that will achieve, to the extent possible, the economic, business and other purposes of such void or unenforceable provision.

5.11 Headings. The headings and table of contents contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement.

5.12 Counterparts. This Agreement and any amendments to this Agreement may be executed in one or more textually identical counterparts, all of which will be considered one and the same agreement and will become effective when one or more counterparts have been signed by each of the parties to this Agreement and delivered to the other parties to this Agreement, it being understood that all parties to this Agreement need not sign the same counterpart. Any such counterpart, to the extent delivered by fax or .pdf, ..tif, .gif, .jpg or similar attachment to electronic mail (any such delivery, an "**Electronic Delivery**"), will be treated in all manner and respects as an original executed counterpart and will be considered to have the same binding legal effect as if it were the original signed version thereof delivered in person. No party to this Agreement may raise the use of an Electronic Delivery to deliver a signature, or the fact that any signature or agreement or instrument was transmitted or communicated through the use of an Electronic Delivery, as a defense to the formation of a contract, and each party to this Agreement forever waives any such defense, except to the extent such defense relates to lack of authenticity.

5.13 Termination. This Agreement shall be terminated and of no force or effect, and the parties to this Agreement shall have no liability hereunder (other than to the extent of any obligations which expressly survive or provide for performance following termination), upon the earliest to occur of (a) the full payment of the Milestone Payment and (b) Parent's delivery of the Non-Occurrence Notice.

5.14 Legal Holidays. In the event that the day on which any Milestone Payment is due shall not be a Business Day, then, notwithstanding any provision of this Agreement to the contrary, any payment required to be made in respect of the CVRs shall be made on the next succeeding Business Day with the same force and effect as if made on the last day on which such Milestone Payment is due.

5.15 Interpretation. When a reference is made in this Agreement to an Article, Annex or Section, such reference shall be to an Article, Annex or Section of this Agreement unless otherwise indicated. Whenever the words "include," "includes" or "including" are used in this Agreement, they shall be deemed to be followed by the words "without limitation." The words "hereof," "herein" and "hereunder" and words of similar import when used in this Agreement shall refer to this Agreement as a whole and not to any particular provision of this Agreement. All terms defined in this Agreement shall have the defined meanings when used in any certificate or other document made or delivered pursuant of this Agreement unless otherwise defined therein. The definitions contained in this Agreement are applicable to the singular as well as the plural forms of such terms and to the masculine as well as to the feminine and neuter genders of such term. Any agreement, instrument or statute defined or referred to herein or in any agreement or instrument that is referred to herein means such agreement, instrument or statute as from time to time amended, modified or supplemented, including (in the case of agreements or instruments) by waiver or consent and (in the case of statutes) by succession of comparable successor statutes and references to all attachments thereto and instruments incorporated therein. References to a Person are also to its permitted

successors and assigns. References to clauses without a cross-reference to a Section or subsection are references to clauses within the same Section or, if more specific, subsection. References from or through any date means, unless otherwise specified, from and including or through and including, respectively. The symbol "$" refers to United States Dollars.

5.16 No Fiduciary Obligations. Each of Parent and the Rights Agent acknowledges and agrees that the other party, its Affiliates and their respective officers, directors and controlling Persons do not owe any fiduciary duties to the first party or any of its respective Affiliates, officers, directors or controlling Persons. The only obligations of Parent and the Rights Agent to each other and their Affiliates and their respective officers, directors and controlling Persons arising out of this Agreement are the contractual obligations expressly set forth in this Agreement.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

IN WITNESS WHEREOF, the undersigned have caused this Agreement to be executed by their respective duly authorized officers to be effective as of the date first above written.

LIGAND PHARMACEUTICALS INCORPORATED

By: /s/ Charles S. Berkman
Name: Charles S. Berkman
Title: Senior Vice President, General Counsel and Secretary

AMERICAN STOCK TRANSFER & TRUST COMPANY, LLC

By: /s/ Michael Legregin
Name: Michael Legregin
Title: Senior Vice President

[Signature Page to Contingent Value Rights Agreement]

ANNEX A

CERTAIN DEFINED TERMS

"**Acting Holder(s)**" means any Holder or Holders of at least thirty-five percent (35%) of the outstanding CVRs as set forth on the CVR Register

"**Business Day**" means any day, other than a Saturday, Sunday and any day which is a legal holiday under the Laws of the State of California or is a day on which banking institutions located in the State of California are authorized or required by Law or other governmental action to close.

"**Change of Control**" means (i) a sale or other disposition of all or substantially all of the assets of Parent on a consolidated basis (other than to any direct or indirect wholly owned subsidiary of Parent), (ii) a merger or consolidation involving Parent in which it is not the surviving entity, and (iii) any other transaction involving Parent in which it is the surviving entity but in which the stockholders of Parent immediately prior to such transaction own less than fifty percent (50%) of the surviving entity's voting power immediately after the transaction, other than any bona fide equity financing transaction solely related to the continued financing of the operations of Parent and its subsidiaries.

"**Chosen Courts**" means the Court of Chancery of the State of Delaware and any state appellate court therefrom within the State of Delaware (or, if the Court of Chancery of the State of Delaware does not have subject matter jurisdiction (but only in such event), the United States District Court for the District of Delaware or, if jurisdiction is not then available in the United States District Court for the District of Delaware (but only in such event), then any Delaware state court).

"**CVR(s)**" means the rights of Holders to receive contingent cash payments pursuant to the Merger Agreement and this Agreement.

"**CVR Payment Milestone**" means, with respect to Company's teriparatide injection product (also referred to as PF708 or Bonsity™) (the "**CVR Product**"), the receipt of written notice from the U.S. Food and Drug Administration (the "**FDA**") indicating that the FDA has determined the CVR Product to be therapeutically equivalent to the listed product, FORTEO® (teriparatide injection) ("**FORTEO**"), and that the FDA has assigned the CVR Product a therapeutic equivalence code that begins with an "A" in the FDA publication, *Approved Drug Products with Therapeutic Equivalence Evaluations* (the "**Orange Book**") with respect to FORTEO (the "**FDA TE Achievement Notice**").

"**DTC**" means The Depository Trust Company or any successor entity thereto.

"**Equity Award Holder**" means Holders of CVRs granted with respect to In-the-Money Options.

"**FDA TE Non-Achievement Notice**" means with respect to the CVR Product, the receipt of written notice from the FDA indicating that the FDA has determined that the CVR Product is not therapeutically equivalent to FORTEO, such that the CVR Product will not be assigned a therapeutic equivalence code that begins with an "A" in the Orange Book with respect to FORTEO.

"**Governmental Authority**" means any government, any governmental or regulatory entity or body, department, commission, board, agency, instrumentality, legislature, Taxing Authority, political subdivision, bureau, official and any self-regulatory organization (including NYSE American) and any court, tribunal, judicial body, arbitrator or arbitration panel, in each case whether federal, state, county, provincial, and whether local, foreign or multinational.

"**Holder**" means, at the relevant time, a Person in whose name a CVR is registered in the CVR Register.

"**Law**" means any and all applicable federal, state, local, municipal, foreign, multinational or other law, statute, constitution, principle of common law, ordinance, code, rule, regulation, ruling, order or other legal requirement issued, enacted, adopted, promulgated, implemented or otherwise put into effect by law under the authority of any Governmental Authority.

"**Legal Proceeding**" means any civil, criminal or administrative actions, demands, countersuits, proceedings suits, claims, charges, arbitrations, oppositions, investigations, reexaminations, lawsuits, litigations or other proceedings brought by or pending before any Governmental Authority.

"**Milestone Payment**" means an amount equal to $2.00 per CVR, payable in cash, without interest thereon and subject to reduction for any applicable withholding Taxes in respect thereof.

"**Permitted Transfer**" means a transfer of one or more CVRs (a) upon death by will or intestacy; (b) by instrument to an inter vivos or testamentary trust in which the CVRs are to be passed to beneficiaries upon the death of the trustee; (c) made pursuant to a court order; (d) made by operation of Law (including a consolidation or merger) or without consideration in connection with the dissolution, liquidation or termination of any corporation, limited liability company, partnership or other entity; (e) in the case of CVRs payable to a nominee, from a nominee to a beneficial owner (and, if applicable, through an intermediary) or from such nominee to another nominee for the same beneficial owner, in each case as allowable by DTC; or (f) as provided in Section 1.6.

Ligand Completes Acquisition of Pfenex Inc.

Adds proprietary technology for manufacturing antibodies, enzymes and other protein-based treatments

Acquired company expected to increase Ligand's royalties by 50% annually and to contribute $60 million of total revenue in 2023

SAN DIEGO, Calif. (October 1, 2020) — Ligand Pharmaceuticals Incorporated (NASDAQ: LGND) today announced it has completed its tender offer for all outstanding shares of Pfenex Inc. for $437.5 million in cash, plus one non-transferable contingent value right (CVR) per share representing the right to receive a contingent payment of $78 million in cash if a certain specified milestone is achieved. The acquired company will cease trading on the NYSE American under the symbol PFNX effective as of October 1, 2020.

"This is a transformative acquisition that provides a highly valuable technology platform and a portfolio of royalty-bearing collaborations with leading pharmaceutical companies for treatments and vaccines. The business is well established with an attractive growth outlook that is expected to add significantly to Ligand's financial growth and performance," said John Higgins, Chief Executive Officer of Ligand. "The expertise we acquired in the expression of complex proteins is highly complementary to Ligand's industry-leading antibody and drug enabling technologies, which together comprise a comprehensive discovery and early stage platform. We welcome our new colleagues to Ligand and look forward to growing the integrated business with our expanded platform supporting the pharmaceutical industry."

The acquired protein expression technology platform is utilized to develop next-generation and novel protein therapeutics to improve existing therapies and create new therapies for biological targets linked to critical, unmet diseases. The proprietary platform uses *P. fluorescens* bacterium, which are especially well-suited for complex, large-scale protein production that cannot be made by more traditional host systems. The technology can contribute significant value to biopharmaceutical development programs by reducing development timelines and costs for manufacturing human therapeutics and vaccines.

Financial and Business Highlights

- The acquired business is forecasted to generate $30 million of total revenue in 2021 and double that amount, or $60 million, in 2023. Royalties are expected to be the major component of total revenue and are forecasted to increase Ligand's royalty revenue by approximately 50% starting by the end of 2021 assuming approval of the programs partnered with Jazz and Merck. The newly acquired business is expected to be accretive to Ligand in 2021 and contribute $1.50 in adjusted earnings per share in 2023.
- Regulatory submission is expected to be filed in the fourth quarter 2020 for Merck's V114, with potential approval and launch in 2021. Jazz Pharmaceuticals anticipates submitting the JZP-458 biologics license application (BLA) as early as year-end 2020 and is targeting mid-2021 for U.S. launch following BLA submission and approval.
- Serum Institute of India (SII) recently launched its PNEUMOSIL vaccine to low- and middle-income countries where price previously was a barrier to providing sufficient vaccination. SII is targeting an initial delivery of 150 million doses of the vaccine annually.
- Ligand gains eight existing partner contracts and over $600 million of remaining milestone payments to potentially be paid to Ligand.
- Ligand believes it can secure at least three new partnerships over the next 12 months whereby large pharma or leading biotech companies license Ligand's newly acquired protein expression technology.

Partnership Highlights

The acquisition brings to Ligand major collaborations with Jazz Pharmaceuticals, Merck, Serum Institute of India and Alvogen. Each has the potential to contribute meaningfully to Ligand's royalty revenue, as follows:

- **Jazz Pharmaceuticals**: Under this collaboration Ligand will receive tiered royalties on net sales of JZP-458. JZP-458 is a recombinant *Erwinia* asparaginase product candidate that is being developed for the treatment of pediatric and adult patients with acute lymphoblastic leukemia (ALL) or lymphoblastic lymphoma (LBL) who are hypersensitive to *E. coli*-derived asparaginase products. The Phase 2/3 study of JZP-458 continues to enroll and Jazz Pharmaceuticals anticipates submitting the JZP-458 BLA as early as year-end 2020 and is targeting mid-2021 for U.S. launch following BLA submission and approval. JZP-458 was granted Fast Track designation by FDA in October 2019 for the treatment of this patient population. The Pfenex Expression Technology platform is used to develop complex therapeutic proteins such as JZP-458.
- **Merck**: Under this collaboration, Ligand will receive a low-single-digit royalty on net sales of Merck's 15-valeant pneumococcal vaccine V114. V114 is expected to compete with Pfizer's $6 billion Prevnar franchise. Merck plans to file a BLA by the end of 2020, with a standard 10-month FDA review. The CRM197 carrier protein protected via the Pfenex platform is utilized in the Merck V114 vaccine program.
- **Serum Institute of India**: Under this collaboration Ligand will receive a low-to-mid-single-digit royalty on net sales of SII's recently approved PNEUMOSIL vaccine and Phase 3 meningococcal vaccine. SII is initially targeting 150 million doses of the vaccines annually for low-and middle-income countries in the developing world. SII intends to sell the vaccine at $2 to $4 per dose. PNEUMOSIL utilizes the CRM197 platform.
- **Teriparatide**: Teriparatide Injection is exclusively licensed to Alvogen for sale in the U.S. Under this collaboration, Ligand may be eligible to receive 50% gross profit share on sales of Teriparatide Injection (previously referred to as PF708 and Bonsity™, filed with FDA as a 505(b)(2) application referencing Eli Lilly's Forteo®) if the product is rated by FDA as Therapeutic Equivalent to Forteo, and up to 40% if rated differently. Alvogen is currently marketing Teriparatide Injection in the U.S., and continues to seek a Therapeutic Equivalence rating from FDA. Eli Lilly's Forteo had U.S. sales of $645 million in 2019.[1] Alvogen recently received EU Marketing Authorization for Teriparatide Injection from the European Commission, to be marketed under the name Livogiva™ by Theramex. Important safety information about Teriparatide can be found here.

Expression Technology Platform

The Pfenex Expression Technology® is a robust, validated, cost-effective and scalable platform for recombinant protein production, and is especially well-suited for complex, large-scale protein production where traditional systems are not suitable. Multiple global manufacturers have demonstrated consistent success with the platform and the technology is currently out-licensed for numerous commercial and development-stage programs. The versatility of the platform has been demonstrated in the production of enzymes, peptides, antibody derivatives and engineered non-natural proteins. Partners seek the platform as it can contribute significant value to biopharmaceutical development programs by reducing development timelines and costs for manufacturing therapeutics and vaccines. Given pharmaceutical industry trends toward large molecules with increasing structural complexities, the Pfenex Expression Technology is well positioned to meet these growing needs as the most comprehensive broadly available protein production platform in the industry.

CRM197

CRM197 is a non-toxic mutant of diphtheria toxin having a single amino acid substitution of glutamic acid to glycine at position 52. CRM197 is a well-defined protein and functions as a carrier for

[1] Forteo is a trademark of Eli Lilly which has no affiliation with Ligand, Pfenex or Alvogen. Teriparatide Injection is not an authorized generic of Forteo.

polysaccharides and haptens, making them immunogenic. It is utilized as a carrier protein in several approved conjugate vaccines for diseases such as Streptococcus pneumoniae, Haemophilus influenzae B and Neisseria meningitidis. CRM197 is produced by the Pfenex Expression Technology platform and is currently being used in vaccine development by multiple partners, including Merck and the Serum Institute of India Private Ltd.

Integration Plan

Ligand plans to operate the newly acquired protein expression technology platform business with approximately 50 specialized employees based in San Diego, CA. By mid-2021, Ligand expects to consolidate its multiple San Diego locations into one facility at the current Pfenex company location.

Transaction Details

On October 1, 2020, Ligand completed the acquisition through a tender offer and subsequent merger of Pfenex with Pelican Acquisition Sub Inc., a wholly owned subsidiary of Ligand (Buyer). Pfenex is now a wholly owned subsidiary of Ligand. The tender offer for all of the outstanding shares of common stock of Pfenex at a price of $12.00 per share, in cash, plus a CVR, which represents the right to receive a contingent payment of $2.00 in cash, without interest and less any applicable withholding taxes, if a specified milestone is achieved, expired as scheduled, at midnight (New York City Time), at the end of the day on Tuesday, September 29, 2020. American Stock Transfer & Trust Company, LLC, the depositary and paying agent for the tender offer, has advised Ligand that 24,744,327 shares of Pfenex common stock (excluding shares with respect to which Notices of Guaranteed Delivery were delivered) were validly tendered and not properly withdrawn in the tender offer, representing approximately 72.0% of the shares outstanding as of the expiration of the tender offer. In addition, Notices of Guaranteed Delivery had been delivered with respect to approximately 2,847,227 shares that had not yet been tendered, representing approximately 8.3% of the outstanding shares. All of the conditions to the tender offer having been satisfied, on September 30, 2020, Buyer accepted for payment and will promptly pay for all shares tendered. The transaction will be funded with cash on hand.

Ligand completed its acquisition of Pfenex through the merger of Buyer with and into Pfenex without a vote of Pfenex's shareholders pursuant to Section 251(h) of the Delaware General Corporation Law. In connection with the merger, all shares of Pfenex common stock outstanding immediately prior to the effective time (other than shares owned by Ligand, Buyer, Pfenex, any other subsidiary of Ligand's or any subsidiary of Pfenex, or shares that are held in Pfenex's treasury, or shares held by any Pfenex stockholder who has properly demanded and perfected appraisal rights under Delaware law) have been converted into the right to receive $12.00 per share, in cash, plus the CVR, without interest (less any required withholding taxes), the same amount paid for all shares validly tendered and not validly withdrawn in the tender offer. As a result of the merger, as of October 1, 2020, Pfenex common stock will cease to be traded on the NYSE American market.

Adjusted Financial Measures

Ligand reports adjusted earnings per diluted share in addition to, and not as a substitute for, or superior to, financial measures calculated in accordance with GAAP. Ligand's financial measures under GAAP include share-based compensation expense, amortization of debt-related costs, amortization related to acquisitions and intangible assets, changes in contingent liabilities, mark-to-market adjustments for amounts relating to its equity investments in public companies, excess tax benefit from share-based compensation, gain on the sale of Promacta and others that are listed in the itemized reconciliations between GAAP and adjusted financial measures included at the end of Ligand's press release reporting its results of operations for the period ended June 30, 2020. However, other than with respect to total revenues, Ligand only provides financial guidance on an adjusted basis and does not provide reconciliations of such forward-looking adjusted measures to GAAP due to the inherent difficulty in forecasting and quantifying certain amounts that are necessary for such reconciliation, including adjustments that could be made for changes in contingent liabilities, changes in the market value of its investments in public companies, stock-based compensation expense and effects of any discrete income tax items. Management has excluded the effects of these items in its adjusted measures to assist investors

in analyzing and assessing Ligand's past and future core operating performance. Additionally, adjusted earnings per diluted share is a key component of the financial metrics utilized by Ligand's board of directors to measure, in part, management's performance and determine significant elements of management's compensation.

About Ligand

Ligand is a revenue-generating biopharmaceutical company focused on developing or acquiring technologies that help pharmaceutical companies discover and develop medicines. Ligand's business model creates value for stockholders by providing a diversified portfolio of biotech and pharmaceutical product revenue streams that are supported by an efficient and low corporate cost structure. Ligand's goal is to offer investors an opportunity to participate in the promise of the biotech industry in a profitable, diversified and lower-risk business than a typical biotech company. Ligand's business model is based on doing what Ligand does best: drug discovery, early-stage drug development, product reformulation and partnering. Ligand partners with other pharmaceutical companies to leverage what they do best (late-stage development, regulatory management and commercialization) to ultimately generate our revenue. Ligand's OmniAb® technology platform is a patent-protected transgenic animal platform used in the discovery of fully human mono- and bispecific therapeutic antibodies. The Captisol platform technology is a patent-protected, chemically modified cyclodextrin with a structure designed to optimize the solubility and stability of drugs. The Pfenex Expression Technology® is a robust, validated, cost-effective and scalable approach to recombinant protein production, and is especially well-suited for complex, large-scale protein production that cannot be made by more traditional systems. The Vernalis Design Platform (VDP) integrates protein structure determination and engineering, fragment screening and molecular modeling, with medicinal chemistry, to help enable success in novel drug discovery programs against highly challenging targets. Ab Initio™ technology and services for the design and preparation of customized antigens enable the successful discovery of therapeutic antibodies against difficult-to-access cellular targets. Ligand has established multiple alliances, licenses and other business relationships with the world's leading pharmaceutical companies including Amgen, Merck, Pfizer, Sanofi, Janssen, Takeda, Gilead Sciences and Baxter International. For more information, please visit www.ligand.com.

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Forward-Looking Statements

This press release contains forward-looking statements by Ligand that involve risks and uncertainties and reflect Ligand's judgment as of the date of this release. These forward-looking statements include, without limitation, statements regarding: the potential contributions the acquisition is expected to bring to Ligand, including expected royalties and other revenues, technologies and collaborations; and projected future adjusted earnings the potential for approval of product candidates by Jazz Pharmaceuticals and Merck and other partners; the timing of any commercial launch by Ligand's partners following approval, if any, of product candidates; the potential that Alvogen will successfully achieve Therapeutics Equivalence for Bonsity, including Ligand's belief that successful completion of the comparative use human factors study will meet the requirements of Therapeutic Equivalence; FDA may not grant a Therapeutic Equivalence rating of Teriparatide Injection to Forteo; projections of PNEUMOSIL vaccine sales by SII; the potential to secure additional licenses, and development operations; and the expected impact on Ligand's future financial and operating results. Actual events or results may differ from Ligand's expectations due to risks and uncertainties inherent in Ligand's business, including, without limitation: Alvogen, Jazz Pharmaceuticals, Merck and SII or other Ligand partners, may not execute on their development or sales and marketing plans for marketed products for which Ligand has an economic interest; the comparative use human factors study may not be successful and even if successful, the FDA may disagree with Ligand's or Alvogen's interpretations of the results of the trial and not grant Therapeutics Equivalence for Bonsity; risks that the merger will disrupt the current plans and operations of Ligand; the ability of Ligand to retain key personnel following the merger; competitive responses to the proposed transaction; unexpected costs, charges or expenses resulting from completion of the transaction; potential adverse reactions or changes to business relationships resulting from the completion of the transaction; Ligand's ability to achieve the growth prospects and synergies expected from the

transaction, as well as delays, challenges and expenses associated with integrating Pfenex with its existing businesses; the impact of COVID-19 on Ligand's and Pfenex's businesses; Ligand may not achieve the royalties or other revenues expected from the transaction; legislative, regulatory and economic developments; and other risks described in Ligand's prior press releases and filings with the SEC. The failure to meet expectations with respect to any of the foregoing matters may reduce Ligand's stock price. Ligand disclaims any intent or obligation to update these forward-looking statements after the date hereof. This caution is made under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995.

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