

LIGAND PHARMACEUTICALS INC
Form S-4/A
November 06, 2009
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As filed with the Securities and Exchange Commission on November 6, 2009

Registration No. 333-162238

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

AMENDMENT NO. 1
TO
FORM S-4
REGISTRATION STATEMENT

Under

The Securities Act of 1933

LIGAND PHARMACEUTICALS INCORPORATED

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

2834
(Primary Standard Industrial
Classification Code Number)

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

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10275 Science Center Drive

San Diego, California 92121-1117

(858) 550-7500

(Address including zip code, and telephone number, including area code, of registrant's principal executive offices)

John L. Higgins

President and Chief Executive Officer

Ligand Pharmaceuticals Incorporated

10275 Science Center Drive

San Diego, California 92121-1117

(858) 550-7500

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Michael J. Brown, Esq.

Stradling Yocca Carlson & Rauth

4365 Executive Drive, Suite 1500

San Diego, California 92121

(858) 926-3000

Stephen R. Davis

President and Chief Executive Officer

Neurogen Corporation

45 NE Industrial Road

Branford, CT 06405

Telephone: (203) 488-8201

Robert S. Reder, Esq.

Milbank, Tweed, Hadley & McCloy LLP

One Chase Manhattan Plaza

New York, NY 10005

(212) 530-5000

Approximate date of commencement of proposed sale to the public:

As soon as practicable after the effectiveness of this registration statement and the satisfaction or waiver of all other conditions under the merger agreement described herein.

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If the securities being registered on this Form are being offered in connection with the formation of a holding company and there is compliance with General Instruction G, please check the following box. "

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

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. "

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act.

Large accelerated filer " Accelerated filer Non-accelerated filer " Smaller reporting company "

(Do not check if a smaller reporting company)

If applicable, place an X in the box to designate the appropriate rule provision relied upon in conducting this transaction:

Exchange Act Rule 13e-4(i) (Cross-Border Issuer Tender Offer) "

Exchange Act Rule 14d-1(d) (Cross-Border Third-Party Tender Offer) "

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MERGER PROPOSAL YOUR VOTE IS VERY IMPORTANT

Dear Fellow Stockholder:

The board of directors of Neurogen Corporation has approved a merger agreement that provides for the merger of Neon Signal, LLC, a wholly owned subsidiary of Ligand Pharmaceuticals Incorporated, with and into Neurogen. As a result of the merger, Neurogen will become a wholly owned subsidiary of Ligand.

As is more fully described in the accompanying proxy statement/prospectus, in connection with the merger, Neurogen stockholders will receive in the aggregate shares of Ligand common stock valued at approximately \$11 million, subject to (a) adjustment based on Neurogen's final cash position compared to its target cash amount of \$7.9 million as of September 30, 2009 (decreasing daily by \$5,000) and (b) a 4.2 million share maximum. Neurogen stockholders will also be entitled to receive in the merger net proceeds from the sale, if any, of Neurogen's Aplindore program for the treatment of Restless Leg Syndrome and Parkinson's disease and from the sale of its real estate holdings, if such assets are sold by Neurogen before the effective time of the merger. In addition, Neurogen stockholders will receive up to four contingent value rights that will provide the opportunity to receive cash or other payments in connection with (i) the sale or license of Neurogen's H3 antagonist program, (ii) the achievement of a milestone in its partnership with Merck, Sharpe & Dohme Limited for a vanilloid receptor subtype 1 antagonist drug, (iii) the sale of the Aplindore program, and (iv) the sale of its real estate holdings (if the Aplindore program and real estate holdings are not sold by Neurogen before the effective time of the merger).

We describe in detail the terms of the merger, including the contingent value rights, in the accompanying proxy statement/prospectus under the caption "Certain Terms of the Merger Agreement" beginning on page 75, which we urge you to read carefully. The common stock of Ligand is quoted on the Nasdaq Global Market under the symbol "LGND". The common stock of Neurogen is quoted on the Nasdaq Global Market under the symbol "NRGN".

The merger cannot be completed unless Neurogen stockholders adopt the merger agreement and approve the merger contemplated by the merger agreement at the special meeting of Neurogen stockholders to be held on December 18, 2009. We describe in detail the special meeting of Neurogen stockholders in the accompanying proxy statement/prospectus under the caption "The Special Meeting of Neurogen Stockholders" beginning on page 40, which we urge you to read carefully. More information about Ligand, Neurogen and the merger is contained in the accompanying proxy statement/prospectus. **We encourage you to read the proxy statement/prospectus and to carefully consider the risk factors beginning on page 20 of the accompanying proxy statement/prospectus before voting.**

Your vote is very important. Whether or not you plan to attend the special meeting of Neurogen stockholders, please take the time to vote your shares. You may vote your shares by completing, signing, dating and returning the enclosed proxy card as promptly as possible in the enclosed postage-prepaid envelope.

Thank you for your continued support.

Sincerely,

/s/ Stephen R. Davis

Stephen R. Davis

President and Chief Executive Officer

Neurogen Corporation

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THE SECURITIES TO BE ISSUED IN CONNECTION WITH THE MERGER, OR DETERMINED WHETHER THIS PROXY STATEMENT/PROSPECTUS IS ACCURATE OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

This proxy statement/prospectus is dated November 6, 2009, and is first being mailed to Neurogen stockholders on or about that date.

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NEUROGEN CORPORATION

45 NORTHEAST INDUSTRIAL ROAD

BRANFORD, CONNECTICUT 06405

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

TO BE HELD ON DECEMBER 18, 2009

To the Stockholders of Neurogen Corporation:

We will hold a special meeting of the stockholders of Neurogen Corporation, a Delaware corporation, on December 18, 2009 at 10:00 a.m., local time, at Neurogen Corporation, at 45 NE Industrial Road, Branford, CT 06405, to consider and vote upon the following matters:

1. A proposal to adopt the Agreement and Plan of Merger, dated as of August 23, 2009, by and among Ligand Pharmaceuticals Incorporated, Neon Signal, LLC, a wholly owned subsidiary of Ligand Pharmaceuticals, and Neurogen, as amended by the Amendment to Agreement and Plan of Merger, dated as of September 18, 2009, and Amendment No. 2 to Agreement and Plan of Merger, dated as of November 2, 2009, and approve the merger contemplated by such merger agreement. A copy of the merger agreement is attached as *Annex A* to the proxy statement/prospectus accompanying this notice and the form of CVR agreements are attached as *Annex B, Annex C, Annex D and Annex E* to the proxy statement/prospectus accompanying this notice;
2. A proposal to adjourn the special meeting to a later date or dates, if necessary, to permit further solicitation of proxies if there are not sufficient votes at the time of the special meeting to adopt the merger agreement and approve the merger; and
3. To transact such other business as may properly come before the special meeting and any adjournments or postponements thereof. The Neurogen board of directors has unanimously adopted the merger agreement and approved the merger, and recommends that the stockholders vote **FOR** the adoption of the merger agreement and approval of the merger and **FOR** the proposal to adjourn the special meeting to a later date, if necessary.

The close of business on October 28, 2009 has been fixed by the Neurogen board of directors as the record date for the determination of stockholders entitled to notice of and to vote at the special meeting or any adjournment or postponement thereof. Only holders of record of Neurogen common stock at the close of business on the record date may attend and vote at the special meeting. A list of such stockholders will be available for inspection at the principal offices of Neurogen, located at 45 Northeast Industrial Road, Branford, CT 06405, during ordinary business hours for the ten-day period before the special meeting.

All stockholders entitled to vote are cordially invited to attend the special meeting in person. However, to ensure your representation at the special meeting, you are urged to complete, sign and return the enclosed proxy card as promptly as possible in the enclosed postage-prepaid envelope. You may revoke your proxy in the manner described in the accompanying proxy statement/prospectus at any time before it is voted at the special meeting. Executed proxies with no instructions indicated thereon will be voted **FOR** the adoption of the merger agreement and approval of the merger, **FOR** the proposal to adjourn the special meeting to a later date, if necessary, and, in the discretion of the proxy holders, on any other proposals that may properly come before the special meeting.

If you plan on attending the special meeting and your shares are held in the name of a broker, trust, bank or other nominee, you should bring with you a proxy or letter from the broker, trustee, bank or nominee confirming your beneficial ownership of the shares. If you plan to vote via proxy and your shares are held in your broker's name, please note that your broker will not be permitted to vote on the adoption of the merger agreement and the approval of the merger or the proposal to adjourn the special meeting to a later date, if necessary, or on any other proposal that properly comes before the special meeting unless you provide your broker with instructions on how to vote.

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By Order of the Board of Directors,

/s/ Stephen R. Davis

Stephen R. Davis

President and Chief Executive Officer

New York, NY

November 6, 2009

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THIS PROXY STATEMENT/PROSPECTUS INCORPORATES ADDITIONAL INFORMATION

This proxy statement/prospectus incorporates important business and financial information about Ligand from documents that are not included in or delivered with this proxy statement/prospectus. This information is available to you without charge upon written or oral request. For a more detailed description of the information incorporated by reference into this proxy statement/prospectus and how you may obtain it, see *Where You Can Find More Information* beginning on page 110 of this proxy statement/prospectus.

Ligand will provide you with copies of this information relating to Ligand (excluding all exhibits unless Ligand has specifically incorporated by reference an exhibit in this proxy statement/prospectus) without charge, upon written or oral request to:

Ligand Pharmaceuticals Incorporated

10275 Science Center Drive

San Diego, California 92121

Attn: Investor Relations

(858) 550-7500

This proxy statement/prospectus incorporates important business and financial information about Neurogen from documents that are delivered with this proxy statement/prospectus. Additional copies of this information is available to you without charge upon written or oral request. For a more detailed description of the information incorporated by reference into this proxy statement/prospectus and how you may obtain additional copies, see *Where You Can Find More Information* beginning on page 110 of this proxy statement/prospectus.

Neurogen will provide you with additional copies of this information relating to Neurogen (excluding all exhibits unless Neurogen has specifically incorporated by reference an exhibit in this proxy statement/prospectus), without charge, upon written or oral request to:

Neurogen Corporation

45 NE Industrial Road

Branford, CT 06405

Attn: Secretary

(203) 488-8201

In order to receive timely delivery of the documents before the special meeting, you must make your requests no later than December 11, 2009.

ABOUT THIS PROXY STATEMENT/PROSPECTUS

This proxy statement/prospectus, which forms a part of a registration statement on Form S-4 filed with the Securities and Exchange Commission, or SEC, by Ligand, constitutes a prospectus of Ligand under Section 5 of the Securities Act of 1933, as amended, or the Securities Act, with respect to the shares of Ligand common stock to be issued to Neurogen stockholders in connection with the merger. This document also constitutes a proxy statement under Section 14(a) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and the rules thereunder, and a notice of meeting with respect to the special meeting of Neurogen stockholders to consider and vote upon the proposal to adopt the merger agreement and approve the merger.

Except as otherwise provided herein, all descriptions of and calculations with respect to the terms of the merger agreement and the transactions contemplated by the merger agreement, including the merger, assume that no Neurogen stockholders exercise their appraisal rights under Delaware law.

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QUESTIONS AND ANSWERS ABOUT THE MERGER

Q: Why am I receiving this proxy statement/prospectus?

A: Ligand Pharmaceuticals Incorporated, or Ligand, has agreed to acquire Neurogen Corporation, or Neurogen, under the terms of an Agreement and Plan of Merger, dated August 23, 2009, as amended by the Amendment to Agreement and Plan of Merger, dated as of September 18, 2009, and Amendment No. 2 to Agreement and Plan of Merger, dated as of November 2, 2009, or the merger agreement, that is described in this proxy statement/prospectus. Please see the sections entitled *The Merger* and *Certain Terms of the Merger Agreement* beginning on pages 44 and 75, respectively, of this proxy statement/prospectus. A copy of the merger agreement is attached to this proxy statement/prospectus as *Annex A*.

In order to complete the transactions contemplated by the merger agreement, including Ligand's acquisition of Neurogen, Neurogen stockholders must adopt the merger agreement by the affirmative vote of the holders of a majority of the shares of Neurogen common stock outstanding on the record date for the special meeting and all other conditions to the merger must be satisfied or waived. You are receiving this proxy statement/prospectus because you have been identified as a Neurogen stockholder as of October 28, 2009, the record date for the special meeting, and thus you are entitled to vote at the special meeting. This document serves as both a proxy statement of Neurogen, used to solicit proxies for the special meeting, and as a prospectus of Ligand, used to offer shares of Ligand common stock in exchange for shares of Neurogen common stock pursuant to the terms of the merger agreement. This document contains important information about the merger and the special meeting, and you should read it carefully.

Q: When and where is the special meeting of Neurogen stockholders?

A: The special meeting of Neurogen stockholders will be held on December 18, 2009, starting at 10:00 a.m., local time, at Neurogen Corporation, at 45 NE Industrial Road, Branford, CT 06405.

Q: On what matters am I being asked to vote on?

A: Neurogen stockholders are being asked to consider and vote on the following items:

the adoption of the merger agreement and approval of the merger; and

a proposal to adjourn the special meeting to a later date, if necessary, to solicit additional proxies in the event there are insufficient votes at the time of the special meeting to adopt the merger agreement and approve the merger.

Q: What is the merger?

A: Under the terms of the merger agreement, Neon Signal, LLC, a wholly-owned subsidiary of Ligand, or Merger Sub, will merge with and into Neurogen, with Neurogen continuing as the surviving entity. The merger of Merger Sub with and into Neurogen is referred to as the merger. Upon completion of the merger, each outstanding share of Neurogen common stock will be converted into the right to receive a combination of shares of Ligand common stock and contingent value rights and, in some situations involving the sale of certain Neurogen assets before the merger, other consideration, as described below. For a more complete description of the merger, please see the section entitled *The Merger* beginning on page 44 of this proxy statement/prospectus.

Q: *As a Neurogen stockholder, what will I receive in the merger?*

A: If the merger agreement is adopted by Neurogen's stockholders and the other conditions to the merger is satisfied or waived, then upon completion of the merger, Ligand would issue to each Neurogen stockholder a number of Ligand shares equal to approximately \$11 million (subject to dollar for dollar adjustments for any difference between Neurogen's targeted and actual net cash as of the third trading day before the date of

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the Neurogen special meeting of stockholders) divided by the average of the daily volume weighted average prices of Ligand's common stock over the 20 day trading period ending three trading days before the Neurogen stockholders meeting with respect to the merger, which result is then divided by the number of shares of Neurogen stock outstanding immediately before the merger. The number of Ligand shares to be issued in the merger is subject to a 4,200,000 share maximum, unless Ligand waives such maximum. Ligand may issue a number of Ligand shares equal to less than \$11 million if either or both of the following conditions exist: (a) such number is adjusted downward because as of the third trading day before the date of the special meeting of Neurogen stockholders, Neurogen's actual net cash is less than an agreed upon targeted net cash or (b) the average of the daily volume weighted average prices of Ligand's common stock over the 20 day trading period ending three trading days before the special meeting of Neurogen stockholders is less than approximately \$2.62 and the 4,200,000 share maximum is not waived. The average of the daily volume weighted average prices of Ligand's common stock over the 20 day trading period ending on October 28, 2009 was \$2.12. 4,200,000 Ligand shares times \$2.12 would equate to approximately \$8.9 million.

If Neurogen's program for the development of Aplindore for the treatment of Restless Legs Syndrome, or RLS, and Parkinson's disease is sold by Neurogen before the merger, Neurogen stockholders will also receive in the merger a pro-rata share of the cash and/or number of shares of third-party stock, as the case may be, paid pre-merger by the buyer for the program. In addition, if the real properties currently owned by Neurogen are sold by Neurogen before the merger, the pre-merger net cash proceeds from the sale shall also be paid in the merger to the Neurogen stockholders. Please see section entitled "Recent Neurogen Developments" beginning on page 19 of this proxy statement/prospectus for recent developments relating to Aplindore and Neurogen's real properties.

Neurogen's stockholders will also receive up to four CVR agreements, if the Aplindore program and the real properties are not sold by Neurogen before the merger.

Please see the sections entitled "The Merger - General" and "Certain Terms of the Merger Agreement - CVR Agreements" beginning on pages 40 and 86, respectively, of this proxy statement/prospectus for a description of the merger consideration.

Q: What is required to consummate the merger?

A: To consummate the merger, Neurogen stockholders must adopt the merger agreement, which requires the affirmative vote of the holders of a majority of the voting power of the shares of Neurogen common stock outstanding on the record date for the special meeting. In addition to obtaining Neurogen stockholder approval, each of the other closing conditions set forth in the merger agreement must be satisfied or waived. For a more complete description of the closing conditions under the merger agreement, please see the section entitled "Certain Terms of the Merger Agreement - Conditions to the Merger" beginning on page 86 of this proxy statement/prospectus.

Q: How does Neurogen's board of directors recommend that I vote?

A: After careful consideration, Neurogen's board of directors approved the merger agreement and the merger and unanimously declared that the merger agreement and the merger, upon the terms and subject to the conditions set forth in the merger agreement, are advisable and in the best interests of Neurogen and its stockholders. Accordingly, Neurogen's board of directors unanimously recommends that you vote **FOR** the proposal to adopt the merger agreement and approve the merger, and **FOR** the proposal to adjourn the special meeting to a later date or dates, if necessary, to solicit additional proxies in the event there are insufficient votes at the time of the special meeting to adopt the merger agreement and approve the merger. To review the background of the merger and Neurogen's board of directors' reasons for recommending the merger in greater detail, see the sections entitled "The Merger - Background of the Merger" and "The Merger - Neurogen's Reasons for the Merger; Recommendation of Neurogen's Board of Directors" beginning on pages 45 and 51, respectively, of this proxy statement/prospectus.

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Q: What risks should I consider in deciding whether to vote in favor of the merger?

A: You should carefully review the section of this proxy statement/prospectus entitled *Risk Factors* beginning on page 20 of this proxy statement/prospectus, which sets forth certain risks and uncertainties related to the merger, risks and uncertainties to which the combined company's business will be subject and risks and uncertainties to which Ligand, as an independent company, is subject.

Q: When do the parties expect to complete the merger?

A: The parties are working towards completing the merger as quickly as possible. The merger is expected to close during the fourth calendar quarter of 2009. However, because completion of the merger is subject to various conditions, Ligand and Neurogen cannot predict the exact timing of the merger or whether the merger will occur at all.

Q: Am I entitled to appraisal rights?

A: Under Delaware law, holders of Neurogen common stock are entitled to appraisal rights in connection with the merger pursuant to Section 262(d) of the Delaware General Corporation Law. Failure to take any of the steps required under Section 262(d) of the Delaware General Corporation Law on a timely basis may result in a loss of those appraisal rights. The provisions of the Delaware General Corporation Law that grant appraisal rights and govern such procedures are attached as *Annex F* to this proxy statement/prospectus. For a more complete description of your appraisal rights, see the section entitled *The Merger Appraisal Rights of Dissenting Neurogen Stockholders* on page 71 of this proxy statement/prospectus.

Q: What will happen to any options or warrants to acquire Neurogen common stock in the merger?

A: Neurogen's board of directors, by operation of existing agreements or by resolution, will take all requisite actions such that immediately before the effective time of the merger each holder of outstanding Neurogen options shall be entitled to exercise in full all Neurogen options held by such holder by paying the exercise price therefor in exchange for shares of Neurogen common stock in accordance with the applicable Neurogen equity plan or arrangement. All outstanding Neurogen options not exercised, other than any unexercised Neurogen options remaining outstanding under Neurogen's 1993 Omnibus Incentive Plan, shall be terminated and canceled at the time of the merger without any payment or liability on the part of Neurogen. No replacement options will be issued.

If any Neurogen warrant or any option issued under Neurogen's 1993 Omnibus Incentive Plan prior to the effective time of the merger remains outstanding after the effective time of the merger and the holder thereof exercises such Neurogen warrant or option, as the case may be, before its expiration or termination date, then Ligand shall issue and pay in respect of each exercised Neurogen warrant or option, as the case may be, in exchange for the payment of the applicable exercise price, on a per-exercised-share basis, equivalent consideration to the consideration (or the proceeds thereof) as was paid in respect of each issued and outstanding share of Neurogen common stock in the merger; provided that any such payment in respect of options shall be made in compliance with Section 409A of the Internal Revenue Code, or Code.

See the section entitled *Certain Terms of the Merger Agreement Neurogen Stock Options and Warrants* beginning on page 77 of this proxy statement/prospectus.

Q: Will my rights as a Neurogen stockholder change as a result of the merger?

A: Yes. You will become a Ligand stockholder and a holder of Ligand CVRs as a result of the merger and will have rights after the completion of the merger that are governed by Delaware law and Ligand's amended and restated certificate of incorporation and amended and restated bylaws and the CVR agreements. For further information regarding your rights as a Ligand stockholder following the merger,

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please see Comparative Rights of Ligand Stockholders and Neurogen Stockholders beginning on page 107 of this proxy statement/prospectus.

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Q: As a Neurogen stockholder, will I be able to trade the Ligand common stock and CVRs that I receive in connection with the merger?

A: The shares of Ligand common stock issued to Neurogen stockholders in connection with the merger will be freely tradable. The CVRs issued to Neurogen stockholders in connection with the merger will not be marketable or listed on any securities exchange and will be subject to general transfer restrictions with limited exceptions.

Q: What are the United States federal income tax consequences of the merger?

A: The receipt of the merger consideration by a U.S. holder in exchange for Neurogen shares will be a taxable transaction for United States federal income tax purposes. The amount of gain or loss a U.S. holder recognizes, and the timing of such gain or loss, depends in part on the United States federal income tax treatment of the CVRs, with respect to which there is substantial uncertainty. A Neurogen stockholder's gain or loss will also be determined by the stockholder's tax basis in his shares of Neurogen common stock. For a more complete description of the tax consequences of the merger, see the section entitled "The Merger Material United States Federal Income Tax Consequences of the Merger" beginning on page 67 of this proxy statement/prospectus.

Tax matters are very complicated, and the tax consequences of the merger to a particular stockholder will depend in part on such stockholder's circumstances. Accordingly, you are urged to consult your own tax advisor for a full understanding of the tax consequences of the merger to you, including the applicability and effect of federal, state, local and foreign income and other tax laws.

Q: What should I do now?

A: You should carefully read this proxy statement/prospectus, including its annexes and the documents incorporated by reference, and consider how the merger will affect you. Ligand and Neurogen urge you to then respond by voting your shares through one of the following means:

by mail, by completing, signing, dating and mailing each proxy card (if you are a registered stockholder, meaning that you hold your stock in your name) or voting instruction card (if your shares are held in street name, meaning that your shares are held in the name of a broker, bank or other nominee) and returning it in the envelope provided;

via the Internet, at the address provided on each proxy card or voting instruction card (if your bank, broker or nominee makes Internet voting available);

via telephone, using the toll-free number listed on each proxy card or voting instruction card (if your bank, broker or nominee makes telephone voting available); or

in person, by attending the special meeting and submitting your vote in person (special requirements apply if your shares are held in street name and you wish to vote in person).

Q: What happens if I do not return a proxy card or otherwise vote?

A: The failure to return your proxy card, vote using the telephone or via the Internet or vote in person at the special meeting will have the same effect as voting **AGAINST** adoption of the merger agreement and approval of the merger, and will have no effect on the proposal for

possible adjournment of the special meeting.

Q: *What happens if I return a signed and dated proxy card but do not indicate how to vote my proxy?*

A: If you do not include instructions on how to vote your properly signed and dated proxy, your shares will be voted **FOR** adoption of the merger agreement and approval of the merger, and **FOR** approval of possible adjournment, if any, of the special meeting.

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Q: May I vote in person at the special meeting?

A: If your shares of Neurogen common stock are registered directly in your name with Neurogen's transfer agent, you are considered, with respect to those shares, the stockholder of record, and the proxy materials and proxy card are being sent directly to you by Neurogen. If you are a Neurogen stockholder of record, you may attend the special meeting and vote your shares in person, rather than signing and returning your proxy card or otherwise voting by Internet or telephone.

If your shares of Neurogen common stock are held in a brokerage account or by another nominee, you are considered the beneficial owner of shares held in street name, and the proxy materials are being forwarded to you together with a voting instruction card. As the beneficial owner, you are also invited to attend the special meeting. Since a beneficial owner is not the stockholder of record, you may not vote these shares in person at the special meeting unless you obtain a legal proxy from the broker, trustee or nominee that holds your shares, giving you the right to vote the shares at the special meeting.

Q: May I change my vote after I have mailed my signed and dated proxy card or otherwise voted?

A: Yes. If you have submitted a proxy, you may change your vote at any time before your proxy is voted at the Neurogen special meeting of stockholders. You can do this one of four ways. First, you can send a written, dated notice to the Corporate Secretary of Neurogen stating that you would like to revoke your proxy. Second, you can complete, sign, date and submit (in time to reach Neurogen before the beginning of the special meeting) a new later-dated proxy card. Third, you can submit another proxy via the Internet or telephone. Fourth, if you are a stockholder of record or you obtain a legal proxy from your broker, trustee or nominee, you can attend the special meeting and vote in person. Your attendance at the special meeting alone will not revoke your proxy.

If you have instructed a broker to vote your shares, you must follow the directions received from your broker to change those instructions.

Q: If my shares are held in street name by my broker, will my broker automatically vote my shares for me?

A: No. Your broker will not be able to vote your shares without instructions from you. Therefore, you should provide your broker with instructions on how to vote your shares, following the procedure provided by your broker. The failure to provide such voting instructions to your broker will have the same effect as voting **AGAINST** adoption of the merger agreement and approval of the merger, and will have no effect on the proposal for possible adjournment of the special meeting.

Q: Should I send in my Neurogen stock certificates now?

A: No. If you are a Neurogen stockholder, after the merger is completed a letter of transmittal will be sent to you informing you where to deliver your Neurogen stock certificates in order to receive the merger consideration. You should not send in your Neurogen common stock certificates before receiving the letter of transmittal.

Q: Who is soliciting this proxy?

A: Neurogen is conducting this proxy solicitation and will bear the cost of soliciting proxies. In addition, Neurogen may reimburse brokers, banks and other custodians, nominees and fiduciaries representing beneficial owners of shares for their expenses in forwarding soliciting materials to such beneficial owners. Neurogen's directors, officers and employees may also solicit proxies by personal interview, mail, e-mail, telephone, facsimile or other means of communication. These persons will not be paid additional remuneration for their efforts.

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Q: Who can help answer my additional questions?

A: Neurogen stockholders who would like additional copies, without charge, of this proxy statement/prospectus or have additional questions about the merger, including the procedures for voting their shares of Neurogen common stock, should contact:

Neurogen Corporation

45 NE Industrial Road

Branford, CT 06405

Attn: Secretary

(203) 488-8201

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SUMMARY

*This summary highlights selected information contained or incorporated by reference in this proxy statement/prospectus. You should read carefully this entire proxy statement/prospectus and the documents referred to in this proxy statement/prospectus for a more complete description of the terms of the merger and related transactions. The merger agreement is attached as Annex A to this proxy statement/prospectus, and the forms of CVR agreements are attached as Annex B, Annex C, Annex D and Annex E to this proxy statement/prospectus. Additional documents and information, including important business and financial information about Ligand and Neurogen, are incorporated by reference into this proxy statement/prospectus. You are encouraged to read the merger agreement as it is the legal document that governs the merger, as well as the forms of CVR agreements and the additional documents incorporated by reference. In this proxy statement/prospectus, unless the context otherwise requires, *Ligand* refers to Ligand Pharmaceuticals Incorporated and its subsidiaries, *Neurogen* refers to Neurogen Corporation and its subsidiary, and *Merger Sub* refers to Neon Signal, LLC, a wholly-owned subsidiary of Ligand.*

The Companies

Ligand Pharmaceuticals Incorporated

Ligand Pharmaceuticals Incorporated (NASDAQ: LGND), a Delaware corporation, is a biotechnology company that focuses on discovering and developing new drugs that address critical unmet medical needs in the areas of thrombocytopenia, anemia, cancer, hormone related diseases, osteoporosis and inflammatory diseases. Ligand aims to develop drugs that are more effective and/or safer than existing therapies, that are more convenient to administer and that are cost effective. Ligand plans to build a profitable company by generating income from research, milestone and royalty and co-promotion revenues resulting from its collaborations with pharmaceutical partners.

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

Neon Signal, LLC

Neon Signal, LLC, or Merger Sub, is a Delaware limited liability company and a wholly-owned subsidiary of Ligand organized on August 13, 2009. Merger Sub does not engage in any operations and exists solely to facilitate the merger. Its principal executive offices have the same address and telephone number as Ligand.

Neurogen Corporation

Neurogen Corporation (NASDAQ: NRGN) is a development company which has historically focused on new small molecule drugs to improve the lives of patients suffering from psychiatric and neurological disorders, including RLS and Parkinson's disease. Small molecule drugs typically are suitable for oral administration as a pill, while large molecule drugs are typically administered by injection.

Neurogen was incorporated in Delaware in 1987. Neurogen's principal executive offices are located at 45 Northeast Industrial Road, Branford, CT 06405. Neurogen's telephone number is (203) 488-8201.

Special Meeting of Neurogen Stockholders

General. Neurogen is furnishing this proxy statement/prospectus to Neurogen stockholders in connection with the solicitation of proxies by the Neurogen board of directors for use at the special meeting of stockholders, including any adjournment or postponement of the special meeting.

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Date, Time and Place. Neurogen will hold its special meeting on December 18, 2009 at 10:00 a.m., local time, at Neurogen Corporation, at 45 NE Industrial Road, Branford, CT 06405.

Purpose of the Meeting. At the special meeting, the Neurogen stockholders will be asked to consider and vote upon the following matters:

1. A proposal to adopt the Agreement and Plan of Merger, dated as of August 23, 2009, by and among Ligand Pharmaceuticals Incorporated, Neon Signal, LLC, a wholly owned subsidiary of Ligand Pharmaceuticals, and Neurogen, as amended by Amendment to Agreement and Plan of Merger, dated as of September 18, 2009, and Amendment No. 2 to Agreement and Plan of Merger, dated as of November 2, 2009, and approve the merger contemplated by the merger agreement. A copy of the merger agreement is attached as *Annex A* to this proxy statement/prospectus accompanying this notice and the form of CVR agreements are attached as *Annex B*, *Annex C*, *Annex D* and *Annex E* to this proxy statement/prospectus accompanying this notice;
2. A proposal to adjourn the special meeting to a later date or dates, if necessary, to permit further solicitation of proxies if there are not sufficient votes at the time of the special meeting to adopt the merger agreement and approve the merger; and
3. To transact such other business as may properly come before the special meeting and any adjournments or postponements thereof.

Quorum Required. Neurogen's bylaws provide that the holders of a majority of the shares of Neurogen common stock issued and outstanding and entitled to vote at the special meeting, present in person or represented by proxy, shall constitute a quorum for the transaction of business at the special meeting. Abstentions and broker non-votes will be counted as present for the purpose of determining the presence of a quorum.

Voting Rights. Neurogen common stock is the only type of security entitled to vote at the special meeting. On October 28, 2009, the record date for determination of stockholders entitled to vote at the special meeting, there were 69,038,691 shares of Neurogen common stock outstanding. Each Neurogen stockholder of record on October 28, 2009 is entitled to one vote for each share of Neurogen common stock held by such stockholder on that date. All votes will be tabulated by the inspector of election appointed for the meeting, who will separately tabulate affirmative and negative votes, abstentions and broker non-votes.

Proxies. Whether or not you are able to attend Neurogen's special meeting of stockholders, you are urged to complete and return the enclosed proxy, which is solicited by Neurogen's board of directors and which will be voted as you direct on your proxy card when properly completed. In the event no directions are specified, such proxies will be voted **FOR** the adoption of the merger agreement and approval of the merger, **FOR** the proposal to adjourn the special meeting to permit further solicitation of proxies if there are not sufficient votes to adopt the merger agreement and approve the merger, and in the discretion of the proxy holders as to any other matters that may properly come before the special meeting. All shares represented by a valid proxy received before the special meeting will be voted.

Revocation of Proxies. You may also revoke or change your proxy at any time before the special meeting. To do this, send a written notice of revocation or another signed proxy with a later date to the Secretary at Neurogen's principal executive offices in time to arrive before the beginning of the special meeting. If you are a stockholder of record or you obtain a legal proxy from your broker, trustee or nominee, you may also revoke your proxy by attending the special meeting and voting in person.

Neurogen Votes Required. The affirmative vote of the holders of record of a majority of the outstanding shares of Neurogen common stock is required to adopt the merger agreement and approve the merger, and the affirmative vote of the holders of record of a majority of the shares of Neurogen common stock present and entitled to vote at the special meeting is required to adopt the proposal to adjourn the special meeting, if

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necessary, to permit further solicitation of proxies. If a broker or other nominee holding shares of Neurogen common stock or a holder of Neurogen common stock fails to vote on the adoption of the merger agreement and the approval of the merger or responds to that proposal with an abstain vote, it will have the same effect as a vote against that proposal. If a broker or other nominee holding shares of Neurogen common stock or a holder of Neurogen common stock responds to the proposal to adjourn the special meeting, if necessary, to permit further sollicita