February 28, 2017

Ligand Provides Highlights from Today's Analyst Day Event

Webcast available at www.ligand.com

SAN DIEGO--(BUSINESS WIRE)-- At an Analyst Day event held today in New York City, **Ligand Pharmaceuticals Incorporated (NASDAQ:LGND)** reviewed the recent progress of its business, its revenue growth opportunities and its portfolio of partnered assets and unpartnered development programs. Management also discussed the OmniAb and Captisol discovery and formulation technologies as well as its financial outlook for 2017.

Highlights of presentations by Ligand's senior management include the following:

Business model and growth drivers:

- Ligand has more than 155 fully-funded programs in partnership with more than 92 different pharmaceutical and biotechnology companies, and is eligible to receive over $2 billion in milestone payments based on success. 14 products have been approved and are generating commercial revenue for Ligand today, and the company projects that in 2020 more than 28 products from its portfolio will be commercialized and generating revenue for Ligand.
- Ligand estimates that in 2017 its partners will spend more than $2 billion on R&D to advance partnered programs, including funding 32 Phase 3 trials and 39 Phase 2 trials.
- Global product sales by partners on which Ligand is entitled to receive royalty payments are projected to be approximately $1.9 billion in 2017. The blended average royalty rate to Ligand during this period is expected to be close to 4.6% of net sales.
- Ligand identified major growth drivers that could occur in 2017 including;
    - Results from Ligand's Phase 2 trial of GRA (LGD-6972) in type 2 diabetes
    - Update on Retrophin's approval pathway for Sparsentan
    - Completion of Viking Therapeutics' Phase 2 trial of VK5211 (SARM) in hip fracture
    - Potential approval of Melinta Therapeutics' BAXDELA
    - Completion of Viking Therapeutics' Phase 2 trial of VK2809 (TRβ) in hypercholesterolemia and fatty liver disease
    - Potential approval of Sage Therapeutics' brexanolone (SAGE-547)

Asset portfolio review:

- Promacta® sales have continued to grow under Novartis, surpassing $600 million in

annual sales in 2016 for the first time ever, and pushing into the top of the tiered royalty structure earlier in the year. The drug is approved to treat idiopathic thrombocytopenia in over 100 countries, thrombocytopenia induced by Hepatitis C in over 50 countries and aplastic anemia in over 45 countries. 23 clinical trials are ongoing to potentially expand Promacta indications to include MDS (Phase 2), chemotherapy-induced thrombocytopenia (Phase 2) and others.

- Kyprolis®, developed and marketed by Amgen, for the treatment of multiple myeloma, which uses Captisol in its formulation, has also shown significant growth, with worldwide sales reaching close to $700 million in 2016. Kyprolis was approved to be marketed in Japan by Ono Pharmaceutical Co in 2016. Trials are ongoing to further expand Kyprolis' label including a Phase 3 trial in combination with Darzalex which is expected to begin in the second quarter of 2017.
- Management provided an update on the Big 6, which now includes the following programs:
    - Melinta Therapeutics' NDA stage BAXDELA for treatment of infection
    - Retrophin's Phase 2/3 Sparsentan for treatment of focal segmental glomerulosclerosis (FSGS)
    - Sage Therapeutics' Phase 3 brexanolone for treatment of super-refractory status epilepticus and also for post-partum depression
    - Sermonix Pharmaceuticals' Phase 2/3 lasofoxifene for oncology and women's health
    - Bristol-Myers Squibb's Phase 2/3 BMS986231 for treatment of cardiovascular disease
    - Eli Lilly's Phase 2 prexasertib for various oncology indications
- Management also provided an update to the Next 12, which now includes the following drug types: oncology (6), metabolic disease (2), cardiovascular (1), inflammation (1) specialty (1) and biosimilar (1).
- Additionally, Ligand provided updated metrics to describe the portfolio as a whole, noting;
    - 33% are in Phase 2 development or later
    - Captisol programs make up more than a third of the portfolio, with Selexis programs making up a quarter and current OmniAb programs making up a fifth
    - The portfolio is widely diversified across indications but also has a significant number of oncology programs
- GRA is Ligand's proprietary glucagon receptor antagonist in development as an oral treatment for type 2 diabetes (T2DM), which recently completed enrollment of its ongoing Phase 2 trial. At the Analyst Day event management discussed the growing need for novel treatments for T2DM and GRA's positive safety and efficacy profile. The company expects topline results in September 2017.
- Ligand also highlighted the strength of the intellectual property protecting its portfolio and technologies, with over 700 worldwide issued patents.

Underlying technologies review:

- Management gave an update on the progress of Captisol, highlighting that since Ligand's acquisition of CyDex in 2011, over 450 research and animal use agreements have been executed with potential partners, and that the number of inbound requests for Captisol samples passed 800 for the first time in 2016. Captisol has patent-protection through 2033 in major markets.
- Roland Buelow, Ph.D., VP of Antibody Technologies and founder of Ligand-acquired OMT Technologies and inventor of the OmniAb technology platform, discussed the growing number of antibody therapeutics in development and the novel approach of the OmniAb platform. To date, OmniAb partners have initiated over 300 discovery projects with the technology, and Ligand estimates that approximately 30 OmniAb-discovered antibodies will enter the clinic in the next five years. By 2027, Ligand estimates that over 50 Phase 1 trials will be completed or in-process, with multiple Phase 2 and Phase 3 trials ongoing, three or more OmniAb therapeutics on the market and cumulative revenue received at that time of over $300 million.

Financial outlook:

- Management highlighted Ligand's recent history of significant revenue growth, sustained low cash operating expenses and resulting strong EBITDA and cash flow generation.
- Ligand also reiterated and gave additional detail regarding recent core revenue and core adjusted EPS guidance for 2017 as follows:
    - Core royalties are projected to be $87 million, taken from a range of $80 million to $95 million that is calculated based on applying contractual royalty rates to sell-side analyst estimates.
    - Core materials sales are projected to be $23 million, which shows continued growth over prior years when normalizing historical sales to remove historical lumpy ordering patterns of a significant customer.
    - Core milestone and license revenues are projected to be $20 million, with potential upside of an additional $30 million of milestones including; licensing/financing, NDA-related, trial start and other types of milestones.
    - Based on core revenue of $130 million, adjusted EPS is expected to be $2.70, although this amount could increase based on potential receipt of upside milestones beyond $20 million.
- Management also reiterated its projected cash operating expense structure of $28 million to $30 million, which implies 2017 EBITDA of $96 million, compared to $74 million in 2016 or a 30% increase.
- Ligand reiterated that the 2017 tax rate for adjusted EPS is expected to be between 36% and 39%, although the actual cash tax rate is expected to be less than 1%.
- Management also provided a general outlook through 2020, which included the expectation that:
    - Royalties grow in line with consensus sell-side research
    - Milestones continue at a core level of $20 million - $30 million, with potential

upside

- Materials grow at a 5% - 10% CAGR
- Cash operating expense expected to be relatively flat with only modest annual increases
- Fully-diluted share count projected to grow at 0.2 million shares annually
- Adjusted EPS tax rate continues to be between 36% and 39%, while actual cash tax rate is less than 1% through 2020

A webcast of the Analyst Day presentations can be accessed at www.ligand.com for the next 90 days.

Adjusted Financial Measures

The company reports adjusted results for diluted net income per share and net income, in addition to, and not as a substitute for, or superior to, financial measures calculated in accordance with GAAP. The company's financial measures under GAAP include stock-based compensation expense, amortization of debt-related costs, amortization related to acquisitions, changes in contingent liabilities, net losses of Viking Therapeutics, mark-to-market adjustment for amounts owed to licensors, fair value adjustments to Viking Therapeutics convertible note receivable and warrants, unissued shares relating to the Senior Convertible Note, unissued shares relating to the anti-dilutive effect of fourth quarter and fiscal year 2016 GAAP net loss and adjustments for discontinued operations, and others that are listed in the itemized reconciliations between GAAP and adjusted financial measures included in this press release. However, other than with respect to total revenue, the Company only provides 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, net losses of Viking Therapeutics, mark-to-market adjustments for amounts owed to licensors and fair value adjustments to Viking Therapeutics convertible note receivable. Management has excluded the effects of these items in its adjusted measures to assist investors in analyzing and assessing the Company's past and future core operating performance. Additionally, adjusted diluted earnings per share is a key component of the financial metrics utilized by the company's board of directors to measure, in part, management's performance and determine significant elements of management's compensation.

About Ligand Pharmaceuticals

Ligand is a biopharmaceutical company focused on developing or acquiring technologies that help pharmaceutical companies discover and develop medicines. Our 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. Our 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. Our business model is based on doing what we do best: drug discovery, early-stage drug development, product reformulation and partnering. We partner

with other pharmaceutical companies to leverage what they do best (late-stage development, regulatory management and commercialization) to ultimately generate our revenue. Ligand's Captisol® platform technology is a patent-protected, chemically modified cyclodextrin with a structure designed to optimize the solubility and stability of drugs. OmniAb® is a patent-protected transgenic animal platform used in the discovery of fully human mono-and bispecific therapeutic antibodies. Ligand has established multiple alliances, licenses and other business relationships with the world's leading pharmaceutical companies including Novartis, Amgen, Merck, Pfizer, Celgene, Gilead, Janssen, Baxter International and Eli Lilly.

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Forward-Looking Statements

This news release contains forward-looking statements by Ligand that involve risks and uncertainties and reflect Ligand's judgment as of the date of this release. Words such as "plans," "believes," "expects," "anticipates," and "will," and similar expressions, are intended to identify forward-looking statements. These forward-looking statements include, without limitation, statements regarding: growth in the number of products in Ligand's portfolio, the research and development expenditures of Ligand's partners, the average royalty rate expected based on sales by Ligand's partners, Ligand's future revenues and other projected financial measures, the timing and results of Ligand's clinical trials and clinical trials to be conducted by Ligand's partners, Ligand's expected tax rate, Ligand's projected operational and financial results, and guidance regarding 2017 financial results. Actual events or results may differ from Ligand's expectations. For example, Ligand may not receive expected revenue from material sales of Captisol, expected royalties on partnered products and research and development milestone payments. Ligand and its partners may not be able to timely or successfully advance any product(s) in its internal or partnered pipeline. In addition, there can be no assurance that Ligand will achieve its guidance for 2017 or any portion thereof or beyond, that Ligand's 2017 revenues will be at the levels or be broken down as currently anticipated, that Ligand will be able to create future revenues and cash flows by developing innovative therapeutics, that results of any clinical study will be timely, favorable or confirmed by later studies, that products under development by Ligand or its partners will receive regulatory approval, that there will be a market for the product(s) if successfully developed and approved, or that Ligand's partners will not terminate any of its agreements or development or commercialization of any of its products. Further, Ligand may not generate expected revenues under its existing license agreements and may experience significant costs as the result of potential delays under its supply agreements. Also, Ligand and its partners may experience delays in the commencement, enrollment, completion or analysis of clinical testing for its product candidates, or significant issues regarding the adequacy of its clinical trial designs or the execution of its clinical trials, which could result in increased costs and delays, or limit Ligand's ability to obtain regulatory approval. Further, unexpected adverse side effects or inadequate therapeutic efficacy of Ligand's product(s) could delay or prevent regulatory approval or commercialization. In addition, Ligand may not be able to successfully implement its strategic growth plan and continue the development of its proprietary programs. The failure to meet expectations with respect to any of the foregoing matters may reduce Ligand's stock price. Additional information concerning these and other risk factors affecting Ligand can be found in prior press releases available at www.ligand.com as well as in Ligand's public periodic filings with the Securities and

Exchange Commission available at www.sec.gov. Ligand disclaims any intent or obligation to update these forward-looking statements beyond the date of this release. This caution is made under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995.

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