

Ligand Partner TG Therapeutics Presents Positive Pre-clinical Data on IRAK4 Compounds at the American Association for Cancer Research (AACR) Annual Meeting

NEW YORK-- **Ligand Pharmaceuticals Incorporated (NASDAQ: LGND)** partner **TG Therapeutics, Inc. (NASDAQ: TGTX)** today announced the first presentation of preclinical data demonstrating single agent and combination activity of two of TG Therapeutics' IRAK4 inhibitor compounds under development. This pre-clinical data was presented yesterday at the 106th Annual Meeting of the American Association for Cancer Research (AACR), held in Philadelphia, PA.

Highlights and conclusions of the study include:

- Both compounds are potent inhibitors of IRAK4 with single-digit nanomolar potency.
- Data demonstrated IRAK4 inhibitors inhibited cell proliferation and induced apoptosis as single agents in various B-cell lymphoma cell lines, potentially elucidating the mechanism of action of and clinical rationale for IRAK4 inhibition.
- Compounds demonstrated marked synergy when combined with the novel targeted kinase inhibitors TGR-1202, TG Therapeutics' proprietary PI3K delta inhibitor, and the BTK inhibitor, ibrutinib.

"We entered into our IRAK-4 partnership with TG Therapeutics last year knowing the promise of IRAK-4 as a target in both oncology and inflammation, as well as the opportunities for treatment synergies between IRAK-4 inhibitors and TG's other best-in-class clinical-stage programs," commented Matt Foehr, President and Chief Operating Officer of Ligand Pharmaceuticals. "These studies now further illustrate that potential, and we congratulate our partners at TG on their progress as they continue to quickly advance the IRAK-4 program toward the clinic."

A copy of the presentation is available on the Events page, located within the Investors & Media section of TG Therapeutics' website at www.tgtherapeutics.com.

About Interleukin-1 Receptor Associated Kinase-4 (IRAK-4)

IRAK-4 is a serine/threonine protein kinase that is a key downstream signaling component of the interleukin-1 receptor and multiple toll-like receptors. Signaling through IRAK-4 is important for both innate immunity and inflammation. Ligand discovered novel compounds that selectively and potently inhibit IRAK-4 activity. IRAK-4 inhibitors may have therapeutic potential in oncology and a number of autoimmune diseases. Ligand originally acquired the

rights to the IRAK-4 program at a discovery stage via its 2008 acquisition of Pharmacopeia. In June 2014, Ligand and TG Therapeutics entered into an exclusive worldwide license for the development and commercialization of IRAK-4 inhibitors.

About TG Therapeutics

TG Therapeutics is a biopharmaceutical company focused on the acquisition, development and commercialization of novel treatments for B-cell malignancies and autoimmune diseases. Currently, TG Therapeutics is developing two therapies targeting hematological malignancies. TG-1101 (ublituximab) is a novel, glycoengineered monoclonal antibody that targets a specific and unique epitope on the CD20 antigen found on mature B-lymphocytes. TG Therapeutics is also developing TGR-1202, an orally available PI3K delta inhibitor. The delta isoform of PI3K is strongly expressed in cells of hematopoietic origin and is believed to be important in the proliferation and survival of B-lymphocytes. Both TG-1101 and TGR-1202 are in clinical development for patients with hematologic malignancies. TG Therapeutics also has a pre-clinical program to develop IRAK4 inhibitors, as well as an antibody research program to develop anti-PD-L1 and anti-GITR antibodies. TG Therapeutics is headquartered in New York City.

About Ligand Pharmaceuticals

Ligand is a biopharmaceutical company with a business model focused on developing or acquiring royalty generating assets and coupling them with a lean corporate cost structure. Ligand's goal is to produce a bottom line that supports a sustainably profitable business. By diversifying the portfolio of assets across numerous technology types, therapeutic areas, drug targets and industry partners, we offer investors an opportunity to invest in the increasingly complicated and unpredictable pharmaceutical industry. In comparison to its peers, we believe Ligand has assembled one of the largest and most diversified asset portfolios in the industry with the potential to generate revenue in the future. These therapies seek to address the unmet medical needs of patients for a broad spectrum of diseases including diabetes, hepatitis, muscle wasting, Alzheimer's disease, dyslipidemia, anemia, asthma and osteoporosis. Ligand's Captisol platform technology is a patent-protected, chemically modified cyclodextrin with a structure designed to optimize the solubility and stability of drugs. Ligand has established multiple alliances with the world's leading pharmaceutical companies including Novartis, Amgen Inc., Merck, Pfizer, Baxter International and Eli Lilly & Co. Please visit www.captisol.com for more information on Captisol and www.ligand.com for more information on Ligand.

Follow Ligand on Twitter @Ligand_LGND.

Forward-Looking Statements

This news release contains certain forward-looking statements by Ligand that involve risks and uncertainties and reflect Ligand's judgment as of the date of this release. These statements include those related to the IRAK-4 program profile, including the synergies of IRAK-4 in combination with other inhibitors, market size and possibility of commercial success, efficacy, potency, competitiveness and the strength of Ligand's out-licensed product portfolio. Actual events or results may differ from our expectations. For example, there can be no assurance that the IRAK-4 program or other potential drugs that Ligand has partnered will progress through clinical development or receive required regulatory approvals.

within the expected timelines or at all, that further clinical trials will confirm any safety or other characteristics or profile described or assumed in this press release, that further clinical trials will be completed in a cost-effective manner, that there will be a market of any size for IRAK-4 inhibitor containing products, or that any such products will be beneficial to patients or successfully marketed. In addition, there can be no assurance that Ligand will achieve any of its guidance or forecasts. The failure to meet expectations with respect to any of the foregoing matters may have a negative effect on Ligand's stock price. Additional information concerning these and other risk factors affecting Ligand's business can be found in prior press releases available via www.ligand.com as well as in Ligand's public current and periodic filings with the Securities and Exchange Commission 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.

Ligand Pharmaceuticals Incorporated

John Higgins, 858-550-7500

President and CEO

investors@ligand.com

@Ligand_LGND

or

LHA

Bruce Voss, 310-691-7100

bvoss@lhai.com

@LHA_IR_PR

Source: Ligand Pharmaceuticals Incorporated