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Ligand's Collaborator Merck Announces V116, an Investigational, 21-valent Pneumococcal Conjugate Vaccine Specifically Designed for Adults, Met Key Immunogenicity and Safety Endpoints in Two Phase 3 Trials

SAN DIEGO--(BUSINESS WIRE)-- **Ligand Pharmaceuticals Incorporated (NASDAQ: LGND)** announced that its collaborator Merck, known as MSD outside of the United States and Canada, today announced positive topline results from two Phase 3 trials evaluating V116, an investigational 21-valent pneumococcal conjugate vaccine in vaccine-naïve and previously vaccinated individuals. If approved, V116 would be the first pneumococcal conjugate vaccine specifically designed for adults. Results from the STRIDE-3 trial demonstrated statistically significant immune responses compared to PCV20 (pneumococcal 20-valent conjugate vaccine) in vaccine-naïve adults for serotypes common to both vaccines as assessed by serotype-specific opsonophagocytic activity (OPA) 30 days post-vaccination. Positive immune responses were also observed for serotypes unique to V116. Additionally, results from STRIDE-6 demonstrated that V116 was immunogenic for all 21 pneumococcal serotypes in the vaccine among adults who previously received a pneumococcal vaccine at least one year prior to the study. In both studies, V116 had a safety profile comparable to the comparator in the studies. Results will be shared with the scientific community in the near future and will support global regulatory licensure applications.

V116 utilizes the CRM197 vaccine carrier protein, which is produced using Ligand's patent-protected Pelican Expression Technology™ platform. If approved, Ligand is entitled to a royalty on worldwide net sales.

"We are delighted to see Merck's continued progress with V116 and their pneumococcal conjugate vaccine franchise," said Todd Davis, CEO of Ligand. "We look forward to the advancement of this program as well as with our multiple other collaborations involving Pelican's cost-effective and scalable production of our CRM197 vaccine carrier protein."

About V116

V116 is an investigational, 21-valent pneumococcal conjugate vaccine in Phase 3 development for the prevention of invasive pneumococcal disease and pneumococcal pneumonia in the adult population. V116 is specifically designed to address the serotypes that represent adult pneumococcal disease, including eight unique serotypes, 15A, 15C,

16F, 23A, 23B, 24F, 31 and 35B, which account for approximately 30% of adult disease, according to 2019 pre-pandemic CDC data. V116 has potential to expand disease coverage to help protect against invasive pneumococcal disease in more than 85% of individuals 65 and older, based on the same data.

About Ligand Pharmaceuticals

Ligand is a biopharmaceutical company enabling scientific advancement through supporting the clinical development of high-value medicines. Ligand does this by providing financing, licensing our platform technologies or both. Our business model generates value for stockholders by creating 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 and diversified manner. Our business model is based on funding mid to late-stage drug development in return for economic rights and licensing our technology platforms to help partners discover and develop medicines. We partner with other pharmaceutical companies to leverage what they do best (late-stage development, regulatory management and commercialization) to generate our revenue. We have two primary platform technologies that are available for outlicense – Captisol and Pelican. Our Captisol platform technology is a chemically modified cyclodextrin with a structure designed to optimize the solubility and stability of drugs. For our Captisol partners, our team supplies the Captisol material needed for their programs. Our Pelican Expression Technology is a robust, validated, cost-effective and scalable platform for recombinant protein production that is especially well-suited for complex, large-scale protein production where traditional systems are not. We have established multiple alliances, licenses and other business relationships with the world's leading pharmaceutical companies including Amgen, Merck, Pfizer, Jazz, Takeda, Gilead Sciences and Baxter International. For more information, please visit www.ligand.com.

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We use Twitter and our investor relations website as a means of disclosing material non-public information and for complying with our disclosure obligations under Regulation FD. Investors should monitor our Twitter account and our website, in addition to following our press releases, SEC filings, public conference calls and webcasts.

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: the potential to receive royalties, and the potential royalty term, from future worldwide sales of V116, if approved by the U.S. Food and Drug Administration (FDA) or other regulatory agencies; Merck's expectations around the timeline for continuing its engagement with regulators. Actual events or results may differ from Ligand's or its partner's expectations due to risks and uncertainties inherent in Ligand's and its partner's business, including, without limitation: the risk that the Phase 3 STRIDE-3 and STRIDE-6 Study of V116 will not demonstrate that V116 is safe or effective or serve as a basis for approval of V116 as planned; the FDA may not agree with Merck's interpretation of results from the STRIDE-3 and STRIDE-6 trial or other clinical trial data; Ligand is dependent on Merck on the

development and, if approved, commercialization of V116 and Merck may not generate net sales to generate royalties payable to Ligand; and other risks described in Ligand's and Merck's prior press releases and 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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