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Ligand and CR Double-Crane Enter Collaboration Agreement to Develop an Oral COVID-19 Therapeutic Using Ligand's BEPro Technology™

BEPro is a novel prodrug technology to enhance oral delivery of active nucleotides

EMERYVILLE, Calif.--(BUSINESS WIRE)-- **Ligand Pharmaceuticals Incorporated (NASDAQ: LGND)** today announced the signing of a collaboration agreement granting China Resources Double-Crane Pharmaceutical Co., Ltd. (CRDC) exclusive Asia territorial rights to develop a novel investigational oral COVID-19 antiviral therapeutic compound using Ligand's BEPro technology. Ligand will receive an upfront payment in respect of the collaboration, and if the program advances, clinical and regulatory milestone payments, and tiered royalties on net sales. CRDC will be responsible for all costs related to the program.

BEPro is a proprietary prodrug technology that is specifically applicable to nucleotides and nucleotide analogs for the development of compounds with improved product profiles. Ligand has generated preclinical pharmacokinetics data showing its oral BEPro-enabled COVID-19 antivirals to have a favorable blood concentration profile and generate lower levels of active nucleotide in the kidney, a potential site for toxicity, than other oral and intravenous comparators. Ligand has filed multiple patents globally on the BEPro technology and potential antiviral compounds.

"This transaction with CRDC is another deal in a long history of success converting our inventions, data and intellectual property into licenses to advance important medicines and deliver value to our shareholders," said John Higgins, CEO of Ligand Pharmaceuticals. "We are proud of the important work our team has contributed toward addressing the pandemic and are pleased with this new collaboration. China Resources Group is one of the largest Chinese pharmaceutical companies and is looking forward to robust development of this program through their subsidiary CRDC."

About CR Double-Crane Pharmaceutical

China Resources Double-Crane Pharmaceutical Co., Ltd. (referred to as CRDC) is a business unit of China Resources Group (a Fortune Global 100 company). China Resources Group was founded in 1939 and is headquartered in Beijing. CRDC's main business covers new drug research and development, preparations production, sales and marketing, pharmaceutical equipment, and API production. CRDC engages in the fields of chronic diseases, infusion solutions, pediatrics, nephrology, psychiatry, and neurology. For more information, please visit www.dcp.com.

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 affairs and commercialization) to ultimately generate revenue. Ligand's OmniAb[®] technology platform is a patent-protected technology stack 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. Ligand's Pelican 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 traditional systems. Ligand has established multiple alliances, licenses and other business relationships with the world's leading pharmaceutical companies including Amgen, Merck, Pfizer, Roche, Jazz Pharmaceuticals, Sanofi, Janssen, Takeda, Gilead Sciences, GSK and Baxter International. For more information, please visit www.ligand.com.

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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 "looks forward to," "plans," "believes," "expects," "anticipates," "would" and "will," and similar expressions, are intended to identify forward-looking statements. These forward-looking statements include, without limitation, statements regarding the potential benefits of the Ligand/CRDC collaboration program and the possible license agreement. Actual events or results may differ from Ligand's expectations due to risks and uncertainties including, without limitation: there can be no assurance that the CRDC program with Ligand will be able to successfully confirm, discover or develop any desirable drug candidates or that any drug candidates developed in such program would be clinically successful, would receive necessary regulatory approvals, or would be commercially successful, all of which might result in the potential license option exercise fee, milestone payments and royalties not being earned; CRDC's drug candidates, if any, from this program might not proceed according to any intended timeline; results of any clinical study may not be timely, favorable or confirmed by later studies; effective COVID-19 vaccines and treatments may limit the market for this collaboration's intended drug products; Ligand or CRDC may not be able to protect their intellectual property and patents covering certain products and technologies may be challenged or invalidated; Ligand is dependent on CRDC for the development and, if approved, commercialization of drug products from the collaboration; CRDC may choose not to exercise the license agreement option, or may terminate or deprioritize development or commercialization of any drug candidates or products; Ligand may not be able to successfully implement its strategic growth plan and continue the development of its proprietary programs; and ongoing or future litigation could expose Ligand to significant

liabilities and have a material adverse effect on the company. 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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