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Ligand Acquires Ab Initio Biotherapeutics, an Antigen-Discovery Company

Strengthens and expands its OmniAb platform offering

SAN DIEGO--(BUSINESS WIRE)-- **Ligand Pharmaceuticals Incorporated (NASDAQ: LGND)** announces the signing of an agreement with Ab Initio Biotherapeutics whereby Ligand will acquire Ab Initio for $12 million in cash. Ab Initio was a privately held antigen-discovery company based in South San Francisco, California. Antigen design and preparation are the first steps necessary for the discovery of therapeutic antibodies. Some antibody targets are particularly difficult and require a specialized approach to design, prepare and deliver an antigen to enable the successful discovery of an antibody drug candidate. This transaction will have minimal impact on Ligand's future cost structure.

Ab Initio brings to Ligand a patented antigen technology that is synergistic with Ligand's OmniAb® therapeutic antibody discovery platform. This new technology will provide Ligand's current and potential new partners enhanced capabilities for the discovery of therapeutic antibodies against difficult-to-access cellular targets. In addition, Ab Initio has a collaboration agreement with Pfizer Inc. to discover novel therapeutic antibodies against an undisclosed target in the G-protein coupled receptor (GPCR) superfamily. GPCRs comprise the largest class of therapeutic drug targets, with key regulatory roles ranging from cardiovascular biology to metabolic health. Under the agreement, Ligand is eligible to receive potential milestones and tiered royalties on potential future sales. Ab Initio also currently has two unpartnered preclinical programs focused on hematological malignancies and solid tumors.

"The Ab Initio technology is highly complementary to our OmniAb platform. Antigen generation is a required step in the antibody discovery process and some targets are very complex with the initial work of antigen design and preparation being difficult. By bolting on the proprietary antigen technology, Ligand will be able to more fully meet the needs of our partners," said John Higgins, Chief Executive Officer of Ligand. "Since Ligand's acquisition of OmniAb in 2016, we have continued to augment the platform through additional internal R&D, partnering and supporting acquisitions such as OmniChicken and now Ab Initio. Ligand is providing a cutting-edge antibody discovery platform that provides considerable value to our current partners."

Kenneth Lin, CEO and co-founder of Ab Initio commented, "Our vision at Ab Initio has been to build on prize-winning scientific breakthroughs in GPCRs by creating antigens that enable antibody discovery against this challenging, but rich family of therapeutic targets. I am extremely excited that Ab Initio will join Ligand and am proud of our entire team's accomplishments. The OmniAb platform is a natural fit and will allow the Ab Initio technology to seed the broader industry with exciting new discovery programs."

About OmniAb

Ligand's OmniAb® therapeutic antibody platform includes OmniRat®, OmniFlic®, OmniMouse® and OmniChicken™. These platforms produce highly diversified, fully human antibody repertoires optimized in vivo for manufacturability, therapeutic efficacy and reduced immunogenicity – *Naturally optimized human antibodies®*. The single-license OmniAb offering is the industry's only with three species and multiple genetic backgrounds to address even the most challenging targets – *3 species, 1 license*™.

About Ab Initio Biotherapeutics

Ab Initio Biotherapeutics, Inc. was a privately held biotech company located in South San Francisco. Its proprietary antigen discovery platform allows for targeting multi-transmembrane proteins such as GPCRs and facilitates antibody generation relevant to a wide array of therapeutic indications including neurological, cardiovascular, endocrine and gastrointestinal disorders.

About Ligand Pharmaceuticals

Ligand is a 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 we do 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 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 Amgen, Merck, Pfizer, 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. These include statements regarding the Ab Initio/Pfizer research collaboration and license agreement, Ab Initio's commercial prospects and the availability of synergies with Ligand's OmniAb business. Actual events or results may differ from our expectations. For example, Pfizer may abandon research and/or development under the Ab Initio/Pfizer research collaboration and license agreement and there can be no assurance that the parties will be able to successfully identify any desirable antibodies under such agreement or that any drug candidates developed in such program would be clinically or commercially successful, all of which might result in the potential milestone payments and royalties not being earned; the

availability of Ab Initio technology might not generate additional OmniAb business for Ligand; and Ligand's OmniAb partners might choose not to utilize Ab Initio technology (or might not achieve successful results, if they do). 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 important risk factors affecting Ligand can be found in Ligand's 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 press release, except as required by law. This caution is made under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995.

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