

Ligand Expands OmniAb® Antibody Discovery Platform Through the Acquisitions of xCella Biosciences and Taurus Biosciences

The acquired technologies continue to position Ligand's OmniAb as a best-in-class platform for antibody discovery

SAN DIEGO--(BUSINESS WIRE)-- **Ligand Pharmaceuticals Incorporated (NASDAQ: LGND)** announces the acquisition of two privately held companies that strengthen and complement its OmniAb® technology platform. Ligand acquired xCella Biosciences, Inc. for \$7 million in cash plus potential earnouts, and acquired Taurus Biosciences LLC for \$5 million in cash plus non-transferable contingent value rights (CVRs). In addition, Ligand will invest \$2.5 million in a new company, Minotaur Therapeutics, which will be led by Taurus Biosciences' founder, in exchange for royalties on products from future programs.

With the addition of these two companies, Ligand has secured a technology to further enhance its single B cell screening platform as well as technologies to discover and humanize antibodies from immunized cows or cow-derived libraries. The acquisitions are expected to enable Ligand to secure new license agreements with expanded economics as a result of the addition of tools and intellectual property that Ligand can now offer to partners. Ligand evaluated multiple public and private platforms to acquire in order to continue the expansion of the OmniAb platform and determined xCella and Taurus represented the best fit and opportunity.

“Bringing the capabilities and intellectual property of these two companies into Ligand will strengthen our antibody discovery capabilities, in particular our OmniChicken® platform. We are committed to keeping OmniAb at the cutting edge of antibody discovery and development, as exemplified by these deals and our acquisition of Ab Initio Biotherapeutics last year,” said John Higgins, Chief Executive Officer of Ligand. “During 2020 we have seen a number of major advancements by partners with OmniAb-discovered programs. We believe the next few years will further highlight the significance of the OmniAb platform to major drug programs and contribute substantially to our financial growth and performance.”

Ligand's OmniAb antibody discovery platform has been formed via five strategic acquisitions of leading antibody discovery tools and intellectual property over the past several years, creating a best-in-class platform to serve a growing portfolio of partners, with:

- Potential for two approvals of OmniAb-derived antibodies in 2021 with expected new royalty streams to Ligand;

- More than 80 OmniAb-derived programs in Ligand's diverse and growing portfolio of partnerships;
- Approximately 50 completed or on-going clinical trials with OmniAb-derived antibodies;
- Leading OmniAb-derived programs in clinical development with Janssen/J&J (Teclistamab), Genentech (Tiragolumab), Gloria Pharmaceuticals and Arcus/Gilead (Zimberelimab), CStone Pharmaceuticals (Sugemalimab), and Immunovant (IMVT-1401).

About xCella Biosciences

xCella is an antibody discovery company based in Menlo Park, California, and built on scientific research from Stanford University and MIT. xCella's xPloration™ platform is a proprietary microcapillary platform that can screen single B cells for specificity and bioactivity and will increase Ligand's antibody discovery throughput and efficiency. This acquisition also provides Ligand with an existing partnership with Teva Pharmaceuticals. For more information, please visit www.xcellabio.com.

About Taurus Biosciences

Taurus Biosciences discovers and develops novel antibodies from immunized cows and cow-inspired libraries. These antibodies feature some of the longest CDR3s of any species, with unique genetic and structural diversity that can enable binding to challenging antigens with application in therapeutics, diagnostics and research. Taurus Biosciences is based in San Diego and has intellectual property, derived from major discoveries at Scripps Research and the Applied Biomedical Science Institute, related to bovine ultralong CDR3 antibodies. For more information, please visit www.taurusbiosci.com.

About OmniAb®

OmniAb is a three-species transgenic-animal platform consisting of five different technologies used for producing mono- and bispecific human therapeutic antibodies. OmniRat® animals comprise the industry's first human monoclonal antibody technology based on rats. Because they have a complete immune system with a diverse antibody repertoire, OmniRat animals generate antibodies with human idiotypes as effectively as wild-type animals make rat antibodies. OmniMouse® is a transgenic mouse that complements OmniRat and expands epitope coverage. OmniFlic® is an engineered rat with a fixed light chain for development of bispecific, fully human antibodies. OmniChicken® animals comprise the industry's first human monoclonal antibody technology based on chickens. The OmniClic chicken is specifically developed to facilitate the generation of bispecific antibodies and retains the ability to generate diverse, high quality affinity matured antibodies. All five types of OmniAb therapeutic human antibody platform, OmniRat, OmniFlic, OmniMouse, OmniChicken and OmniClic, use patented technology, have broad freedom to operate, produce highly diversified, fully human antibody repertoires optimized in vivo for immunogenicity, manufacturability, and therapeutic efficacy, and deliver fully human antibodies with high affinity, specificity, expression, solubility and stability - Naturally Optimized Human Antibodies®.

About Ligand Pharmaceuticals

Ligand is a revenue-generating 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 OmniAb® technology platform is a patent-protected transgenic animal platform 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. The Vernalis Design Platform (VDP) integrates protein structure determination and engineering, fragment screening and molecular modeling, with medicinal chemistry, to help enable success in novel drug discovery programs against highly-challenging targets. Ab Initio™ technology and services for the design and preparation of customized antigens enable the successful discovery of therapeutic antibodies against difficult-to-access cellular targets. Icagen has established deep biological expertise focused on ion channels and transporters and has a strong track record in ion channel drug discovery from screening to lead optimization. Ligand has established multiple alliances, licenses and other business relationships with the world's leading pharmaceutical companies including Amgen, Merck, Pfizer, Sanofi, Janssen, Takeda, Servier, Gilead Sciences 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. These forward-looking statements include, without limitation, statements regarding: the improvement of Ligand's antibody discovery capabilities and the commercial advantages that are expected to arise from such improvements. Actual events or results may differ from Ligand's expectations due to risks and uncertainties inherent in Ligand's business, including, without limitation: the OmniAb platform faces specific risks, including the fact that no product using antibodies from the platform has been approved by the FDA or similar regulatory agency; unexpected adverse side effects or inadequate therapeutic efficacy of Ligand's or Ligand's partners' product(s) could delay or prevent regulatory approval or commercialization; and other risks described in Ligand's prior press releases and filings with the SEC. The failure to meet expectations with respect to any of the foregoing matters may reduce Ligand's stock price. Ligand disclaims any intent or obligation to update these forward-looking statements after the date hereof. This caution is made under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995.

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