

July 21, 2021



Ligand Partner Jazz Pharmaceuticals Launches RYLAZE™ (asparaginase erwinia chrysanthemi (recombinant)-rywn), Formerly JZP458

Ligand expects to receive \$7 million in milestone payments

Rylaze for the treatment of ALL or LBL utilizes Ligand's Pelican Expression Technology™ Platform

EMERYVILLE, Calif.--(BUSINESS WIRE)-- **Ligand Pharmaceuticals Incorporated (NASDAQ: LGND)** today announced Jazz Pharmaceuticals plc (NASDAQ: JAZZ) has launched Rylaze™ (asparaginase erwinia chrysanthemi (recombinant)-rywn), also known as JZP458. Rylaze, which was approved by the FDA on June 30, 2021, is a recombinant erwinia asparaginase used as a component of a multi-agent chemotherapeutic regimen for the treatment of acute lymphoblastic leukemia (ALL) or lymphoblastic lymphoma (LBL) in adult and pediatric patients 1 month or older who have developed hypersensitivity to *E. coli*-derived asparaginase.

Under the terms of the license agreement with Jazz Pharmaceuticals, Ligand received a \$2 million payment upon FDA's acceptance for review of the product BLA and is entitled to receive a \$5 million payment upon the first commercial sale following launch. Ligand is eligible to receive up to an additional \$155.5 million in milestone payments and tiered low to mid-single digit royalties based on worldwide net sales of any products resulting from this collaboration, including Rylaze.

"This partnership with Jazz Pharmaceuticals is one of the core scientific programs that catalyzed our acquisition of Pfenex last year. The Rylaze commercial launch really showcases our highly productive partnership with Jazz and the exceptional ability of our Pelican Expression Technology to enable life-saving therapeutics," said John Higgins, CEO of Ligand. "The robust manufacturing afforded by Ligand's Pelican Expression Technology combined with Jazz's demonstrated success in development and commercialization has enabled the delivery of a high-quality recombinant asparaginase option for patients with hypersensitivity to *E. coli*-derived asparaginase with reliable supply."

About the Pelican Expression Technology™

Pelican is a robust, validated, cost-effective and scalable platform for recombinant protein production, and is especially well-suited for complex, large-scale protein production where traditional systems are not suitable. Multiple global manufacturers have demonstrated consistent success with the platform and the technology is currently out-licensed for

numerous commercial and development-stage programs. The versatility of the platform has been demonstrated in the production of enzymes, peptides, antibody derivatives and engineered non-natural proteins. Partners seek the platform as it can contribute significant value to biopharmaceutical development programs by reducing development timelines and costs for manufacturing therapeutics and vaccines. Given pharmaceutical industry trends toward large molecules with increasing structural complexities, Pelican is well positioned to meet these growing needs as the most comprehensive broadly available protein production platform in the industry. For more information, please visit www.pelicanexpression.com.

About Ligand Pharmaceuticals

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 management and commercialization) to ultimately generate our 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 more 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 "plans," "believes," "expects," "anticipates," and "will," and similar expressions, are intended to identify forward-looking statements. These forward-looking statements include the timing and amount of milestone payments Ligand expects; and the intellectual property protections with respect to Ligand's technologies, including its OmniAb[®] and Captisol[®] platforms and the Pelican Expression Technology[™]. Actual events or results may differ from Ligand's expectations due to risks and uncertainties inherent in Ligand's business, including, without limitation: Ligand is dependent on Jazz on the commercialization of Rylaze, including the timing of the first commercial sale, and Jazz may not generate net sales to generate royalties payable to Ligand; and other risks described in Ligand'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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Ligand Pharmaceuticals Incorporated

Simon Latimer

investors@ligand.com

(858) 550-7766

Twitter: @Ligand_LGND

LHA Investor Relations

Bruce Voss

bvoss@lhai.com

(310) 691-7100

Source: Ligand Pharmaceuticals Incorporated