October 19, 2011

Ligand Enters into Platform Captisol® License Agreement with SAGE Therapeutics

SAN DIEGO-- **Ligand Pharmaceuticals Incorporated (NASDAQ:LGND)** announced today that it has entered into a Captisol license agreement with SAGE Therapeutics, Inc. for the development and commercialization of Captisol-enabled® therapeutics for a broad range of debilitating central nervous system (CNS) conditions. Under the agreement, Ligand will receive upfront and research support payments, as well as potential milestone payments for Captisol-enabled programs. In addition to potentially receiving royalties on net sales for products that use the Captisol technology, Ligand will receive revenue from the sale of Captisol to Sage for clinical and commercial activities.

While the treatment of CNS diseases has long been viewed as a challenging and largely underserved space in drug development, SAGE Therapeutics' proprietary Positive and Negative Allosteric Modulator (PANAM) chemistry platform combined with Ligand's Captisol technology may enable the rapid development of allosteric receptor modulators that target these critical pathways to fine tune and balance the neuronal activity that is disrupted in CNS disorders. Studies have shown that Ligand's Captisol technology is particularly adept at solubilizing this class of molecules and opens up the potential for the Captisol-enabled treatment of various CNS conditions.

"This is an exciting and significant new platform deal for Ligand, continuing the expansion of our growing portfolio of partnered assets," said John Higgins, President and Chief Executive Officer of Ligand Pharmaceuticals. "We believe SAGE will be an excellent partner for this robust platform opportunity in CNS. SAGE has assembled strong financial backing from Third Rock Ventures and a management team with world-class CNS expertise. We look forward to working with SAGE to advance these programs quickly into development."

Kevin Starr, partner at Third Rock Ventures and interim Chief Executive Officer of SAGE Therapeutics, stated "We are pleased to partner with Ligand as we build SAGE Therapeutics and advance our pipeline of CNS therapeutics. Accessing Captisol is a prime example of an early collaboration that will help accelerate the clinical development and commercialization of our broad pipeline of allosteric receptor modulators to treat debilitating CNS conditions such as schizophrenia, depression and traumatic brain injury."

About Captisol®

Captisol is a patent protected, chemically modified cyclodextrin with a structure designed to optimize the solubility and stability of drugs. Captisol was invented and initially developed by scientists at the University of Kansas' Higuchi Biosciences Center for specific use in drug development and formulation. This unique technology has enabled five FDA-approved

products, including Pfizer's VFEND® IV and Baxter Internationals' NEXTERONE®. There are currently more than 25 Captisol-enabled® products in development, including Onyx Pharmaceuticals' carfilzomib program and proprietary programs at Merck and GlaxoSmithKline.

About SAGE Therapeutics

SAGE Therapeutics is a central nervous system (CNS) product focused company building a portfolio of new therapies to meet the growing unmet need in a range of CNS disorders, including schizophrenia, depression, pain, and traumatic brain injury. SAGE Therapeutics' proprietary Positive and Negative Allosteric Modulator (PANAM) chemistry platform targets the primary excitatory and inhibitory neurotransmitter systems in the brain and enables the development of allosteric modulators that fine tune and balance neuronal activity that is disrupted in CNS disorders. Specifically, SAGE is focused on non-benzodiazepine and non-glycine approaches to modulating GABA and glutamate receptors respectively. SAGE's approach leverages extensive knowledge in chemistry, molecular and in vivo pharmacology, formulation technology, biomarker data and compelling clinical proof of concept established for several of its lead programs - all of which may enable SAGE Therapeutics to accelerate the clinical development of its pipeline and bring important medicines to patients. SAGE Therapeutics is a private company launched in 2011 by a proven team of R&D leaders, renowned CNS experts and Third Rock Ventures. For more information, please visit: www.sagerx.com.

About Ligand Pharmaceuticals

Ligand is a biopharmaceutical company with a business model that is based upon the concept of developing or acquiring royalty revenue generating assets and coupling them to a lean corporate cost structure. Ligand's goal is to produce a bottom line that supports a sustainably profitable business. By diversifying the portfolio of assets across numerous technology types, therapeutic areas, drug targets, and industry partners, we offer investors an opportunity to invest in the increasingly complicated and unpredictable pharmaceutical industry. In comparison to its peers, we believe Ligand has assembled one of the largest and most diversified asset portfolios in the industry with the potential to generate revenue in the future. These therapies address the unmet medical needs of patients for a broad spectrum of diseases including hepatitis, muscle wasting, Alzheimer's disease, dyslipidemia, diabetes, anemia, COPD, asthma, rheumatoid arthritis and osteoporosis. Ligand has established multiple alliances with the world's leading pharmaceutical companies including GlaxoSmithKline, Merck, Pfizer, Baxter International, Bristol-Myers Squibb, Celgene, Onyx Pharmaceuticals, Lundbeck Inc. and The Medicines Company. For more information, please visit www.ligand.com. Follow Ligand on Twitter @Ligand_LGND.

Caution Regarding 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. Actual events or results may differ from Ligand's expectations. For example, there can be no assurance that any product in the Ligand or Sage Therapeutics pipelines in relation to the Captisol® collaboration will be successfully or quickly developed, that Ligand's supply capabilities will be sufficient to meet the requirements of Sage Therapeutics or any other Captisol partner,

that regulatory approvals will be granted, that patient and physician acceptance of these products will be achieved, that final results of human clinical trials will be consistent with any interim results, that final results will be supportive of regulatory approvals required to market products or that any revenue will be achieved from these partnered programs and we may not be successful in integrating the CAPTISOL technology and Ligand's other development product candidates into our existing operations. Additional information concerning these and other risk factors affecting Ligand's business can be found in prior press releases available via www.ligand.com as well as in Ligand's public periodic filings with the Securities and Exchange Commission 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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Source: Ligand Pharmaceuticals