

X-Chem Expands Collaboration with Janssen in Inflammatory Diseases

-- Event represents X-Chem's fifth collaboration expansion with five distinct pharma partners --

WALTHAM, Mass. – February 15, 2017 – X-Chem, Inc. (X-Chem) announced today that it has expanded its collaboration with Janssen Biotech, Inc., one of the Janssen Pharmaceutical Companies of Johnson & Johnson, to discover new drug leads for the treatment of inflammatory disease. The multi-target expansion builds on the parties' existing discovery and license partnership, entered into in December 2014, and was facilitated by Johnson & Johnson Innovation. This latest agreement will apply X-Chem's DEX™ platform to the identification of novel modulators for challenging disease targets, following the licensing of multiple series of X-Chem-discovered small molecules by Janssen in 2016. Under the terms of the agreement, X-Chem receives upfront payment and research funding, and is eligible to receive additional payments and royalties based on the achievement of clinical, regulatory and commercial milestones.

"We are pleased with this research alliance and the decision to increase the scope of the original agreement," said Rick Wagner, Ph.D., Chief Executive Officer and Founder of X-Chem. "We are excited to continue our work with Janssen and discover the next generation of anti-inflammatory therapies."

About the DNA-Encoded X-Chem (DEX™) Library and Platform

Due to the size and diversity of the DEX™ library, X-Chem can discover multiple series of novel, potent and selective lead compounds at an unprecedented rate of success against a wide range of targets, including some that previously failed using conventional screening methods. A number of proprietary innovations in library design, screening methodology and bioinformatics underlie the exceptional performance of the DEX™ platform. In particular, X-Chem's approach to library construction allows for additional chemical reactions to become useable in DNA-encoded library synthesis. Together, these developments result in a much greater repertoire of diversity for small molecules, which cover a range of categories including fragment molecules, small molecular weight heterocyclic compounds, and macrocyclic structures. This diverse library, combined with a heightened ability to detect active molecules, has yielded a robust process that has been highly successful against targets categorized as difficult or intractable.

About DNA-Encoding

The X-Chem drug discovery engine is based on a library, currently in excess of 120 billion compounds and growing, generated by iterative combinatorial synthesis of small molecules tethered to DNA tags that record the synthetic history of the small molecule. Every small molecule in the library has a unique DNA barcode attached to it. The library is screened as a mixture using affinity-

based binding to a target of interest. Certain rare molecules in the library that bind to the target can be “fished out,” while the rest of the molecules are washed away. DNA sequencing methods are then used to detect molecules that are enriched when bound to the target. The diverse nature of the library produces multiple families or clusters of related molecules that bind to the target, forming a basis for emergent structure-activity relationships. Structure-activity relationships are typically used by medicinal chemists to guide iterative chemical maturation of a molecule into a drug. Based on the synthetic history encoded in the DNA sequence information, molecules are then made without the DNA tag attached, and tested for activity in conventional assays.

About X-Chem

X-Chem, Inc. is a privately-owned biotechnology company based in Waltham, Mass. The company’s mission is to apply its powerful product engine to the discovery of small molecule compounds against high-value therapeutic targets. X-Chem has established partnerships with Roche, AstraZeneca, Bayer, Pfizer, Alexion, MD Anderson Cancer Center, Sanofi, Abbvie and several other leading pharmaceutical companies, biotechnology organizations, and academic centers. For further information on X-Chem, please visit: <http://www.x-chemrx.com/>.

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