

PsychoGenics Announces Milestones Associated with Sunovion's Advancing Pipeline

Two Compounds Discovered Using PsychoGenics' SmartCube® Platform Have Entered Clinical Development

PARAMUS, N.J., October 30, 2019 – PGI Drug Discovery LLC (PsychoGenics), announced today that it has received milestone payments from Sunovion Pharmaceuticals Inc. (Sunovion) associated with the advancement of two compounds into clinical testing - SEP-378614 and SEP-380135, bringing the total to four compounds now being studied in clinical trials for people living with neuropsychiatric conditions.

"We are pleased to see the continued progress of these compounds that hold promise for people living with serious neuropsychiatric conditions and are tremendously proud of the role played by PsychoGenics' target-agnostic machine learning approach, using the SmartCube® platform," commented Henry Jarecki, MD, Adjunct Professor, Department of Psychiatry, Yale University School of Medicine, and Chairman of PsychoGenics.

PsychoGenics and Sunovion initiated a collaboration in August 2007, with PsychoGenics evaluating a library of Sunovion compounds. SEP-378614 and SEP-380135 were optimized for *in vivo* activity by Sunovion medicinal chemists based on quantitative structure-activity relationship analysis, in collaboration with PsychoGenics.

Late last year, PsychoGenics and Sunovion [announced top line results from a 245-patient](#) multicenter Phase II schizophrenia study where SEP-363856, another compound discovered by Sunovion in collaboration with PsychoGenics, demonstrated statistically significant improvement in the Positive and Negative Syndrome Scale (PANSS) total score ($p < .001$) with a safety profile comparable to placebo. SEP-363856 [received FDA Breakthrough Therapy Designation in May of this year](#) and [recently entered Phase III clinical studies](#), triggering another milestone payment.

SEP-363856, SEP-378614 and SEP-380135 are jointly owned by Sunovion and PsychoGenics. Under the terms of the agreement, Sunovion assumed sole responsibility for global development and commercialization of these compounds. PsychoGenics is entitled to receive payments upon Sunovion's achievement of certain development milestones for SEP-363856, SEP-378614 and SEP-380135, as well as, royalty payments for any sales of these compounds.

About SmartCube®-driven Drug Discovery

PsychoGenics' proprietary, high-throughput SmartCube® platform combines *in vivo* behavioral testing with developments in computer vision and modern artificial intelligence to phenotypically discover drug candidates for potential utility across the spectrum of CNS disease indications. Using SmartCube® and other capabilities, PsychoGenics collects and analyzes multi-

dimensional preclinical data on novel compounds and disease mouse model phenotypes, and employs proprietary machine learning algorithms to find new treatments. PsychoGenics has screened and optimized diverse and targeted libraries of compounds delivering hundreds of hits from which numerous neuropsychiatric drug candidates have emerged.

PsychoGenics' phenotypic drug discovery approach can significantly reduce the time and cost to reaching approved Investigational New Drug status, potentially resulting in the identification of a viable drug candidate from a few hundred analogs tested in lead optimization in just over a year, on average. This compares favorably to most target-driven programs, which typically synthesize thousands of analogs over many years. Due to its target-agnostic nature, the SmartCube approach has increased the probability of successfully finding drug candidates with novel first-in-class mechanisms of action and improved side effect profiles, suitable for treating the symptoms of neuropsychiatric disorders.

About PsychoGenics Inc. and PGI Drug Discovery LLC

PsychoGenics Inc. and its discovery arm PGI Drug Discovery LLC (collectively known as PsychoGenics) have pioneered the translation of rodent behavioral and physiological responses into robust, high-throughput and high-content phenotyping. PsychoGenics' drug discovery platforms, SmartCube®, NeuroCube® and PhenoCube®, have been used in shared-risk partnerships with major pharma companies including Sunovion and Roche, resulting in the discovery of several novel compounds now in clinical trials or advanced preclinical development. PsychoGenics' capabilities also include standard behavioral testing, electrophysiology, translational EEG, molecular biology, microdialysis and quantitative immunohistochemistry. In addition, the company offers a variety of in-licensed transgenic mouse models that support research in areas such as Huntington's disease, autism spectrum disorders, psychosis/schizophrenia, depression, PTSD, Alzheimer's disease, Parkinson's disease, muscular dystrophy, ALS and seizure disorders. For more information on PsychoGenics Inc., visit www.psychogenics.com.

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