

September 23, 2011

Codex BioSolutions, Inc. announces today the receipt of a Phase I SBIR award for \$624,562 from the National Institute of Mental Health to fund the development of cell based assay for screening antipsychotic drugs. The SBIR award titled “Development of a Novel Cell Based PDE10A Assay for Antipsychotic Drug Discovery” was granted in response to a request by the NIMH for applications pertaining to Complex Technologies and Therapeutics Development for Mental Health Research and Practice.

The broad goal of the SBIR project is to develop a cell-based, Phosphodiesterase 10A (PDE10A) assay with proprietary cAMP biosensor technology (“ACTOne”). It will be used to develop innovative antipsychotic drugs.

PDE10A, which hydrolyzes both cAMP and cGMP and inactivates 5'-monophosphate nucleotide-mediated signaling pathways, has been compellingly validated as a schizophrenia drug target. Drug discovery projects are being initiated in many pharmaceutical and biotech companies. Currently, hit compounds for PDE programs are primarily discovered by high-throughput screening (HTS) compound libraries in cell-free biochemical assays with purified recombinant enzymes. Cell-based assays suitable for HTS are essential tools in contemporary drug discovery. They can quantitatively and qualitatively expand the pipeline, critically contribute to the clinical success of the PDE10A program, and are still in high demand by the industry.

Codex leveraged the cyclic nucleotide-gated (CNG) ion channel in the ACTOne technology to detect intracellular cAMP changes and developed the first commercially available live-cell PDE inhibitor assay. Inhibition of PDE results in an increase in intracellular levels of cAMP which is detected as an alteration in ion flux through the channel using Codex's membrane potential dye. This assay has been used to identify inhibitors of PDE4 in a 1536 well format (Titus et al, *J Biomol Screen* 2008; 13: 609-618). The proposed studies funded by the NIMH will lead to the development of a first cell base assay for PDE10A.

Dr. Han-Ting Zhang of West Virginia University Health Sciences Center will serve as a scientific advisor of the project.