metabolic solutions development company

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Metabolic Solutions Development Company Awarded Funding by The Michael J. Fox Foundation

First-in-class mTOT Modulator™ to be studied as potential treatment for dyskinesia in collaboration with researchers at Van Andel Institute

KALAMAZOO, Mich., Feb. 7, 2013 - Metabolic Solutions Development Company, LLC (MSDC) announced today that it has received an award from The Michael J. Fox Foundation for Parkinson's Research (MJFF) to conduct preclinical research on a first-in-class mTOT Modulator, MSDC-0160, as a potential treatment for levodopa induced dyskinesia (LID). The study will be undertaken in collaboration with Patrik Brundin, MD, PhD, of Van Andel Institute (VAI).

The aim of the study, titled "Potential of Novel Insulin Sensitizers to Treat Dyskinesia," is to determine if MSDC-0160 can prevent or reverse LID in a preclinical model of Parkinson's disease (PD). Should the results show that MSDC-0160 can significantly modify LID *in vivo*, MSDC plans to begin a clinical trial to examine the effects of MSDC-0160 in PD patients with LID. Such a clinical trial could begin in 2014.

MSDC-0160
MSDC-0160 is a novel once-a-day oral insulin sensitizer and the first in a new class of therapeutic agents called mTOT Modulators. mTOT™ is newly identified protein complex in the inner mitochondrial membrane that appears to function as a molecular "sensor switch" that coordinates carbohydrate, lipid, and amino acid metabolism. MSDC-0160 selectively modulates proteins in the mTOT complex, effecting pyruvate utilization and resulting in improved insulin action, lipid oxidation, preservation of beta cell function, and generation of brown fat, an important organ in the control of body composition. In a recently completed Phase 2b clinical trial in 258 patients with type 2 diabetes, MSDC-0160 was shown to lower hemoglobin A1c significantly without the side effect profile of Actos®. The compound is also currently being studied in a pilot Phase 2a trial in patients with dementia due to Alzheimer's disease (NCT01374438).

About Parkinson's Disease
Over one million people in the US and an estimated 5 million people globally suffer from Parkinson's disease, a neurodegenerative disorder caused by the diminished production of dopamine, a key neurotransmitter, resulting in progressive impairment of motor function including tremors, rigidity and difficulty in moving. Long-term treatment of Parkinson's disease (PD) patients with levodopa, also called L-dopa, typically leads to unwanted side effects including L-dopa induced dyskinesia (LID), which prevents optimal treatment of the disease.

L-dopa Induced Dyskinesia
Levodopa, also called L-dopa, is the most commonly administered drug to treat Parkinson's symptoms. L-dopa helps restore levels of dopamine, a chemical messenger in the brain responsible for smooth, coordinated movement and other motor and cognitive functions. Dyskinesia is a common side effect of L-dopa treatment. These involuntary, uncontrollable, and often excessive movements are distinct from the rhythmic tremor commonly associated with Parkinson's disease.

About Metabolic Solutions Development Company
Metabolic Solutions Development Company (www.msdrx.com) is a drug discovery and development company investigating novel molecular targets and developing new therapeutics to treat metabolic diseases associated with age-related mitochondrial dysfunction, especially type 2 diabetes.

About The Michael J. Fox Foundation for Parkinson's Research
As the world's largest private funder of Parkinson's research, The Michael J. Fox Foundation is dedicated to accelerating a cure for Parkinson's disease and improved therapies for those living with the condition today. The Foundation pursues its goals through an aggressively funded, highly targeted research program coupled with active global engagement of scientists, Parkinson's patients, business leaders, clinical trial participants, donors and volunteers. In addition to funding more than $313 million in research to date, the Foundation has fundamentally altered the trajectory of progress toward a cure. Operating at the hub of worldwide Parkinson's research, the Foundation forges groundbreaking collaborations with industry leaders, academic scientists and government research funders; increases the flow of participants into Parkinson's disease clinical trials with its online tool, Fox Trial Finder; promotes Parkinson's awareness through high-profile advocacy, events and outreach; and coordinates the grassroots involvement of thousands of Team Fox members around the world.

About Van Andel Institute
Established by Jay and Betty Van Andel in 1996, Van Andel Institute (VAI) is an independent research and educational organization based in Grand Rapids, Mich., dedicated to preserving, enhancing and expanding the frontiers of medical science, and to achieving excellence in education by probing fundamental issues of education and the learning process. Van Andel Research Institute (VARI), VAI's research arm, is dedicated to studying the genetic, cellular and molecular origins of cancer, Parkinson's and other diseases and working to translate those findings into effective therapies. This is accomplished through the work of more than 200 researchers in on-site laboratories and in collaborative partnerships that span the globe. Find out more about Van Andel Institute or donate by visiting www.vai.org

Bio for Patrik Brundin, MD, PhD
Professor Brundin has over 30 years of experience with neurodegenerative diseases, Parkinson's disease pathogenesis, and therapeutic neural grafting into people with Parkinson's disease. He is one of the top cited researchers in the field of neuroscience with nearly 300 publications on Parkinson's disease and related topics. In addition to managing laboratories at VARI and in Lund, Sweden, he is the co-editor in chief of the Journal of Parkinson's Disease and has coordinated multiple international research programs.

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