Kinesia ProView Launches to Visualize Parkinson's Symptom Response to Deep Brain Stimulation Programming

15 MAY 2013: Valley View, OH – Great Lakes NeuroTechnologies announced today the product launch of Kinesia ProView™ [http://www.glneurotech.com/kinesia/proview/index.php] to visualize motor symptom severity response during programming of deep brain stimulation (DBS) for Parkinson's disease. Kinesia ProView provides a standardized platform to quantitatively assess how symptoms such as tremor, bradykinesia, and dyskinesias change in response to specific DBS settings during outpatient programming procedures. Developed in collaboration with clinical studies at the Cleveland Clinic and University of Minnesota, the system is FDA cleared to market in the United States, is CE Marked, and has Health Canada and Australian TGA approval for distribution in international markets. The system integrates a secure, HIPAA compliant web application and a broadband enabled tablet interface with wireless patient sensors. Deep brain stimulation represents a growing therapy for movement disorders such as Parkinson's disease as current estimates indicate a $500 million global market with projections to over $1 billion by 2020.

"Parkinson's disease is an incredibly complex and challenging disease for both patients and physicians", said Joseph P. Giuffrida, PhD, President and Principal Investigator at Great Lakes NeuroTechnologies. "Patients may encounter a wide variety of constantly changing symptoms while clinicians have the challenge of matching patient characteristics to an increasingly complex array of treatment options and settings. The Kinesia product suite was developed to improve disease management of Parkinson's through quantitative assessment and telemedicine with targeted clinical applications. Kinesia ProView builds on that momentum for the application of DBS programming."

DBS involves implanting an electrode in a specific area of the brain, and then adjusting stimulation settings to a level that alleviates symptoms without causing side effects. While the therapy has been shown to be effective for treating Parkinson's motor symptoms, there can be disparity in outcomes among implanted patients due to varied postoperative management, particularly concerning DBS programming optimization. Variability in patient outcomes may be due to programmer training and experience and the time required to determine an optimal set of DBS parameters. Programmers can adjust several settings including the contact, polarity, frequency, pulse width, and amplitude of stimulation. This creates a tremendous amount of possible combinations that must be evaluated over multiple types of motor symptoms in a limited time during an office visit. Kinesia ProView quantitatively assesses motor symptoms in response to stimulation settings and provides tools to quickly visualize the programming space. During a programming assessment, the patient wears a wireless sensor to assess motor symptoms such as tremor, bradykinesia, and dyskinesia at each DBS setting. A tablet PC application creates color-coded tuning maps as the programming session progresses, which display specific symptom severities as a function of stimulation settings. These tuning maps allow physicians to visually assess the programming parameter space and optimize the final settings for specific symptoms and battery consumption. Once the programming session is complete, patient data and tuning maps are transmitted via broadband connectivity to a cloud-based server for storage, reporting, and trending using the Kinesia web application.

For the last decade, Great Lakes NeuroTechnologies has been the worldwide leader in developing quantitative assessment tools and telemedicine technology for Parkinson's disease. Fueled by strong funding support from the National Institutes of Health (NIH) in the United States, including the National Institute of Neurological Disorders and Stroke and the National Institute on Aging, the Kinesia technology suite has been commercialized and clinically validated in numerous studies and with hundreds of patients. Great Lakes NeuroTechnologies will be showcasing the technology at the Movement Disorder Society Congress in Sydney, Australia in June 2013.

Great Lakes NeuroTechnologies thanks the NIH for their support of this development (3R44AG033520-02).

About Great Lakes NeuroTechnologies

Great Lakes NeuroTechnologies [http://www.glneurotech.com] is committed to pioneering innovative biomedical technologies to serve research, education, and medical communities, improving access to medical technology for diverse populations, and positively impacting quality of life for people around the world.

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