

Great Lakes NeuroTechnologies Awarded \$2.1M NIH SBIR Grant for DBS Programming

28 August 2025: Independence, OH – Great Lakes NeuroTechnologies (GLNT) is excited to announce that it has been awarded a \$2.1M Phase II SBIR grant (“DBS-Expert Pro: Automated Deep Brain Stimulation Programming Using Functional Mapping”) from the National Institute of Neurological Disorders and Stroke (NINDS) of the National Institutes of Health (NIH) to further develop its patented Kinesia™ technology for optimization of deep brain stimulation (DBS) for movement disorders such as Parkinson’s disease (PD).

Dustin Heldman, Ph.D., is the principal investigator on the program. According to Dr. Heldman, “The clinical utility of DBS for the treatment of movement disorders such as Parkinson’s disease has been well established; however, there is a great disparity in outcomes among DBS recipients due to varied postoperative management, particularly when choosing an optimal set of programming parameters from the thousands of possible combinations.” Heldman continued, “The system we are developing will use our validated motion sensor-based assessments and algorithms to determine a set of programming parameters that optimize symptom improvement without causing side effects. In this program, we will also be integrating the system with commercial DBS platforms to enable efficient in-clinic and home-based DBS programming adjustments, which will reduce travel and help equalize care across the country.”

Zoltan Mari, M.D., director of the Parkinson’s and Movement Disorders Program at Cleveland Clinic Lou Ruvo Center for Brain Health in Las Vegas, is a collaborator on the project serving as primary investigator at the Lou Ruvo Center for Brain Health. According to Dr. Mari, “Deep brain stimulation has become an essential therapy for many people with Parkinson’s disease, yet programming remains complex and access to expert care is limited. This project will evaluate whether integrating objective, wearable-based monitoring with advanced algorithms can help guide programming decisions and expand access to care. If successful, the approach could standardize and improve DBS therapy while reducing barriers for patients who live far from specialty centers.”

Also collaborating on the project is Dr. Vibhor Krishna, Associate Professor in the Department of Neurosurgery at the University of North Carolina School of Medicine. According to Dr. Krishna, “The technology enhancements in this program will take the DBS programming process to new heights of efficiency, benefiting patients in both clinical and home settings. By automating and standardizing the DBS programming process, we have the potential to significantly improve the quality of life for individuals with PD and other movement disorders.”

Dr. Heldman thanks the NIH, NINDS, and SBIR program for its continued support under this grant (Award Number R44NS143484). The content of this press release is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

About Great Lakes NeuroTechnologies

Great Lakes NeuroTechnologies [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.

About Kinesia™ Technology

GLNT commercialized Kinesia™ technology to provide wearable, objective, and automated assessment of movement disorders such as Parkinson's disease and essential tremor. The clinically validated technology has been adopted by many of the world's leading pharmaceutical and medical device companies as the standard for objective sensor measurement for movement disorders. The KinesiaU™ motor assessment system is a validated, low-cost prescription medical app for individuals to measure their Parkinson's disease and essential tremor symptoms using an iPhone or Android smartphone and smartwatch. The KinesiaU system tracks tremors, slowness, and dyskinesia as well as therapies and activities in user-friendly reports. These can help patients and clinicians make better care decisions and identify therapies and activities to improve their symptoms.

The Kinesia family of motor assessment systems are approved in many regions around the world, but due to individual country regulations, such as language translations, data restrictions, and other regulatory requirements, specific Kinesia products lines may not be approved or available and therefore should not be used in those locations. The Kinesia technology is patented in the US, India, and various countries in Europe including the UK (see <https://www.glneurotech.com/patents/>).

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