

Great Lakes NeuroTechnologies Receives Two New NIH SBIR Grant Awards

1 Oct 2018: Independence, OH – Great Lakes NeuroTechnologies (GLNT) announced today that it has been awarded two new Small Business Innovation Research (SBIR) grants from the National Institutes of Health (NIH), which will provide nearly \$2 Million in research funding over the next three years. GLNT, which moved into an upgraded facility in Independence, OH over the summer, has successfully commercialized FDA-cleared and patented wearable motion sensor technology and mobile apps for objectively measuring motor symptoms associated with movement disorders such as Parkinson’s disease (PD). The technology, known as the Kinesia™ family of products [<http://www.glneurotech.com/kinesia>], has been used extensively to provide objective outcome measures in pharmaceutical and medical device clinical trials and to help clinicians optimize therapies. According to Dustin A. Heldman, Ph.D., Chief Operating Officer and Principal Investigator, these two new grant awards will help GLNT expand its technology into two key areas.

GLNT was awarded an SBIR Phase I grant from the National Institute of Nursing Research (NINR) to adapt its Kinesia technology to be marketed to and used directly by patients. Rather than using mobile devices provided by GLNT and proprietary motion sensors, the new system will use smartphones and smartwatches or other consumer wearables already owned by patients. “When optimizing PD therapy, the patient is in the middle of a complex system where drug types, doses, and times interact to create fluctuating patterns of motor symptoms and side effects,” said Heldman. “Tools for patients to monitor, let alone act on, these temporal patterns are severely lacking. This new product, covered by GLNT’s extensive patent portfolio, will address this major limitation by providing patients with visual feedback and actionable suggestions to discuss with their doctor to optimize treatment. This will empower patients to become more involved in their disease management and allow a personalized approach to treatment.”

Dr. David E. Riley, movement disorder neurologist and Chair of Medical Education of the InMotion non-profit community center in Warrensville Heights, OH, is a consultant on the project. “Many of my patients express interest in tracking their progress and attempt to take it upon themselves to improve their therapy regimens,” stated Riley. “The technology being developed will allow for the automated quantification and analysis of the relationships between time, dosing, and activity, improving understanding of the patient’s medical status for both the clinician and the patients. My patients want to improve their therapy, and I believe this tool will be willingly accepted by my patients and other clinicians.”

GLNT was also awarded an SBIR Fast Track from the National Institute on Minority Health and Health Disparities (NIMHD) to develop a system that uses wearable motion sensors and a smartphone app to continuously monitor motor symptoms, complications, and quality of life during activities of daily living to identify when a patient with PD is ready to consider an advanced therapy or to recognize when a patient needs a therapy adjustment and notify a clinician. Advanced therapies such as deep brain stimulation (DBS) and implantable drug pumps are often recommended to patients with PD when medication no longer provides sufficient relief of motor symptoms without causing undesirable side-effects.

Dr. Alberto J. Espay, neurologist at the University of Cincinnati, is a co-investigator on the project. “Many patients do not have access to movement disorders specialty clinics and there is currently no standardized method for identifying when a patient is ready for an advanced therapy,” Espay stated. “And when one of my patients receives an advanced intervention such as DBS, it is not currently feasible to know how the patient may be doing until the next clinical visit, which can be several months later. A device that would allow me to remotely check in on the patient or notify me when the patient is not responding well would be extremely valuable.”

This project builds on the results of a study GLNT previously published demonstrating that a clinician was five times more likely to recommend a patient for an advanced therapy when given access to Kinesia’s objective remote monitoring reports [<http://www.glneurotech.com/kinesia/kinesia-referral-pub>]. “Both grants will enhance GLNT’s position as a market leader in precision medicine and value-based healthcare for movement disorders,” Heldman concluded.

Dr. Heldman thanks the NIH for their continued support through the SBIR program, specifically the National Institute of Nursing Research and the National Institute on Minority Health and Health Disparities (1R43NR018128-01 and 1R44MD013767-01).

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](http://www.glneurotech.com) [<http://www.glneurotech.com>] is committed to pioneering innovative biomed technologies to serve research, education, and medical communities, improving access to medical technology for diverse populations, and positively impacting quality of life on all seven continents. Kinesia is a trademark of Great Lakes NeuroTechnologies Inc. of Independence, OH.

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