

FOR IMMEDIATE RELEASE

CLEVMED RECEIVES \$1.23 MILLION IN NIH FUNDING TO DEVELOP A SYSTEM TO AUGMENT DEEP BRAIN STIMULATION PROGRAMMING IN PARKINSON'S DISEASE

CLEVELAND, OHIO, OCT 7, 2008 - Cleveland Medical Devices Inc. (CleveMed) announced it has been awarded \$1.23 million in NIH SBIR FastTrack funding from the National Institute on Aging to develop ParkinTune™, a system to augment stimulator programming in deep brain stimulation (DBS) procedures for Parkinson's disease (PD). CleveMed is collaborating with clinicians at the Center for Neurological Restoration of the Cleveland Clinic Foundation, a world renowned, pioneering DBS surgery center.

"Clinical tools are needed to improve deep brain stimulation procedures and patient outcomes." said Dr. Jerrold Vitek, Director of the Cleveland Clinic Foundation Neuromodulation Research Center and grant collaborator. "Assisting neurologists by objectively capturing and tracking motor performance in response to stimulation settings with a compact wireless device should show efficacy in optimizing patient outcomes in Parkinson's disease."

DBS is a surgical procedure for treating PD motor symptoms, such as tremor, bradykinesia (slowed movements) and rigidity, when medication is no longer effective. During surgery, an electrode is implanted in a targeted location in the brain. Once inserted, the stimulator intensity, frequency and duration are programmed. This programming is also necessary in several outpatient sessions over a period of months post surgery. Each time the stimulator settings are changed the patient's motor symptoms are evaluated using the Unified Parkinson's Disease Rating Scale (UPDRS) motor exam, a subjective evaluation clinicians use to assess PD motor symptoms. The process is repeated multiple times until optimal stimulator parameters are found which minimize motor symptoms. Utilizing an automated technology platform to objectively quantify Parkinson's motor symptoms and suggest optimized stimulation settings based on those measurements may reduce the time and cost of programming sessions as well as improve patient outcomes.

"CleveMed has previously demonstrated efficacy in objectively monitoring movement disorder motor symptoms." said [Dr. Joseph Giuffrida](#), Director of [CleveMed's Division of Movement Disorders](#) and grant principle investigator. "Expanding this technology and knowledge to DBS programming should provide neurologists with an innovative tool for understanding specific neural mechanisms of DBS on motor control."

The objective is to further commercialize [Kinesia™](#), a clinical device currently on the market for monitoring upper extremity PD symptoms, for a new area of use which will aid clinicians with stimulator programming during DBS surgery and post surgical tuning sessions to ensure optimal control of motor symptoms has been achieved. The technology to be developed will further strengthen our product portfolio and leading position in the area of ambulatory monitoring for movement disorders. The system

will utilize a wireless patient unit worn on the hand that will transmit the kinematic motion data to a nearby laptop. The laptop will display objective symptom information and suggested stimulation settings to help the clinician rapidly program stimulation parameters. By providing repeatable and objective biokinetic data of patient symptoms along with visual examination, ParkinTune may reduce time and costs associated with DBS surgeries and outpatient programming sessions as well as increase patient comfort and overall outcomes.

About CleveMed

CleveMed was founded with the goal of developing innovative telemetry devices for a variety of medical applications. Today, CleveMed is developing and pioneering the use of novel wireless monitoring systems for high growth neurology and rehabilitation applications, including [movement disorders](#), [sleep disorders](#) and brain monitoring. Through these innovations, CleveMed has developed a growing range of products that address the needs of the medical, research and academic communities. For more information, please visit www.CleveMed.com

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