CSD Researchers Will Study Parkinson's Disease With Michael J. Fox Foundation Grant

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November 14, 2014 - In August Dr. Michael P. Cannito, professor in the University of Memphis College of Communication Sciences and Disorders (CSD), became part of a multidisciplinary team that received a grant from the Michael J. Fox Foundation for Parkinson's Research. Cannito is functioning as co-principal investigator on the grant "Augmenting Treatment Effects of Voice Therapy in Parkinson's Disease." The $677,386 award is for three years.

The grant was awarded to University of Tennessee Health Science Center in collaboration with the Le Bonheur Neuroscience Institute. Dr. Shalini Narayana, an assistant professor at UTHSC, serves as principal investigator. Cannito is heading up the voice and speech-related aspects of the project, while Narayana is leading the neurological portions. In addition, UTHSC has awarded a subcontract to the University of Memphis to provide voice therapy, behavioral speech and voice evaluations and extensive speech data analyses. Cannito is principal investigator on the three-year, $244,607 subcontract which started on Oct. 1.

Patients with Parkinson's disease often suffer from speech and voice disorders that adversely affect their communication and quality of life. Medications that help other symptoms of Parkinson's disease are not very effective in treating speech and voice symptoms, but intensive voice therapy has been shown to be helpful.

"This is the study of a lifetime for someone in my area of neuromotor speech disorders," said Cannito. "This new approach of combining behavioral speech/voice therapy with transcranial magnetic brain stimulation and neuroimaging methodology, if successful, may open up a new frontier of rehabilitation for a variety of neurological disorders affecting the ability to speak."

This double-blind randomized clinical trial examines the combination of behavioral voice treatment (LSVT-LOUD) and transcranial magnetic stimulation (TMS) of the motor cortex (as well as LSVT-LOUD plus placebo TMS) in 36 individuals with idiopathic Parkinson's disease. Researchers will evaluate changes in brain function and vocal behavior using functional magnetic resonance imaging, laryngeal endoscopic imaging, and acoustic/perceptual analyses of the speech signal in addition to paper and pencil assessments. The treatments are being provided in the Le Bonheur outpatient center while the pre-treatment, post-treatment and follow-up evaluations will be done at the Memphis Speech and Hearing Center at the U of M.

Other CSD faculty who are involved in the project include Dr. Eugene Buder (speech science advisor), Dr. Joel Kahane (laryngeal endoscopist) and Caroline Royal Evans (LSVT-LOUD provider). Several graduate students in speech-language pathology also will be involved in both the treatment and evaluation phases of this research. This grant will also provide PhD students in Communication Sciences and Disorders an opportunity to become involved with hands on analysis of brain imaging data obtained during speaking in patients with Parkinson's disease.