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Study Shows NeuroStar TMS Therapy[®] Improved Key Elements of Cognition in Patients with Major Depressive Disorder

Unlike Electroconvulsive Therapy (ECT), NeuroStar TMS Therapy Is Not Associated With Memory Loss

San Francisco, CA [May 20, 2009] – New data presented yesterday at the American Psychiatric Association’s annual meeting in San Francisco demonstrated that NeuroStar[®] Transcranial Magnetic Stimulation (TMS) Therapy improved key areas of cognition in patients whose depression improved with NeuroStar treatment. Cognition is defined as the process of thought, and includes memory and the ability to think, concentrate, and make decisions. NeuroStar TMS produced significant improvements on both overall cognitive function and short-term verbal memory. These positive cognitive effects could not be fully accounted for by the improvement in mood alone.

Diminished ability to think, concentrate, and make decisions is a core symptom of depression. This is often further worsened by some common depression treatments, such as some classes of medications. Most notably, electroconvulsive therapy (ECT), while extremely effective, has high rates of cognitive impairment and long-term or even permanent memory loss.

“In this study, NeuroStar TMS Therapy demonstrated no negative effect on cognition, and evidence suggests that it may even improve certain cognitive functions in depressed patients,” said psychiatrist Phil Janicak, M.D., Professor of Psychiatry at Rush University-Chicago and a principal investigator of the trial. “Many patients, by virtue of their depression, already have diminished cognitive functioning. Receiving an effective treatment like TMS, which appears to have no adverse cognitive effects, may benefit millions of people who require alternate treatment options,” Janicak added.

About the Study

Cognitive function was examined in a multi-site, randomized controlled trial of NeuroStar TMS Therapy in patients with pharmacoresistant major depressive disorder (N=155 active TMS, N=146 sham TMS). Specific measures of global cognition (Mini Mental Status Examination), short-term (Buschke Selective Reminding Test) and long-term memory (Autobiographical Memory Interview-Short Form) were obtained prior to first treatment, and at four and six weeks during an acute treatment course of daily TMS. The results showed no significant difference between active TMS and placebo TMS treatment conditions on any of these measures of cognitive function, which indicates that NeuroStar TMS Therapy had no negative effect on cognition.

Additionally, each treatment group was stratified by clinical outcome (HAMD24 responder) at the end of six weeks. Within the TMS group only, there was a statistically significant improvement on the Buschke Selective Reminding Test in the TMS responders compared to TMS non-responders for both short-term recall (P = 0.0116 at four weeks; P = 0.0038 at six weeks) and delayed recall (P = 0.0463 at four weeks; P = 0.0012 at six weeks). This improvement in cognitive function was not seen in placebo-treated patients.

“We believe that the reason for the lack of negative cognitive effects with NeuroStar TMS Therapy is likely due to the focused stimulation of a key brain region, rather than the whole brain effects of both medications and ECT,” said Mark A. Demitrack, MD, Chief Medical Officer for Neuronetics Inc., a psychiatrist, and the study’s lead author. “The fact that NeuroStar caused no negative effects on cognition, and appeared to improve some measures of cognition in some patients, is a testament to the safety of this new non-systemic and non-invasive treatment option.”

About NeuroStar TMS Therapy

NeuroStar TMS Therapy[®] was cleared by the FDA in October 2008 for patients who have not adequately benefitted from prior antidepressant medication*. NeuroStar TMS Therapy is a non-systemic (does not circulate in the bloodstream throughout the body) and non-invasive (does not involve surgery) form of neuromodulation. It stimulates nerve cells in an area of the brain that is linked to depression, by delivering highly focused MRI-strength magnetic field pulses. The treatment is typically administered daily

for 4-6 weeks. In an open-label clinical trial, which is most like real world clinical practice, approximately 1 in 2 patients experienced significant improvement in symptoms, and 1 in 3 experienced complete symptom resolution. There were no systemic side effects, such as weight gain and sexual dysfunction. The most common adverse events related to treatment were scalp pain or discomfort at the treatment area during active treatments. NeuroStar TMS Therapy may not be effective for all patients with depression.

Availability of NeuroStar TMS Therapy

Treatment with NeuroStar TMS Therapy is now available at over 50 treatment centers in 21 states. For specific information on treatment locations with NeuroStar TMS Therapy, please visit www.NeuroStarTMS.com or call the Neuronetics Customer Service Center at (877) 600-7555.

About Neuronetics

Neuronetics, Inc. is a privately-held medical device company focused on developing non-invasive therapies for psychiatric and neurological disorders using MRI-strength magnetic field pulses. Based in Malvern, PA, Neuronetics is the leader in the development of TMS Therapy, a non-invasive form of neuromodulation. For more information, please visit www.neuronetics.com.

About Depression

Depression affects at least 14 million American adults each year. Researchers estimate that by the year 2020, depression will be the second leading cause of disability worldwide. Each year, over 30,000 people in the US commit suicide, 60% of which suffer from depression. The economic burden of depression in 2000 was estimated at \$83.1 billion in the US. Women are almost twice as likely as men to suffer from depression. However, some experts feel that depression in men is under-reported. Depression has no racial, ethnic, or socioeconomic boundaries. About two-thirds of those who experience an episode of depression will have at least one other episode in their lives. Despite major advances in treating this debilitating illness, nearly 30% of patients with depression do not benefit from or are intolerant of antidepressant therapy.

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* NeuroStar TMS Therapy[®] is indicated for the treatment of Major Depressive Disorder in adult patients who have failed to achieve satisfactory improvement from one prior antidepressant medication at or above the minimal effective dose and duration in the current episode.

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