



National Institutes of Health Award a \$1.7M SBIR Grant to MicroTransponder to Develop a Neurostimulation-based Therapy to Treat Tinnitus

DALLAS, Texas – August 30, 2010 – MicroTransponder, Inc., a privately-held medical device company, announced that it has been awarded a \$1.7M SBIR grant from the National Institute on Deafness and Other Communication Disorders (NIDCD) to develop a neurostimulation-based therapy for the treatment of Tinnitus. This project builds upon previous successful animal research and will utilize MicroTransponder’s novel method of pairing neurostimulation with auditory stimuli to remap the auditory cortex and eliminate tinnitus.

Tinnitus is the annoying perception of sound in the ears or head where no external source is present, commonly referred to as “constant ringing in the ears”. The American Tinnitus Association estimates that as many as 2 million Americans currently suffer from severe debilitating tinnitus that prevents them from functioning on a daily basis. It has become an especially common problem in soldiers returning from Iraq and Afghanistan who are exposed to loud blasts. There is currently no cure for tinnitus and while some technologies try to mask the sound of tinnitus, none has shown significant long term clinical success.

MicroTransponder has been conducting preclinical studies under the leadership of Dr. Navzer Engineer, Vice President of Preclinical Affairs, and Principal Investigator on the grant. “Unfortunately, the brain lacks the ability to optimally repair itself after damage to the inner ear after exposure to loud sounds. The brain does not sit dormant either. Instead, these neurons generate abnormal activity that the patient perceives as a phantom sound.”

The aim of the neurostimulation therapy is to reverse this maladaptive plasticity by retraining the brain to “shrink” the abnormal representation of the phantom sound. To do this, the researchers targeted the vagus nerve in neck that stimulates other brain structures to release neuromodulators such as acetylcholine and norepinephrine. “By precisely pairing the release of these powerful neuromodulators with simultaneous delivery of sounds, we were able to reduce this abnormal brain activity and eliminate the tinnitus perception” said Engineer. “There is no magic bullet or pill to reverse or cure tinnitus. Conditions like tinnitus need to be tackled in a powerful and precise manner. Our technique provides that precision by rewiring damaged neural circuits in

auditory cortex and reversing the spontaneous activity that generates the phantom sound” Engineer said. “We hope that this therapy is effective in eliminating tinnitus suffering”.

Many students in the laboratory of Dr. Michael Kilgard, Associate Professor at The University of Texas at Dallas where this research was conducted, worked tirelessly on this important research. The students include Michael Borland, Will Vrana, Jai Shetake, Sindhu Sudanagunta, Jonathan Riley, Jonathan Seale, Elizabeth Hanacik, Amirah Kuzu, Robert Miller and Charlie Omana. “The students put in many hours of research, and our results would not have been possible without their hard work and dedication” said Engineer.

Will Rosellini, CEO of MicroTransponder, stated, “This grant demonstrates the importance of institutions such as the NIH to fund exploratory research. Neurostimulation therapy holds great promise to treat many devastating neurological disorders. We are excited by the opportunity to develop a therapy to treat tinnitus. With support from the NIDCD, our goal is to make this treatment available to all tinnitus sufferers as quickly as possible.”

About MicroTransponder, Inc.

MicroTransponder Inc. (www.microtransponder.com) is a medical device development company with a strong neuroscience research focus. An experienced team of scientists and engineers is developing a wireless neurostimulation technology platform called the SAINT™ to treat various forms of neurological disease. The lead indication is chronic pain, but other products in the development pipeline include tinnitus, motor and speech deficit after TBI and anxiety disorders. MicroTransponder has a substantial neurostimulation focused R&D program which includes an initiative to use the SAINT™ to assist the delivery of chemotherapy treatments for glioblastoma and other cancer therapeutics. MicroTransponder has raised more than \$17M in private investment and grants, including 8 NIH grants.

Media Contact:
Jordan Curnes, President & COO
214-770-0935
Jordan@microtransponder.com