

PRESS RELEASE

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BEL RECEIVES \$1.3 M GRANT TO STUDY IMPROVED EFFICIENCY OF SLEEP

As part of an overall \$4.3 million grant by the Department of Defense, the **Brain Electrophysiology Laboratory (BEL) Company** has been awarded \$1.3 million to study augmented sleep neurophysiology. The study is in partnership with colleagues at **UNC School of Medicine, University of Washington, Oregon Health & Science University, University of Florida and Montana State University**. BEL scientists will measure the glymphatic clearance of waste in the brain using TES stimulation to augment slow wave sleep (N3), or deep sleep. One hypothesis is that enhanced glymphatic clearance during sleep could improve cognitive function following restricted sleep. This landmark grant could facilitate a non-invasive glymphatic clearance technology for the brain, providing better sleep efficiency for active military service members. Additionally, the ability to clear the brain of harmful waste during sleep could be a valuable therapy in brain health care for both military and civilian populations.

Dr. Miranda Lim, Associate Professor in Neurology at Oregon Health & Science University and a lead investigator in the study, had this comment: "We are very enthusiastic about testing BEL's deep sleep therapy at the Sleep & Health Applied Research Program (SHARP) at Oregon Health & Science University. Together with our collaborators at University of North Carolina, University of Washington, University of Florida, and University of Montana, we will develop and test advanced MRI measures of clearance of toxins from the brain during and after sleep. This project for the US Department of Defense will allow us to apply deep sleep therapy to potentially reverse the detrimental effects of poor sleep often experienced in military operational environments."



BEL Company's CEO, Dr. Don Tucker, revealed that the new technology has many potential applications such as treating **Mild Cognitive Impairment, Alzheimer's Disease, and even anxiety disorders**. A subsidiary business, **Neurosom®**, is developing a sleep therapy system for consumer use. Dr. Tucker had this to say, "We have had good success in synchronizing the brain activity of deep sleep in the laboratory. This new project will allow us to develop a portable technology for use in home as well as in the armed forces."