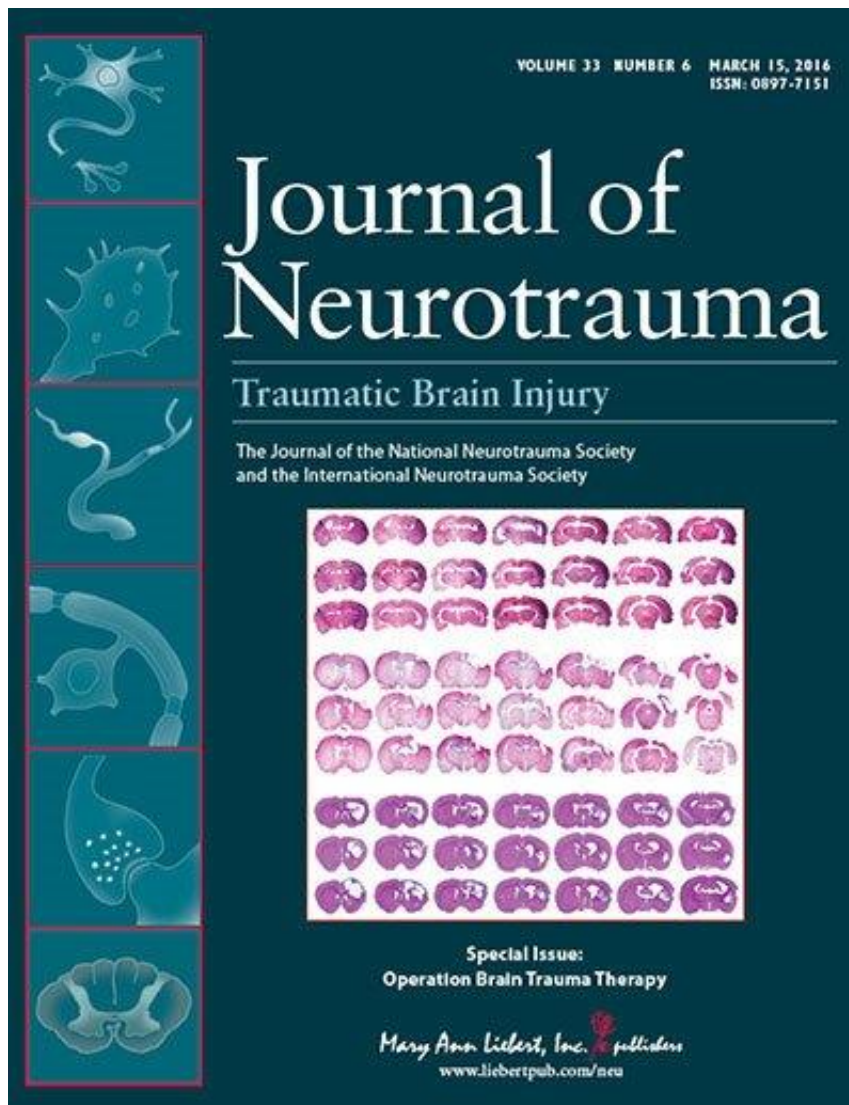# Results from 'Operation Brain Trauma Therapy' Consortium reported

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Credit: Mary Ann Liebert, Inc., publishers

The screening of five therapies for traumatic brain injury (TBI) by the consortium known as Operation Brain Trauma Therapy (OBTT) are published in a new special issue of *Journal of Neurotrauma*.

The OBTT consortium is comprised of investigators from the University of Pittsburgh School of Medicine, the University of Miami Miller School of Medicine, the Walter Reed Army Institute of Research, the Medical College of Virginia Campus of Virginia Commonwealth University, the University of Florida, Messina University, Italy, and Banyan Biomarkers, LLC. OBTT evaluates potential therapies for TBI across multiple animal models using rigorous preclinical studies that include biomarker screening. In the work to date that is presented in the Journal, the widely used anti-epileptic drug Levetiracetam was found to show the most benefit of the drugs tested, with the biomarker GFAP (glial fibrillary acidic protein) performing well across studies.

"Since World War II, over 80,000 publications have addressed the topic of TBI and the number of publications has increased exponentially in the last 10 years reflecting the increasing importance of TBI as the largest cause of disability and death among young persons under 40," states Ross Bullock, MD, PhD, Professor of Neurological Surgery at the University of Miami.

"In spite of this," continues Dr. Bullock, "only about 30 major phase 3 trials to test new therapies have been performed for TBI in humans, and none have been successful. The OBTT initiative funded by the Combat Casualty Care Research Program of the Department of Defense represents a major step forward in addressing some of these limiting factors in translating TBI therapies to clinical use. Although these studies are un-glamorous, they are extremely important and have set a rigorous new standard for the pre-clinical evaluation of candidate neuro-protective drugs in TBI."

"The conceptual framework of OBTT involving multiple investigators using multiple animal models to test multiple therapeutic candidates in a matrixed fashion represents a major step forward for the field," says David Brody, MD, PhD, Associate Professor of Neurology at the Washington University School of Medicine. "While much work needs to be done, Levetiracetam could be initially considered for a [clinical] trial given its extraordinarily low toxicity and our substantial experience with its use as an antiepileptic agent in TBI."

Patrick Kochanek, MD, MCCM, Professor of Critical Care Medicine at the University of Pittsburgh School of Medicine and lead investigator of the OBTT consortium notes that "OBTT has assembled a highly talented and respected team of TBI investigators who have worked diligently to—for the first time—compare multiple therapies and biomarkers across multiple TBI models and centers in the pre-clinical arena." He also comments that the "results do not reflect in any way the desire for OBTT to represent a bully pulpit or the answer to defining optimal candidate therapies for clinical evaluation. Rather, it is hoped that the field views the collective work as providing valuable clues to future directions for both clinical and additional pre-clinical investigations toward the successful development of a new neuroprotective therapy for TBI."

Provided by Mary Ann Liebert, Inc