“Tackling Concussion: The Injury That Keeps on Taking”

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Research Abstract
Dr. Smith serves as Director of the Center for Brain Injury and Repair (CBIR) and is the Robert A. Groff Endowed Professor and Vice Chairman for Research and Education in Neurosurgery at the University of Pennsylvania. Penn's multidisciplinary CBIR includes over twenty-five principal investigators and their laboratory staff collectively studying mechanisms, diagnosis and potential treatments of traumatic brain injury (TBI). Dr. Smith is also director of a multi-center U.S. National Institutes of Health (NIH) program grant on mild traumatic brain injury as well as director of multi-investigator NIH and U.S. Department of Defense grants on TBI and neurodegeneration. Demonstrating his dedication to teaching, Dr. Smith additionally oversees an NIH training grant to support post- and pre-doctoral fellows studying brain injury. The research of his individual laboratory has primarily focused on the effects of mechanical stretch of axons that results in either damage or growth. They have found fundamental mechanical mechanisms that underlie selective injury to axons in the white matter during TBI. His group has also identified the aberrant genesis and accumulation of proteins in the damaged axons after injury to axons in the white matter during TBI.

This research has led to a variety of new scientific opportunities that allow for the translation of basic discoveries into potential clinical applications. In the past five years, Dr. Smith’s team has received nearly $25 million in support of their work from a variety of federal, state, and private sources. The Center for Brain Injury and Repair has established itself as a leader of brain injury research in the United States and beyond.

References


For more information on the weekly colloquia, contact vacumano@burke.org

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