

New Mexico State University
Biomedical Research Seminar Series
Speaker Announcement

Friday, Aug. 25, 2017, 3:30 pm
Domenici Hall, Rm 109
(Refreshments served at 3:00)

Bill Shuttleworth, PhD,

*Regents' Professor
Department of Neurosciences,
University of New Mexico School of Medicine*



Tsunamis in the Brain – surprising mechanisms underlying progression of acute brain injury

Dr. Shuttleworth's research laboratory focuses on events termed spreading depolarizations – dubbed “brain tsunamis” in more common parlance. Brain tsunamis are remarkable events, and break many established rules for normal communication in the brain. They are massive, and propagate very slowly across large regions of brain. Paradoxically, because they are so large, they have been missed in most prior studies of normal human brain activity. However, recent work has established that brain tsunamis do indeed occur in the human brain and underlie phenomena such as migraine aura. In addition, tsunamis can be triggered by stroke and traumatic brain injury, and repetitive tsunamis appear critical for the stepwise increase in injury – in both animal models and human patients. The Shuttleworth lab is studying ways to prevent tsunamis, or to prevent damaging consequences of tsunamis. The lab uses imaging and electrophysiological approaches in brain slices and rodents, and is focused on understanding fundamental mechanisms that can be targeted to improve outcomes in stroke and trauma patients. The seminar will also include work with clinical collaborators, translating this work to patients in the intensive care unit.

The BMRS series is supported by the Office of the Provost, the College of Arts and Sciences, the Departments of Chemistry & Biochemistry and Biology, and the NM-INBRE, RISE, MARC, and HHMI programs. The full semester schedule can be found at <http://events.research.nmsu.edu>

For more information or to meet with the speaker please contact Shelley Lusetti at slusetti@nmsu.edu



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