Barclay Morrison & Steven Kernie, *A Novel Biomedically-Based Approach for the Treatment of Brain Swelling After Injury*

Patients suffering from traumatic brain injury and stroke often develop elevated intracranial pressure due to brain swelling, which is highly associated with poor outcome and increased mortality. Unfortunately, current therapies to control swelling often fail or are associated with substantial adverse effects. The objective of this study is to fill this gap in critical care by testing an unconventional hypothesis about the causes of brain edema and by testing a novel therapy to control brain edema a preclinical model. Our paradigm-shifting approach targets the intracellular fixed charge density (FCD) of dead cells that we believe is thermodynamically responsible for accumulating fluid from the vasculature.