Cerebrovascular Blood Volume Assessment Using Brain Bioimpedance

AWARD AMOUNT: $130,565

THE PROBLEM

Early monitoring of intracranial pressure (ICP) and cerebrovascular autoregulation (CAR) is crucial to preventing secondary injury to the brain.

Current monitoring techniques need specialists
Invasive methods can lead to infection
No continuous readings

THE SOLUTION

A non-invasive tool that uses the eye as a window to the brain to monitor and treat TBI

Non-invasive, automated technology
Does not require experienced operator
Can be used through all echelons of care

THE TECHNOLOGY

Ocular bioimpedance (small electrical currents applied to the eye) tracks changes in cerebral blood flow to predict cerebrovascular autoregulation impairments, while ultrasound images of the eye using automated image analysis enables a non-invasive estimation of intracranial pressure.