JOYCE MASSEY TBI GRAND CHALLENGE
2016 Funded Research Projects

Funding was awarded based on the potential to impact the way traumatic brain injury is diagnosed and treated during the initial “golden hours” of care.

QUANTITATIVE PUPILLOMETRY TO DETECT TBI

THE TEAM

William Meurer, MD
Emergency Medicine

Jacob Joseph, MD
Neurosurgery

Matthew Lewis, PhD
CTO, Michigan Aerospace Corporation

Craig Williamson, MD
Neurological Surgery

THE NEED

LACK OF DIAGNOSTIC TOOLS

HUMAN ERROR

INABILITY TO DIAGNOSE TBI

THE TECHNOLOGY

MACHINE VISION ALGORITHM

HIGH FRAME RATE VIDEO

PRECISE PUPILLARY MEASUREMENTS

COMPETITIVE ADVANTAGE

NON-INVASIVE
Can detect ICP through visual analysis of the pupil.

AUTOMATED PRECISION
Quantitative pupillometry will remove human error that is commonly associated with manual examination.

COMPATIBLE
Can be implemented into existing devices to provide actionable insight into acute head trauma with minimal training.

PORTABLE
There are currently no objective assessment tools for identifying TBI and its severity outside of critical care settings.

COMMERCIALIZATION ROADMAP

CLASS II DEVICE
510(k) premarket notification

FDA

LICENSE TECHNOLOGY/ THERAPY
Michigan Aerospace Corporation

PROJECT MILESTONES

Enroll both sample and control patient groups

Data collection

Data interpretation

Customer discovery