Mild Traumatic Brain Injury Treatment & Diagnostic

Restoring Cognitive Resources in TBI
Inventor: Nicholas Schiff, MD
Team: Bill Rissmann, John Mulvihill, Raja Hitti

**Product**
Novel deep brain stimulation (DBS) system that provides control of key brain circuits.

**Patients**
People who have suffered traumatic brain injury (TBI), who have incomplete recovery and acquired cognitive disability after moderate to severe TBI. (200K/year in US, more worldwide). **No current treatment for these patients.** Have conducted pilot focus group. ~50% said they would consider this invasive treatment. Other indications to follow (movement disorders, epilepsy)

**Outcomes**
Restoration of lost cognitive function = return to work and life

**Data**
Inventor’s basic research is:
- Administering DBS to TBI patients in a minimally conscious state (not a commercial market) *to restore consciousness*
- Research in primates to use DBS to increase cognitive resources. With system, increase time on task and success rate. 70% effect size.

**Team**
- Niko Schiff literally wrote the book on Consciousness
- Stellar clinical team of neurosurgeons (Stanford, Cleveland Clinic) and clinical experts on TBI and bioethics
- Bill Rissmann: Cameron Health (founder & VP R&D), Medtronic, St Jude.
- John Mulvihill: business development for ConMed, Great Batch, texel
- Raja Hitti: engineering/manufacturing for Siemens, ConMed, J&J (ran manufacturing for 4 divisions)

**Deeper play:** John and Raja are founders of MED-ALLY; provides neurostim device solutions for scientists like Dr. Schiff, with new applications. Hub and spoke model.

ROQS
Next Generation of Medical Imaging
Inventor: Sumit Niogi, PhD, MD

**Invention**
Patented software that semiautomatically and reliably analyzes potential brain injuries from medical images - diffusion tensor magnetic resonance imaging (DTI).

**Current manual process:**
- Susceptible to human error
- Labor-intensive
- Time-consuming.

**Benefits of ROQS**
- 80% faster than current process
- 1000% more reliable
- Easy to use and easy to learn