

◦ Hope Through Research for Individuals & Families affected by TBI & Suicide ◦

Cohen Veterans Bioscience (CVB), a public charity biomedical and technology research organization, seeks to advance the brain health of our Veterans and active service members who have experienced brain trauma by fast-tracking solutions for early detection and targeted intervention. (<https://www.cohenveteransbioscience.org/>)

Traumatic brain injury (TBI) occurs when external physical forces cause damage to the brain, whether from impact, penetrating objects, blast waves or rapid movement of the brain within the skull.

TBI is a condition with far-reaching physical, emotional, and economic consequences for patients, families and society at large.

Individuals with TBI have a higher risk for suicide than the general population. Individuals with TBI may experience significant physical, cognitive, and emotional symptoms that place them at higher risk for suicide.

◦ Emerging Opportunities for Progress ◦

Each person experiences brain trauma differently but the field has been stymied by a one-size-fits all approach and lack of tools to effectively diagnose TBI, leaving individuals and families to suffer.

But new insights and new technologies are showing that we could better understand the impact of TBI on different people.

CVB and our partners are utilizing these insights and technologies to find new solutions for people with TBI.

CVB's approach is to galvanize, with collaborative partners, a first generation of diagnostic tests and targeted treatments that detect TBI earlier and optimize brain health.

Donations provided through 22 Jumps: Kiernan Wimmer TBI Innovation Initiative have contributed to a portfolio of Cohen Veterans Bioscience research programs focused on Traumatic Brain Injury diagnosis & treatment solutions.



The National TBI Research Roadmap

CVB leads a national effort to bring together all key stakeholder groups across government, academia, foundations, industry, and individuals with lived experience, to develop and execute the TBI Precision Research Roadmap to drive solutions for TBI. braintraumablueprint.org



RAPID-Dx

CVB's biomarker discovery & validation program for accelerating the discovery of diagnostics is essential to shifting detection & treatment of PTSD and TBI from a syndromic, symptom-based approach to a biological, mechanistically-based one that targets the effects of trauma at their molecular roots.



EarlySignal Digital Health

This platform is being developed for recording and analyzing digital information, reported from wearables and other home sensors, directly from patients living with brain disorders. Our Sleepwell study is collecting sleep-related metrics to assess sleep patterns and outcomes in Veterans with insomnia over a two-week period.



National Normative Neuroimaging Library

This CVB-sponsored study is collecting state-of-the-art MRI imaging data (diffusion tensor imaging (DTI), functional connectivity), blood samples and cognitive data from >3000 normal Veterans and civilians to provide a reference to compare injured individuals' data for TBI imaging diagnostics.



TBI Genetics (Future)

The role of genetics in the resiliency, recovery or long-term consequences to an individual experiencing TBI are largely unknown. CVB is building a \$10M fund to run a global consortium and study to identify the first validated genetic risk markers for TBI.