

# FierceMedical Devices

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## Here are the 16 Brain Trauma R&D Efforts Funded by the NFL and GE

By: Emily Wasserman

General Electric ([\\$GE](#)) and the NFL have named 16 winners in the first stage of its "Head Health Challenge," a competition that awards each winner \$300,000 to further their work in diagnosis and treatment for mild traumatic brain injury. Here are the 16 companies and research efforts that won grants in a partnership proposing to put \$50 million into concussion imaging technology.

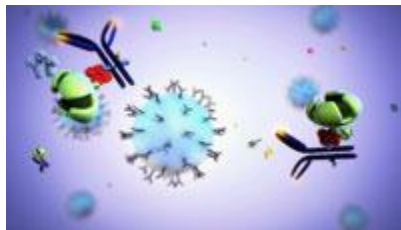
The competition received more than 400 entries from 27 countries, according to GE and the NFL. In addition to \$300,000, the companies get mentorship from GE and the NFL. Six will win an additional \$500,000 in 2015.

"By advancing the work of these winners, we will better understand brain injuries suffered by athletes and members of the military and improve our knowledge of the brain overall which could help improve our understanding of neurodegenerative diseases such as Alzheimer's and Parkinson's," [GE Ventures](#) CEO Sue Siegel said in a statement.



*Sue Siegel, CEO of GE Ventures--Courtesy of GE*

n point-of-care blood tests, [Banyan Biomarkers](#) and the University of Florida got funds to work on a sports concussion research study connecting biomarkers, neurocognitive testing and neuroimaging. Based in Alachua, FL, Banyan raised \$6 million last June in a venture financing round, which followed a \$26.3 million contract with the Department of Defense back in 2010. Efforts to develop a blood test are also underway from another winner, Richmond, VA- and Israel-based ImmunArray, based on data from immune system responses to brain injury.



*A still shows how Quanterix's*

*tech captures images of individual molecules--Courtesy of Quanterix* [Quanterix](#), of Lexington, MA, is also developing a blood test to detect traumatic brain injury. The test incorporates the company's Simoa technology to identify biomarkers of brain injury in the blood, and could facilitate diagnosis. In 2012, Quanterix raised \$18.5 million led by French in vitro diagnostics giant bioMérieux.

While blood-test developers [argue for their superiority over MRIs](#), the NFL and GE remain interested in a UC Santa Barbara lab using [MRI](#) scans to identify damage to individual connections and determine which brain areas become disconnected following an injury. The goal is to develop related software. The NFL and GE are also funding brain-blood-flow-focused MRI research at the Indiana University School of Medicine.

In another GE/NFL-funded MRI initiative, researchers at Sunnybrook Health Sciences Centre are developing an advanced MRI imaging method to identify patients and athletes at risk for secondary injury following a concussion.



In handheld Dx devices, Bethesda, MD-based BrainScope has an EEG-based traumatic brain injury detection technology (pictured at left). They're collaborating with Purdue Neurotrauma Group to conduct a study in collegiate athletes. Meanwhile, Cortical Metrics of Semora, NC, is developing a device shaped like a computer mouse that vibrates the fingertips to measure brain health. Cortical also got \$300,000 from the NFL/GE partnership.

*BrainScope's concussion detection device--Courtesy of BrainScope*

The remaining winners were [Johns Hopkins Medicine](#), the Medical College of Wisconsin, the University of Montana, the University of Notre Dame, the University of Pittsburgh, the VTT Technical Research Centre of Finland, Weill Cornell Medical College and the University of California, San Francisco.

- read the [release](#) from the NFL and GE