UC SANTA BARBARA

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Keeping Your Head in the Game

The National Football League and General Electric today named UC Santa Barbara's Scott Grafton as one of the six final winners of the Head Health Challenge I.

The goal of Head Health Challenge I is to improve the safety of athletes, members of the military and society overall. The winners were selected from an initial group of 16 challenge winners, who were chosen from more than 400 entries from 27 countries. Each winner receives $500,000 in addition to $300,000 previously awarded to the 16 first-round winners.

"The competition for these awards has been fierce, so I was delighted when I learned we were one of the finalists," said Grafton, director of the Brain Imaging Center and a professor in the Department of Psychological & Brain Sciences. "I have benefited from a remarkably creative and productive team that has put a lot into this project."

In collaboration with faculty in the Department of Computer Science, Grafton and his team at the Brain Imaging Center are developing statistical methods to detect damage to the deep connections in the brains of patients who have sustained mild head injuries. Recent breakthroughs in both MRI scanning and data analysis make it possible to detect subtle brain changes in individual patients after mild concussions. This approach will be tested with clinical data from collaborators using a variety of MRI scanners.

“Our goal is to develop a really sophisticated platform that provides a robust MRI toolkit for identifying brain abnormalities associated with mild brain trauma,” Grafton said. “In order to do that, we will be analyzing scans from 1,200 healthy people who are part of the Human Connectome Project so that we have a rich comparison group to test with our approach.”

In addition to UC Santa Barbara, the other winners are Banyan Biomarkers, Inc. in Alachua, Florida; the BrainScope Company, Inc. in Bethesda, Maryland; the Medical College of Wisconsin in Milwaukee; Quanterix Corp. in Lexington, Massachusetts; and the University of Montana in Missoula.

“We are truly impressed by the quality of the work and the measurable progress being made by these winning organizations,” said Alan Gilbert, director of health policy, government and community strategy for GE healthymagination, the company’s commitment to invest in innovations that bring better health to more people. “There are a number of breakthrough ideas that are advancing our understanding of the brain and not only have applications on the playing field but also extend to neurodegenerative diseases such as ALS, Parkinson’s and Alzheimer’s.”

Jeff Miller, the NFL’s senior vice president of health and safety policy, said: “It’s exciting to witness the breakthroughs accomplished by the winners. Their efforts will truly advance the science around brain injury. We look forward to continuing to support this work and benefiting not only football and other sports but society more broadly.”

About UC Santa Barbara

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.