

# NFL, Under Armour and GE Seek Ideas to Accelerate Concussion Research, Prevention, Diagnosis & Treatment

## Launch up to \$10 Million Open Innovation Challenge to find and fund new solutions to enhance protection against brain injury Second Challenge in Head Health Initiative, a collaboration to help speed diagnosis and improve treatment for mild traumatic brain injury

Baltimore, MD (September 4, 2013) – The NFL, Under Armour (NYSE:UA) and GE (NYSE: GE) today launched Head Health Challenge II an open innovation challenge to award up to \$10 million for new innovations and materials that can protect the brain from traumatic injury and for new tools for tracking head impacts in real time. The challenge is part of the Head Health Initiative, a collaboration to help speed diagnosis and improve treatment for mild traumatic brain injury.

Kevin Plank, Founder and CEO of Under Armour said: "As longstanding partners of the NFL and in collaboration with GE, we take great pride in our participation in the Head Health Challenge II. We are excited to harness the power of innovation and assemble the best minds in the world towards an effort to make the field of play safer across all sports and for all athletes."

NFL Commissioner Roger Goodell said: "We are very pleased to have Under Armour join our work with GE to help accelerate progress and find better ways to protect the brain from injury. This is a perfect example of our shared commitment to making the culture of sports better and safer – especially for young athletes."

Entries are being immediately accepted at <u>www.headhealthchallenge.com</u>. The deadline to submit entries is January 30, 2014. In September 2014 up to 10 winners will be selected for the chance to receive as much as \$500,000 each. Up to five of the potential 10 finalists will be eligible to receive as much as \$1,000,000 after the second phase of judging concludes. Please visit <u>www.ninesights.com/community/nfl-ge-grand-challenge/process#/terms-conditions</u> for Terms and Conditions.

Specific focus areas for Head Health Challenge II include:

## I. Potential to Improve the Prevention and Identification of Brain Injuries

Technology that demonstrates clear potential to quantify head impact in real time; detect, track or monitor biologic or
physiological indicators of traumatic brain injury; protect the brain from traumatic injury; mitigate or prevent short or longterm consequences of brain trauma; assist in training to prevent traumatic brain injury.

#### II. Monitoring and Identifying Injury

- Technology that include, but are not limited to the following:
  - Monitoring and integration of directional and rotational impact force into data.
  - Systems that monitor biomechanical and physiological responses to detect injury and quantify head impact exposures
  - Systems to efficiently collect, interpret and organize large quantities of real-time data.

## III. Protection against Injury or its Consequences

- Materials or devices that can absorb, distribute and/or dissipate the force of impact. These include smart or active materials.
- Polymers that are comfortable, but can adapt to sudden impacts.
- Equipment that reduces the force of direct impact transmitted to the brain.
- Equipment to control axial rotation of the head.
- Novel uniforms and protective padding equipment to dissipate excessive force.
- Improve effective mass by linking the head and neck as a total system to reduce head acceleration and minimize the mechanical effect on the brain.

#### **IV.** Training

- Sensors that provide biofeedback to modify behaviors that predispose athletes to injury or its consequences.
- Improved training methods that reduce tissue and brain damage such as:
  - \* Novel conditioning regimes.
  - \* Neck isolation and strengthening protocols.

Sue Siegel, CEO of GE Business Innovations, said, "GE is investing to speed up the study of head health. Through this challenge, we hope to stimulate the broader ecosystem of scientists, engineers, entrepreneurs and innovators worldwide to bring their talents to this effort and accelerate the current understanding of brain trauma."

The winners of the challenges will be selected by a panel of external judges that include leading experts in brain research and engineering solutions for training and protocols. For Head Health Challenge II, these individuals are:

Kenneth M. Ford, PhD: Founder and CEO, Institute for Human and Machine Cognition (IHMC)

Gerard Gioia, PhD: Division Chief of Neuropsychology at Children's National Medical Center

**Kevin M. Guskiewicz, PhD, ATC:** Kenan Distinguished Professor, Co-Director of the Matthew Gfeller Sport-Related Traumatic Brain Injury Research and Director of the Center for the Study of Retired Athletes in the Department of Exercise and Sport Science at The University of North Carolina Chapel Hill

**Colonel Dallas Hack, MD:** Director of the Combat Casualty Research Program and the Chair, Joint Program Committee 6 (Combat Casualty Care), U.S. Army Medical Research and Materiel Command, Ft. Detrick, MD

Stuart Hoffman, PhD: Scientific Program Manager for the Brain Injury Portfolio, U.S. Department of Veteran Affairs

**David Hovda, PhD:** Professor and Vice Chairman of Research Affairs for the Department of Neurosurgery and Director of the Brain Injury Research Center, University of California, Los Angeles

**David Meaney, PhD:** Associate Director at Penn Center for Brain Injury and Repair and Solomon R. Pollack Professor and Chair, Department of Bioengineering

Joseph F. Waeckerle, MD FACEP: Clinical Professor of Emergency Medicine, University of Missouri-Kansas City School of Medicine

The Head Health Initiative is a four-year, \$60 million collaboration to speed diagnosis and improve treatment for mild traumatic brain injury. The goal of the program, guided by healthcare experts, is to improve the safety of athletes, members of the military and society overall. The initiative includes a four-year, \$40 million research and development program from the NFL and GE to evaluate and develop next generation imaging technologies to improve diagnosis that would allow for targeting treatment therapy for patients with mild traumatic brain injury. In addition the NFL, Under Armour and GE launched two open innovation challenges to invest up to \$20 million in research and technology development to better understand, diagnose and protect against brain injury. The first challenge launched in March and closed in July with more than 400 submissions from more than 25 countries and will invest up to \$10 million in technologies and imaging biomarkers that address identification and management of subclinical and mild traumatic brain injury. Winners of the first challenge will be announced later this year.

#### About Under Armour, Inc.

Under Armour® (NYSE: UA) is a leading developer, marketer, and distributor of branded performance apparel, footwear, and accessories. The Company's products are sold worldwide and worn by athletes at all levels, from youth to professional, on playing fields around the globe. The Under Armour global headquarters is in Baltimore, Maryland. For further information, please visit the Company's website at <u>www.ua.com</u>.

## About The National Football League

Throughout its history, the NFL has made the health and safety of its players a priority. This commitment extends to football played at all ages, as well as other sports. At the youth level, the NFL's partnership with the Centers for Disease Control and Prevention and the league's support for USA Football, including the Heads Up Football initiative, helps parents, coaches, clinicians and athletes understand the signs and symptoms of head injuries. The league has successfully advocated for the passage of youth concussion laws in 49 states thus far. Through funding for medical studies, including a \$30 million grant to the National Institutes of Health for medical research; collaboration with the military on research and recognizing and reporting potential head injuries; and the work of the NFL's medical committees, the NFL is committed to supporting and advancing science that will have an impact beyond football. With a continued emphasis on improved equipment, rules changes, and ingame policies, the NFL fosters a culture that promotes health and safety at every level of the game.

#### About GE

GE (NYSE: GE) works on things that matter. The best people and the best technologies taking on the toughest challenges. Finding solutions in energy, health and home, transportation and finance. Building, powering, moving and helping to cure the world. Not just imagining. Doing. GE works. For more information, visit the company's website at <u>www.ge.com</u>.