

For immediate release

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World's First "Brain Vital Signs" Revolutionizes The Science Behind Brain Health

Innovative NeuroCatch™ brain imaging technology changes how we understand brain waves

Link to brain vital signs video: www.HTCBrainVitalSigns.com

Surrey, BC – A team led by a world-renowned neuroscientist from Simon Fraser University (SFU) has announced a global game-changing healthcare breakthrough, which is revolutionizing the way we measure brain health. Dr. Ryan D'Arcy and team have discovered a way to extract a simple series of **brain vital signs** (the new science for analyzing brain waves) from longstanding brainwave technologies that have been around for nearly a century.

To make sure the science advance is accessible, the team is developing the new **NeuroCatch™** platform for the highest quality brain vital sign monitoring. Currently in the development phase, **NeuroCatch™** makes it possible to translate the brain waves into objective, practical and deployable brain vital signs that help better monitor brain health.

In a highly accessed peer-reviewed study, just published this month in the international journal **Frontiers in Neuroscience**, scientists explain that - like other vital signs - such as blood pressure, heart rate and pulse oxygenation – the development of **brain vital signs** represents an essential advance to monitor brain health. The ground-breaking discovery demonstrated:

- The critical need for a rapid, objective and physiological index of brain function, which builds from more than 70 years of fundamental science in event-related potentials (ERPs), a well-established evaluation of brain waves to measure specific brain functions.
- The framework to translate this complex science into a user-friendly and highly meaningful index of an individual's healthy brain function, to address concerns of injury (like concussion) or disease (like dementia).
- The evaluation of brain vital signs across our life span, showing they are stable and able to detect age-related changes that were not detected by existing standard clinical tests that use subjective behavioural measures.
- The disruptive impact that **brain vital signs** will have as a long overdue way to objectively track a person's on-going changes in brain health and vitality.

"Brain vital signs represents a scientific breakthrough we have been working towards for more than 20 years, which can soon be made accessible to people through the forthcoming NeuroCatch™ brain monitoring platform. There is no doubt that this discovery will revolutionize our ability to provide better treatments for injuries like concussions, brain injuries, and stroke along with diseases like Alzheimer's, multiple sclerosis, and so many others," says Dr. Ryan D'Arcy, SFU's BC Leadership Chair in Medical Technologies, Head of Health Sciences and Innovation at Surrey Memorial Hospital, and President & Chief Scientific Officer of HealthTech Connex Inc.

“Much like how we monitor blood pressure in hospital, in clinics, or at home, we plan to bring brain vital signs to any portable brainwave device that can be used by health care specialists and any individual who wants to regularly track their own brain health.”

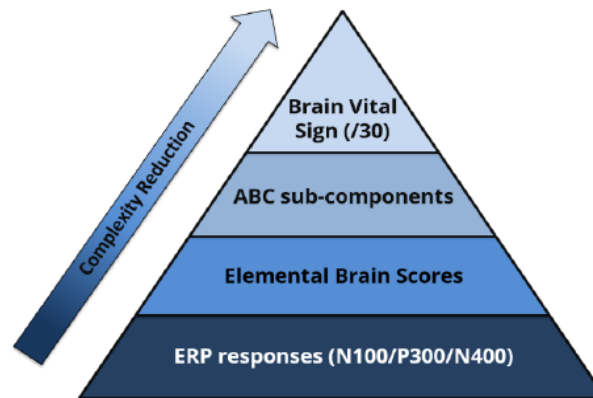


Illustration: How the NeuroCatch™ brain monitoring platform breaks down the brainwaves into a **brain vital sign framework** to analyze the brain’s overall vitality, which allows for complex brainwave responses to be extracted as indicators of brain health and measures of improved brain vitality.

About the Science

The study entitled “Developing Brain Vital Signs: Initial Framework for Monitoring Brain Function Changes Over Time” published in May 12, 2016 in *Frontiers in Neuroscience* – has been accessed over 1,000 times already across the globe. The research is a critical part of SFU’s PhD student Sujoy Ghosh Hajra work, who is training in Biomedical Engineering Science and is available publically (<http://journal.frontiersin.org/article/10.3389/fnins.2016.00211/full>). The study represents a wide-scale collaboration between Simon Fraser University, Surrey Memorial Hospital, the Mayo Clinic (USA), Sheba Medical Centre (Israel), and Dr. D’Arcy’s high tech company HealthTech Connex Inc. – a key driver in the rapid development of BC’s Innovation Boulevard.

About brain vital signs and NeuroCatch™:

The science behind **brain vital signs** began in the mid 1990s with the discovery that it was possible to use ERP brain wave responses as objective physiological markers for intact sensory, attention, and cognitive functions in non-communicative individuals with severe brain injury and disease. Existing tests rely on individuals providing subjective and often unreliable responses to evaluate inner brain function, which all too often resulted in alarmingly high rates of misdiagnosis.

In order to move these embedded laboratory advances into globally accessible brain care, Dr. Ryan D’Arcy and the team at HealthTech Connex Inc. began developing the **NeuroCatch™** brain monitoring platform in the fall of 2015 and have quickly been able to deploy initial successful evaluations for use in concussion, brain injury, brain health monitoring, and the measurement of treatments for recovery. New trials for monitoring healthy cognitive enhancement along with early detection of dementia are now underway.

About HealthTech Connex Inc.

HealthTech Connex, Inc. is a health technology company working to revolutionize the practice of clinical neuroscience through advanced technologies based on the highest quality science and innovation. Located in Surrey, British Columbia, Canada, it is one of the first companies to form the city's Innovation Boulevard, an agile partnership of health, business, higher education and government creating new health technologies to improve peoples' lives.

www.HTCBrainVitalSigns.com.

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