Neurological disease and injury biomarker

Published date: April 23, 2019

Technology description

Invention

This technology is a blood-based biomarker that can be used for rapid diagnosis of Traumatic Brain Injury (TBI) and other neurodegenerative disease. Unlike most biomarkers, currently being studied for the diagnosis of TBI, which are found in the cerebral spinal fluid, this biomarker can be found in the blood, making it easier and faster to test for. This biomarker has the potential to not only diagnose TBI but also allow for monitoring progression, predicting clinical outcomes, and providing more detailed molecular-level information about the extent of TBI and patho-bioloigical changes of TBI.

Background

High profile injuries in professional sports have brought renewed attention to TBIs, such as concussions and bruising on the brain. The CDC estimates that 138 people in the United State die every day from TBI related complications and approximately 2.5 million emergency department visits and hospitalizations per year are related to TBI. Traditional diagnosis has relied on imprecise methods ranging from neuromotor testing by a physician, to CAT Scans and X-rays. However, it is critical that TBI is diagnosed early and clearly and therefore a more accurate test is needed. This biomarker has the potential to not only diagnose TBI but also allow for monitoring progression, predicting clinical outcomes, and providing more detailed molecular-level information about the extent of TBI and patho-bioloigical changes of TBI.

Application area

• Rapid diagnostic for Traumatic Brian injury (TBI)

• Potential diagnostic for other neurodegenerative disease, such as ALS

• Use for clearance guidelines in professional sports

• Field use in military operations

• Use for personalized medicine in neurological diseases

Advantages

• Easy to use blood test

- Noninvasive sampling
- More accurate
- Time saving

Institution

University of Arizona

Inventors

Marissa McGilvrey
Research Associate
Center for Translational Mass Spectrometry

Jonathan Lifshitz
Associate professor
Child Health

Khyati Pathak
Staff Scientist
Center for Translational Mass Spectrometry

Bret Tallent
UA Associate
Child health

Maha Saber
Post-doctoral Fellow
Child Health - Phoenix

Christine Garcia-Mansfield

Patrick Pirrotte
Director
Cancer and Cell Biology

Rachel Rowe
Assistant Professor
Child Health - Phoenix

联系我们

叶先生

电 话 : 021-65679356
手 机 : 13414935137
邮 箱 : yeyingsheng@zf-ym.com