

Medical technology and devices



> Pre-Clinical

Problem

The incidence of chronic neurodegenerative diseases, such as Alzheimer's Disease, and acute neurological injuries, such as stroke, are increasing as the global population is living longer lives. However, these diseases/ disorders are difficult to diagnose requiring expensive infrastructure (brain imaging) and/or assessments over years. Early diagnosis leads to unique therapeutic intervention opportunities and better patient outcomes.

Solution

The technology describes molecular probes and software that, combined, can identify brain-derived cell-free DNA within patient blood plasma. Proof-of-concept has been demonstrated in acute neurological injury and the diagnosis of Alzheimer's Disease. The technology is now being evaluated in the differential diagnosis of Frontotemporal Dementia and Primary Psychiatric disease and as a measure of the time-of-event in stroke.

Intellectual Property Status

This technology is protected by patent family WO2021/217210 in AU, EP, US.

Potential Applications

- Neurodegenerative Diseases
- Alzheimer's Disease
- Neurotoxicity assessment
- Acute neurological injury assessment
- Disease tracking

Inventor

Zac Chatterton

Commercial Opportunity

The technology represents a significant breakthrough in diagnostics for neurology. The cell (eg. Neuron, Glia) and brain-region (eg. cortex, cerebellum) specificity can test a range of neurological conditions, assess neurotoxicity and as a companion diagnostic to assess therapeutic efficacy in neurology.



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