Medical Technology and Devices

Opportunity
The incidence of neurodegenerative disease is increasing as the global population is living longer lives, and age is the most significant risk factor associated with neurodegenerative diseases. Neurodegenerative diseases are difficult to diagnose, their symptoms overlap significantly and depending on the disease in question, the diagnosis process can involve a number of tests spread over a significant period of time. This process leads to misdiagnoses and delayed treatment for the affected patients.

Technology
This technology is a software diagnostic capable of identifying the specific neurodegenerative disease a patient is suffering from.
The software analyses cell free DNA, to determine the cause of the it’s origin cell’s death and thereby the neurodegenerative disease the patient suffers from.
Proof of concept has been demonstrated for this analysis using blood cells.
Future development will centre around the specificity of the test in its identification of diseases including Alzheimer’s, Frontotemporal Dementia and, Motor Neuron Disease.

Inventors
This technology was developed by Dr Zac Chatterton of the University of Sydney’s Faculty of Medicine and Health.

Intellectual Property Status
This technology is the subject of an Australian provisional patent application.

Commercial Opportunity
This technology represents a significant breakthrough in diagnostic technologies. The early diagnosis of neurodegenerative disorders greatly increases the efficacy of the existing therapies. This diagnostic could also be developed for other conditions such as fetal genetic abnormalities, cancer, and disease tracking.
The University is seeking an industry partner for the co-development and/or licensing of this exciting technology.

Applications/ Indications
- Neurodegenerative Diseases
- Alzheimer’s, Motor Neuron Disease etc.
- Cancer Diagnostic
- Genetic abnormality identification
- Organ transplant monitoring
- Disease tracking

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