

New Zealand to propel development of world-first brain micro implant

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A \$6 million funding injection means a brain pressure sensor is closer to helping patients with neurological disorder hydrocephalus



A cash injection of \$6 million into Auckland Bioengineering Institute (ABI) spin out Kitea is a major step toward scaling clinical trials and propelling the world's first implantable long term brain pressure sensor into global markets.

The long term brain pressure sensor is developed to be implanted into the brains of patients with hydrocephalus.

It is based on several years of research by the Implantable Devices Group led by Professor Simon Malpas, a professor of physiology and bioengineering at ABI, New Zealand.

Hydrocephalus is a condition characterised by an increase in fluid around the brain which, unless treated, is fatal. Approximately 100 patients in New Zealand are diagnosed with hydrocephalus every year.

Clinical trials will move the brain pressure sensor a huge leap closer to becoming the first New Zealand-designed fully implanted electronic medical device, akin to the complexity of a cochlear implant or pacemaker.

The sensor, once FDA approved, would alleviate the considerable anxiety and suffering of parents of children with the disorder, as well as highlight the potential of remote monitoring of chronic conditions wherever a patient lives and ultimately, the means of providing more equitable healthcare.

Investment into the medical device will enable NZ-based clinical trials to begin on around 10 adult patients in 2024 and, if successful, will accelerate the wireless technology into market by the end of 2025.

The device would offer patients and caregivers both peace of mind and early warning of a likely blockage, thus preventing unnecessary hospitalisations.