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NZ to develop Ã¢â?¬Ë?electroceutical' for treating heart diseases

September 10, 2021 | News

Cardiovascular disease is a leading cause of death in New Zealand and primary drug treatments have failed to improve statistics in the last ten years.



Researchers at the University of Auckland in New Zealand (NZ) have been awarded over $1 million by MBIE's Endeavour Fund to develop an implantable medical device that activates nerves to treat heart disease, potentially transforming cardiovascular therapies and the treatment of a range of conditions.

The MBIE-funded research is jointly led by Dr Daniel McCormick, a principle investigator with the Implantable Devices Group at the Auckland Bioengineering Institute (ABI), and Dr Jesse Ashton, Research Fellow with both the Faculty of Medical and Health Sciences (FMHS) and the ABI.

The research is focussed on the advancement of what are called 'electroceuticals', devices that stimulate or block neural activity and which offer an attractive alternative to drug-based therapies for heart disease – they can be more precisely controlled, and also have fewer side effects.

The key challenge facing the development of electroceuticals, they say, is finding a way to limit their effects to the fibres within a nerve that have therapeutic benefits on the target organ.

Their research is focussed particularly on the vagus nerve, the longest nerve of the autonomic nervous system.