Sydney **Neurostimulation**

eWalk Clinical Trial

Application of non-invasive neurostimulation (eletrical currents) to the spine to wake up neural pathways.

Total commitment: $1,750,000 (payments also made in 2021)

Auckland ***Connor Clemett***

Gene therapy and cell transplantation in chronic SCI *- Extension payment due to COVID-19 lockdown*

This project aims to combine the gene therapy approach with enriched cell transplantation to promote stronger connections for recovery.

Total commitment: $114,777 +extension (payments also made in 2018, 2019, 2021)

Auckland

The NZ Brain Bee Challenge (NZBBC)

This high school competition encourages students in Year 11 to learn about the brain and its functions, the latest advances in neuroscience research and career pathways.

Total commitment: $95,000 (committed 2020 - 2024)

Auckland ***Dr Simon O'Carroll***

Spinal Cord Injury Research Facility (SCIRF)

Underpinning our research, the goal of the SCIRF is to maintain ongoing research programmes to develop novel treatments for SCI and to attract new ideas through local and international biomedical and clinical collaborations.

Total commitment: $580,880 (committed until 2025)

Auckland ***Dr Amy Chapman***

Generating human oligodendrocyte cells for the treatment of SCI - Postdoctoral funding *- Extension payment due to COVID-19 lockdown*

This study investigates whether the precursor cells of human oligodendrocytes (highly specialised neural cells) generated from human skin cells can be used for cell transplantation to promote natural repair and improve electrical pathways.

Total commitment: $186,842 (payment also made in 2021)

Sydney ***NeuRA, SpinalCure and CatWalk***

Project Spark: sparking a revolution in the way spinal cord injury is treated

Building on the eWALK trial evidence, this project aims to take the research out of the lab and into mainstream use. Project Spark involves a series of rigorous clinical trials and community-based studies with the initial aim of improving respiratory, hand and upper limb function.

Total CatWalk commitment: $1,050,000 (committed 2022-2024)

Auckland ***Dr Bruce Harland***

Electroceutical therapies to treat spinal cord injury in a preclinical model

This fellowship will create and test second-generation bioelectric implants that are flexible, and use electrodes that are less prone to degeneration. It will focus on one of the most promising therapies to spinal cord injury and explore how well the implants are tolerated; seeking to provide evidence for axonal regeneration.

Total commitment: $246,362

Auckland ***Dr Brad Raos***

Computational modelling and analysis to inform electrical treatments following spinal cord injury and assist in development of electrical biomarkers

This impressive project will provide a means to both record and stimulate directly from the spinal cord. It has high potential to provide breakthroughs, not only in terms of treatment but also in understanding of spinal cord injury.

Total commitment: $246,362

Auckland ***Associate Professor Darren Svirskis***

Applying sustained electrical fields to achieve functional recovery after SCI

This project aims to determine the efficacy of sustained electrical fields incorporated into a bioelectronic implant to direct axonal regeneration after SCI.

Total commitment: $337,942 (payment also made in 2021)

Auckland ***Dr Sheryl Tan***

Calcium binding buffer proteins and neuroprotection

A series of functional studies will be conducted using human spinal cord tissue and stem cells to see if the distribution of calcium binding buffers are altered in the injured spinal cord and therefore if they create neurodegeneration.

Total commitment: $186,818

Auckland ***Dr Amy Chapman***

Generating human oligodendrocyte precursor cells from adult human dermal fibroblasts – Project funding

Extension payment due to COVID-19 lockdown

This project will compare the viability and differentiation of cells encapsulated in 3D bio printed hydrogels verses the traditional flat 2D substrates.

Total commitment: $55,833 +extension

Total :

2022 1 April '21- 31 March '22	2023 1 April '22- 31 March '23	2024 1 April '23- 31 March '24
$959,832		
$17,915		
$15,000	$15,000	$15,000
$116,176	$116,176	$116,176
$94,284		
	$350,000	$350,000

2022 1 April '21 31 March '22	2023 1 April '22 31 March '23	2024 1 April '23 31 March '24
	$123,181	$123,181
	$106,884	$106,884
$142,564	$64,700	
$91,226	$95,592	
$55,882 + $23,500		
$1,515,777	$871,533	$711,241