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The CatWalk Cure Programme

Update March 2026

"While a number of groups are developing new technologies, it is much less common to have a programme like ours where technology development is being directly motivated by a clinical need, and where new technologies can be immediately tested and iterated for their efficacy."

Prof. Darren Svirskis, Director CatWalk Cure Programme

From the Chair

Welcome to the third Cure Programme Update- the halfway point of Year 2.

Around the world, researchers are working on their own spinal cord injury research project. Often, they're focused on a single strand of research- attempting to unlock one component of healing.

However, we already know that any cure will involve a combination of treatments. Treatments drawn from many disciplines. Most likely they'll need to be individually customised and applied. Spinal cord injuries are simply that complex.

With the growth in the quantity of research over the past 20 years, it is no longer possible to 'back every horse'.

The Cure Programme's Spine Squad is unique in its combinational approach. Already, we've brought together multiple disciplines in the same team. They are not simply aware of each other's work; they are actually working together with the same objective.

The power of this approach is amplified through their relationships and collaborations with other researchers around the world. Few research teams are so well-positioned to seek out, assess and incorporate research thinking from others.

With a model dedicated to collaboration, we're hedging your Cure Programme investment. Through the Cure Programme, you're already exploring and supporting the work of other researchers. You are effectively 'boxing the field.'

As your interests and partnerships outside New Zealand continue to forge truly international platforms with remarkable success, so too does the Cure Programme. We're driving global thinking from our Kiwi base. You understand how this can be achieved, and we thank you for your insight and continued support.

Together, we will cure spinal cord injury.

Grant Sharman
Campaign Chair

The CatWalk Cure Programme Spine Squad

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Gordon Research Conference

Neuroelectronic Interfaces

Feb 2026, Italy

Gordon Conferences are the gold standard for research collaboration. These prestigious, non-profit international scientific conferences, established in 1931, focus on cutting-edge research in biological, chemical, physical, and engineering sciences. They are renowned for fostering informal, off-the-record discussions of unpublished data.

The 2026 Gordon Conference, Neuroelectronic Interfaces, was co-chaired by Spine Squad researcher, Sweden-based Dr Maria Asplund.

It was attended by another four Spine Squad members, who presented Cure Programme outcomes in varying formats.

- Dr Darren Svirskis:
    - ‘Subdural Electrodes Positioned Over Spinal Cord Injuries in Rats to Deliver Therapies and Study Electrophysiology’.

- Dr Brad Raos:
    - ‘An investigation of electrophysiological activity in the spinal cords of rats to develop biomarkers of injury’,
- Dr Bruce Harland:
    - ‘Using a bioelectronic spinal implant to administer a daily electrical field treatment promotes functional recovery in spinal cord-injured rats’
- PhD Researcher, Gonzalo León González
    - ‘Strain-Relief Strategies for Flexible Polyimide Implants’

Cure Programme Researchers, Jonathan Bonet and Aron Jeremiah

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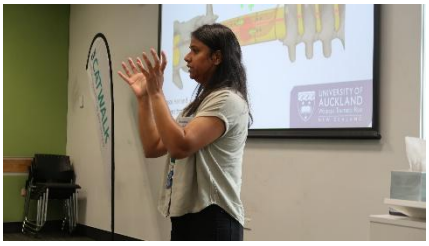
Talk the Walk

The 2026 Spinal Cord Injury Research Symposium

Feb 2026, New Zealand





Talk the Walk, the 2026 New Zealand Spinal Cord Injury Research Symposium, was again hosted at Waipapa Taumata Rau University of Auckland in February.

Talk the Walk brings together researchers, clinicians, treatment specialists, carers and those living with a spinal cord injury.

The Symposium continues to provide an important platform for partnership and cooperation with Australian researchers. The ongoing dialogue and researcher exchanges are the foundations of a powerful Anzac partnership – harnessing the strengths of both countries.

Presentations were made by the Spine Squad and spinal cord injury researchers from:

- University of Canterbury, New Zealand
- Griffith University, Australia
- University of Queensland, Australia
- University of Adelaide, Australia
- Salk Institute, USA

Presentations were also given by researchers within the University of Auckland working in complementary fields and by a panel of those living with spinal cord injury.

Conferences like these are one example of the level and depth of collaboration between researchers. The Cure Programme is committed to seeking out and developing strategic research partners to accelerate the path to a cure.

Cure Programme Publications

Sep 25 – Mar 26

Publishing research in respected, peer-reviewed international journals is a key method to share research outcomes and breakthroughs. As we look to others, we also share what we are doing, because together, we will find a cure.

Therapeutic potential of ultrasound for spinal cord injury

Journal: Neural Regeneration Research
Published: 25 November 2025
Authors: Ederlyn Perolina, Brad Raos, Maria Asplund, Darren Svirskis & Sachin Thakur

"The potential for treating spinal cord injury with ultrasound is increasingly being recognized… While preclinical studies show encouraging results, further translational efforts are necessary to adapt these therapies for clinical use…This literature review highlights the exciting potential of ultrasound therapy in spinal cord injury research and the importance of refining treatment parameters and strategies for successful clinical translation."

Progress in peptide and protein therapeutics: Challenges and strategies

Journal: Acta Pharmaceutica Sinica B
Published: 25 October 2025
Authors: Mengyang Liu, Darren Svirskis, Thomas Proft, Jacelyn Loh, Naibo Yin, Hao Li, Danhui Li, Yongzhi Zhou, Shuo Chen, Lizhuo Song, Guanyu Chen, Wei-Yue Lu, Zhiwen Zhang, Zhou Zhou, Lian Li, Yuan Huang, Craig Bunt, Guiju Sun, Paul Harris, Margaret Brimble & Jingyuan Wen

"… this review serves as a roadmap for the development of next-generation peptide and protein therapeutics with improved stability and efficacy, and enhanced patient adherence, which is needed to fully realize the true potential of this class of therapeutics."

Electrically Triggered Fluorescein and Dexamethasone Release from Conducting Polymer Hydrogels

Journal: Tissue Engineering Part A Research Advances
Published: 9 September 2025
Authors: Matthew Horrocks, Kirill Zhurenkov, Matthew Ting, Darren Svirskis & Jenny Malmström

"… demonstrates the inclusion and release of small-molecule drugs from conducting polymer hydrogels, in an electrically triggered manner. This enables the release of drugs to cells in cell culture models, while ensuring a suitable mechanical microenvironment via the hydrogel component. The ability to reload the conducting polymer hydrogel with drug after release is demonstrated, along with excellent control over drug release, with minimal release without an electrical trigger."

A full list of published articles can be viewed on the CatWalk website at
Published Research Articles- The CatWalk Spinal Cord Injury Trust

Cure Programme Researcher, Dr Simon Kellaway