

The Current

Bionics Institute Newsletter

SPRING 2026



New
Clinical Trials

Dapinder -
Helping shape
the future

COMMUNITY INVOLVEMENT
in **Research**



**Bionics
Institute**

Pictured is Dapinder Kaur and her husband, Jagdeep Singh



A Word from our CEO

Welcome to the Spring 2026 edition of The Current.

At the Bionics Institute, our focus has always been on translating world-leading research into technologies and treatments that improve people's lives. This edition highlights the many steps involved in that journey, from discovery and collaboration through to clinical trials, where promising innovations begin to reach the people who need them most.

Clinical trials are a critical part of turning research breakthroughs into real-world impact. In this edition, we share an overview of our current and upcoming clinical trials, showcasing the breadth of our work across neurological and other complex health conditions. These studies represent years of research, engineering and collaboration, and are an important step towards developing new solutions for people who have limited treatment options today.

We are also focused on ensuring that the people most affected by these conditions have a voice in shaping the research we undertake. In this edition, we highlight our Consumer and Community Involvement (CCI) Program, facilitated by Dr Sally Herring. By partnering with people with lived experience, we are strengthening our research process and ensuring our work remains connected to the needs of the communities we serve.

The progress we make is only possible through strong partnerships. You'll read about Anita Castan's support of Dr Oscar Murphy's research into personalised brain stimulation for Alzheimer's disease, demonstrating the important role philanthropy plays in accelerating promising discoveries. We also welcome Philip Binns as our new Chair of the Board, bringing extensive experience in science, technology and commercialisation to guide the Institute's future.

Thank you for your continued support. Together, we are helping transform innovative ideas into life-changing medical technologies.

Best wishes,

Robert Klupacs
Bionics Institute CEO

CURRENT TRIAL

Reboot: Abdominal vagus nerve stimulation as a novel treatment for rheumatoid arthritis

The abdominal vagus nerve stimulation (abVNS) system is an active medical device placed into the body to allow electrical stimulation of the abdominal vagus nerve. Participants will undergo stimulation treatment with the device for 24 weeks after it is implanted by keyhole surgery.

The trial aims to assess the safety of the abVNS device for people experiencing moderate to severe rheumatoid arthritis that are not responding or are intolerant to drug therapies.



CURRENT TRIAL

Electrx: Abdominal vagus nerve stimulation to prevent recurrence of IBD

Similar to the arthritis trial, the vagus nerve stimulation device will be attached to the abdominal branch of the vagus nerve with the aim of dampening inflammation following bowel resection surgery.

The clinical trial is conducted in collaboration with Austin Health and is currently recruiting through the Austin Hospital. It aims to demonstrate the safety of the device and help prevent the recurrence of Crohn's disease at the surgical site.

CURRENT TRIAL

Validation of an fNIRS objective measure of tinnitus in patients using app-delivered tinnitus management

We have demonstrated the sensitivity of a non-invasive brain imaging technique called functional near-infrared spectroscopy (fNIRS) to detect tinnitus presence and severity.

We now aim to validate our objective measures in those using a smartphone app for tinnitus management called Oto, developed by the UK company Oto Health.



CURRENT TRIAL

A two-centre study for the use of functional near-infrared spectroscopy as an objective measure of the efficacy of standard tinnitus management

We have demonstrated the sensitivity of functional near-infrared spectroscopy (fNIRS) to detect tinnitus-related changes in brain activity.

The trial aims to validate our objective measures of tinnitus presence and severity in people completing standard clinical treatment pathways.

Clinical trials at the Bionics Institute

At the Bionics Institute, our focus is translating research from the lab into people's lives to help those who need it the most.

Our clinical trials are a major step in this process, and here we highlight the trials in progress and those on the horizon.



To participate



For more info

CURRENT TRIAL

A system for measuring activities of daily living in people with cerebellar ataxia

The NeuroMovement Research Group develops objective measurements of neurological diseases including the cerebellar ataxias. These result in significant impairment of coordination, balance, speech, swallow and vision. A range of wearable devices and eye movement goggles, coupled with artificial intelligence, are in development.

Aboriginal remote communities in Northern Australia see rates of cerebellar ataxias amongst the highest in the world. A current trial aims to provide these patients, who have very limited access to specialist care, with accurate measures of disease progression and treatment effectiveness. It is anticipated that this technology will find application in drug development, including gene therapy treatment trials.

Potential future clinical trials

Our researchers are also planning clinical trials into potential new treatments for tinnitus, Parkinson's gait issues, ataxia and towards improvements in cochlear implant programming:

- Multimodal Coordinated Reset Stimulation as a treatment for Tinnitus
- Peripheral stimulation for Parkinson's disease gait
- Augmented Reality for the analysis of eye movement abnormalities in Cerebellar Ataxia
- Digital Twins for Cochlear Implants: Personalised and precise implant programming

CURRENT TRIAL

A randomised controlled trial of the Theta Burst Stimulation Melbourne Protocol for Alzheimer's disease (The TRAM Protocol)

Professor Kate Hoy of the Bionics Institute has developed a treatment program using Transcranial Magnetic Stimulation (TMS) which aims to improve brain function in people living with Alzheimer's disease.

The trial is investigating an extended course of personalised TMS in Alzheimer's disease to determine both the clinical efficacy and duration of effects.



CURRENT TRIAL

Multimodal Imaging in Cognitive Decline (The MInD Sub-study)

The study explores brain activity associated with ageing and cognitive decline to better understand changes in memory and thinking associated with Alzheimer's disease.

The trial aims to identify early signs of cognitive decline and better understand the mechanisms of memory and thinking changes.



Beverley's quiet generosity leaves a lasting legacy

Beverley Mae Webb was a remarkable woman whose life was defined by independence, compassion and a deep concern for others. Born in Preston, Melbourne, on 25 February 1938, she lived a quiet and unassuming life, yet her impact will continue through the generosity she left behind.

Beverley passed away on 2 August 2025 at the age of eighty-seven. She never married or had children and lived life on her own terms. She worked for many years as a secretary, including with a Japanese firm in Melbourne, and remained connected to her father's former World War II battalion association throughout her life.

From an early age, Beverley faced significant hearing difficulties. Advances in hearing technology later helped her communicate more easily, but her experiences gave her a special understanding of the challenges that people face. She developed a strong empathy for those who were disadvantaged, vulnerable or struggling.

Her compassion was reflected in her final Will, where she named nine charities as beneficiaries. Four supported people and five supported animals, causes close to Beverley's heart. While carefully managing her own circumstances, she continued donating to charities throughout her life, often putting the needs of others before her own.

Beverley's Gift in Will represents more than a financial gift. It is a continuation of the values that guided her life: kindness, generosity, and a desire to make a difference.

Although she lived modestly, Beverley's final act of giving was extraordinary. Her generosity ensures that her caring spirit will continue to benefit others for years to come.

Download our
Legacy Pack here



Bionics Institute News

CEO recognised for advancing innovative research

Bionics Institute CEO Robert Klupacs has received an Individual Outstanding Achievement Award at the 2026 Impact Investment Awards, recognising his leadership in innovative medical research funding.

The award recognises his vision and the Institute's commitment to helping breakthrough research reach patients faster.

Digital Twins - One step closer to personalised cochlear implant care

Bionics Institute researchers are developing digital twin technology to support personalised cochlear implant care. The team has created and validated a virtual model of the electrode-neuron interface, laying the foundation for simulating individual responses to implant settings.

Combined with machine learning, the technology could help predict personalised programming based on each user's anatomy and neural responses. Clinical validation begins next year, with potential to improve hearing outcomes and make specialised care more accessible to people in remote locations.



Read the full stories here

Philip Binns appointed Chair of the Board

The Bionics Institute welcomes Philip Binns as Chair of the Board. With more than 30 years of international leadership across science and life sciences, Phil brings extensive expertise in technology, innovation and commercialisation. "It is an honour and privilege to take on the role of Chair of the Bionics Institute... I look forward to working with the team and our partners to further our mission of developing and bringing to clinic new life-changing diagnostics and therapies," Phil said.

From graduate to benefactor: A shared mission to make the world better

Inspired by the impact of Alzheimer's disease, philanthropist Anita Castan is supporting Dr Oscar Murphy's research into personalised brain stimulation as a potential treatment. "I have seen first-hand how devastating Alzheimer's is, not just for the person with the condition but also for their loved ones, and I was keen to support Oscar in his research," Anita says.

A voice that is helping shape the future

For Dapinder, supporting research is about more than giving back, it's about helping improve the lives of people living with autoimmune conditions.

Diagnosed with primary Sjögren's syndrome in 2015, Dapinder brings both her personal experience as a patient and her professional perspective as a dentist to the Bionics Institute's Consumer and Community Involvement (CCI) Program.

"If it means improved outcomes for others, I'm committed to giving even more."

For more than a decade, Dapinder has managed the progressive autoimmune condition, which affects the body's ability to produce tears, saliva and natural oils. While there is no cure, she hopes sharing her experience can help researchers better understand the impact of the disease and improve outcomes for others.

"I've lived with the disease for 11 years... if my understanding of this disease as a patient can help researchers and subject matter experts in developing solution, even for one person, it's a win for me." As both a patient and a clinician, Dapinder believes lived experience is essential to research.

"People who are invested in researching and improving the quality of life of people with these conditions, they need as much data and patient input as possible. They need to hear different viewpoints."

Supported by her husband, Jagdeep, and inspired by her family, Dapinder remains grateful for the opportunity to contribute and help shape future research.

"Dapinder's personal and professional lived experience provides a targeted and powerful perspective that enhances the meaning, impact and reach of what we do. Her extraordinary openness, expertise and generosity benefits not just the individual research programs she contributes to but supports the consumer and community involvement program as a whole." - **Dr Sally Herring, Clinical Research Support Team Leader**

Better research starts with listening

What if the most important expert in a research project isn't in the laboratory?

Through the Bionics Institute's Community Involvement (CCI) Program, people living with conditions such as dementia, Crohn's disease, arthritis, epilepsy and chronic pain are helping shape the future of medical research

Facilitated by Dr Sally Herring, the program brings researchers together with people who have firsthand experience of living with challenging medical conditions. Their lived experience provides insights that no textbook or laboratory can offer, helping researchers ask better questions, identify unmet needs, and design research that is more relevant, practical and impactful.

Although still in its early stages, the program is already making a difference.

Over the past year, researchers, consumers and national advocacy organisations have come together to establish Community Advisory Committees, engage with individual lived experience expertise, facilitate workshops and begin to build lasting partnerships. One example is the Vagus Nerve Stimulation Centre of Excellence at Bionics Institute, which now incorporates consumer expertise across all arms and phases of development in its groundbreaking research programs.

Consumer insights have already directly influenced the design of a potential next stage Crohn's disease clinical trial, inspired new ideas and indications for medical device development and highlighted priorities that researchers may otherwise have overlooked. Consumers have provided an open and honest window into their lived experience, educating and linking researchers with the real-world meaning of their work. Researchers have shared their research ideas and progress and are feeding back the impact of consumer expertise on the research to come.



The response has been overwhelmingly positive.

Researchers are seeing the value of involving consumers from the outset, while advocacy organisations are embracing the program as a model for meaningful collaboration between researchers and the communities they serve.

As interest continues to grow across the Institute, so does the opportunity. The work of researchers and consumers to date has established a strong foundation at Bionics Institute, demonstrating how consumer involvement can strengthen research at every stage, from early ideas through to clinical translation. The next challenge is ensuring more research teams, and more consumers can benefit from this approach.

"By embedding lived experience into the research process, the Bionics Institute is helping create better science and better outcomes for the community. Consumer and community involvement is becoming more than a research initiative; it's helping shape a culture where discovery is driven not only by scientific excellence, but by the people research is ultimately designed to help."

– Dr Sally Herring



Contact to find out more



**Bionics
Institute**

Please give this Spring at:

bionicsinstitute.org/donate

Join our incredible community of supporters and help us develop life-changing treatments for future generations.

📍 Mailbox 84, St Vincent's Hospital,
41 Victoria Parade, FITZROY
VIC 3065 AUSTRALIA