

# *The Current*

Bionics Institute Newsletter

**AUTUMN 2025**



New ambassador  
**Vance Joy**

*Maquetic solutions*  
for Alzheimer's

Innovative solutions  
for a hidden crisis



**Bionics  
Institute**



## A word from our CEO

Welcome to the Autumn edition of *The Current*! We are thrilled to share the incredible progress you've made possible over the past six months. Your generosity and support have driven remarkable achievements, from groundbreaking research advancements to securing vital grant funding.

A heartfelt thank you to everyone who contributed to our recent appeal, extraordinarily raising over \$19,000 to seed-fund new research initiatives. Your support ensures innovative ideas take flight and have the chance to become the next medical breakthroughs.

We're also excited to announce a major milestone: we received a \$4.8 million grant from the Helmsley Charitable Trust in the US to fund our cutting-edge research into a personalised electrical treatment for Crohn's disease.

In other exciting news, we are delighted to welcome Australian singer-songwriter Vance Joy as our newest Ambassador. Vance will be championing our Giving Day on March 4, helping us raise crucial funds to accelerate our clinical trial for Alzheimer's patients. With your incredible support, we are confident that we can build on the success of last year's Giving Day and make this year even more impactful.

Your generosity continues to inspire and drive the exceptional work of our researchers. Thank you for being part of our journey, and we look forward to sharing more updates with you soon.

Best wishes,

**Robert Klupacs**  
Bionics Institute CEO



← Daryl and his wife Cathy

## Giving Day for Alzheimer's

### Research: March 4

On March 4, you will have the opportunity to play an even bigger role in the fight against Alzheimer's disease, with donations you make **MATCHED** by a caring group of Bionics Institute supporters.

By giving generously on Alzheimer's Research Giving Day, you will be doubling the funds raised and doubling your impact towards life-changing research that gives hope to so many people who are living with the devastating effects of the disease around the world.

## Your support can make a huge difference to people like Daryl

Daryl was diagnosed with early-onset Alzheimer's in 2021 at just 58 years old.

Following his diagnosis and progression of the disease, Daryl has had to give up his life-long career teaching primary school children, and like many people with Alzheimer's, he and his family have had to rapidly adjust to a new way of life to ensure he has the support he needs.

For his wife Cathy, and their family, the impact has been profound. Cathy, who manages the local bookstore, has shouldered the primary caregiving role, while their daughter and her husband have moved back home to help.

*"You have to have a lot of patience dealing with Alzheimer's and it can be like putting your regular life on hold to make everything work around the disease,"* Cathy says.

*"We have a pretty good system of visuals in the house, and every day we try and make a bit of a plan of what's going to happen. We just have to make sure that we're super organised."*

Cathy and Daryl are both grateful to have taken part in the Bionics Institute's Transcranial Magnetic Stimulation (TMS) trial, which has brought a glimmer of hope.

*"The whole experience was really positive for us. We felt valued and always comfortable and supported and well looked after,"* Cathy says.

*"I'm really hoping it progresses and as many people as possible can get it."*

Your gift on Giving Day will be the catalyst we need to accelerate our clinical trial and give hope to more people like Daryl. Please give generously on March 4.

Donate to  
Alzheimer's  
research







The Bionics Institute have made great strides into the research and development of medical devices to improve the lives of people with conditions affecting the brain. With your generous support we continue to create innovative new treatments for epilepsy, balance disorders, Parkinson's disease and much more.

Meet our new Ambassador

# Vance Joy

We're delighted to announce our new Ambassador for our Alzheimer's research: Australian singer and songwriter, Vance Joy!



While you may know him from his hit song *Riptide* — which has been streamed more than 2 billion times on Spotify — you may not know that Vance is passionate about finding a way to combat memory loss and the worst effects of Alzheimer's disease. With your help, he is hoping we raise enough money this Giving Day to progress our pioneering research into the disease.

***"I'm proud to support the Bionics Institute in their research into brain stimulation treatments for Alzheimer's disease, aiming to combat memory loss," Vance says. "If you're able to support, please donate to their Giving Day on March 4."***

We are truly grateful to Vance Joy for his generous support of our Alzheimer's research.

Sign up for our  
**Giving Day  
reminder**

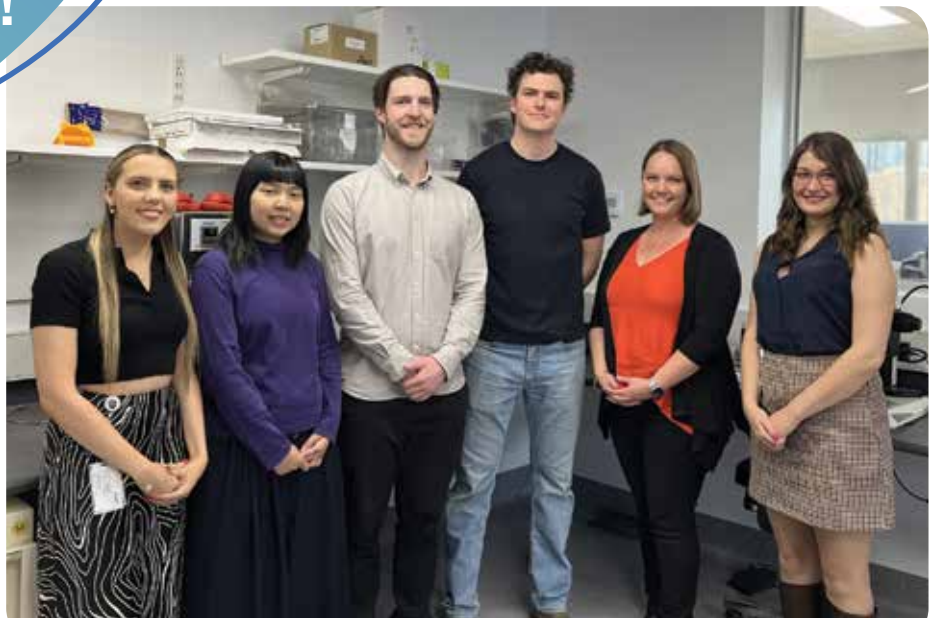
to go into the draw to

**win**

a tote bag  
signed by  
**Vance!**



Vance Joy with the Bionics Institute's Alzheimer's researchers >





## Q&A with Dr Oscar Murphy

Dr Oscar Murphy is a Clinical Neuropsychologist and Senior Clinical Research Fellow who studies how brain function relates to mental health issues and neurological disorders such as Alzheimer's. His research at the Bionics Institute focuses on creating and testing new brain stimulation treatments for neurological and psychiatric conditions. We sat down with him to hear about the exciting possibilities of the team's research.

### Can you tell us about the Bionics Institute's innovative treatment of Alzheimer's disease?

We are trialling the use of Transcranial Magnetic Stimulation (TMS), which is a form of brain stimulation that uses magnetic pulses to alter brain activity. Brief magnetic pulses are passed from a handheld coil through the scalp to induce a weak electrical current within selected regions of the brain. By delivering repeated magnetic pulses, we aim to improve brain connections and thereby improve the symptoms of Alzheimer's.

### What are the benefits?

TMS has been investigated for more than 30 years and is safe and very well tolerated. It is non-invasive, pain-free, does not require surgery and has few side effects. Importantly, it is already a proven and clinically available treatment for depression and is listed on the Medicare Benefits Schedule in Australia for the treatment of depression.

### What difference could it make?

The devastating symptoms of Alzheimer's create significant impacts, not just for those with the disease, but also for their families and the surrounding community. Currently, there are no truly effective treatments to pause or reverse the symptoms of Alzheimer's disease.

Our treatment could enable people with Alzheimer's to enjoy more time with family, live independently for longer, participate socially, and remain engaged in the workforce to a greater extent.

It also enables families and carers to have relief from the emotional distress of caring for someone with the disease, remain working, spend more quality time with their loved ones, and know loved ones with Alzheimer's are safer.

***"We are so grateful to all our caring and generous supporters who help us develop a new treatment, which could give people with Alzheimer's the chance to have more cherished time and memories with their loved ones."***

### What are the next steps?

Excitingly, the clinical trial of our TMS treatment is underway and we are continuing to enrol new patients. If you or a loved one are interested in taking part in the trial, we would love to hear from you.

*Register your interest today!*



**Your Will. Your choice.**  
*Our collective future.*

This year we are starting our clinical trial of a drug-free treatment for rheumatoid arthritis, progressing our trial for a new treatment for Alzheimer's, advancing a novel treatment for epilepsy and so much more.

Yet none of it would be possible without your support and the support of those who have very kindly left a gift in their Will to progress vital medical research.

The future success of our research is dependent on your generosity. Remembering the Bionics Institute in your Will is an impactful choice to make a difference in people's lives, without affecting your independence and self-sufficiency today.

**Download our Legacy Pack to make an informed choice.**



▲ Professor Kate Hoy, Head of the Cognitive Therapeutics Research Program demonstrating the TMS device.



# Latest News

Read all our latest news and updates here



## Thank you!

We're thrilled to announce new funding support for our talented researchers. These grants empower our researchers to transform lives—thank you to all who make this possible:

- The Helmsley Charitable Trust awarded \$4.8 million to fast-track the development of our world-first electrical treatment for Crohn's disease.
- The Harold and Cora Brennen Foundation awarded funding for vital, cutting-edge medical device fabrication equipment.
- The Passe and Williams Foundation awarded:
  - Dr. Yingjie Hu: Passe and Williams Junior Fellowship to pioneer inner ear drug delivery.
  - Mardi Gammon: Passe & Williams Research Scholarship to 'reconnect ears to the brain'.
  - Professor Colette McKay: Passe & Williams Special Project Grant to advance a revolutionary hearing test for babies.

## Corporate Giving

Patent and trademark attorneys FB Rice are at the forefront of corporate philanthropy that is making a significant impact on transformative medical device research at the Bionics Institute.

*"At FB Rice, we are passionate about supporting local innovation and giving back to our community – it is a very important part of building our workplace culture and values."* - Eddie Walker, Partner at FB Rice.

There are multiple ways to take part in corporate giving, including corporate partnerships through cash and in-kind sponsorship, donation matching to multiply your impact, or companies can support employees through workplace giving.



Take part  
in corporate giving



## 2024 Girls in STEM

## Mentoring Program

We were delighted to give 70 students from 15 schools the chance to be mentored by leaders from the Bionics Institute and industry partners. It's a privilege to help inspire the next generation of young women to pursue careers in science, technology, engineering and mathematics (STEM).

## Upcoming Events

### Cross the finish line for a cause at Run Melbourne

It's time to lace up your running shoes! Run 5.5, 10 or 21.1km on July 13 and raise vital funds to support our life-changing research.

- Raise \$200 and snag a branded running singlet
- Raise \$500 and have the chance to gain FREE entry as a Charity Superstar!



Let's come together to get fit and help people at the same time! Register today



### Driving Change: Charity Golf Day



Book your ticket today

We invite you to take part in our Concept Logistics 2025 Charity Golf Day on Monday, March 31 at Box Hill Golf Club. You'll enjoy nine challenging holes in an Ambrose competition, followed by a BBQ buffet and drinks in the beautiful upper-level function room overlooking the course.

# Groundbreaking Research Sheds Light on Cerebellar Ataxias:

## Advancing Hope for Balance Disorder Treatment

At the Bionics Institute, we are committed to pushing the boundaries of medical research to address the most pressing and overlooked health challenges. One such challenge are the cerebellar ataxias, a devastating group of over 100 genetic disorders, which disproportionately affect Indigenous Australians living in remote communities. Under the leadership of Associate Professor David Szmulewicz, our researchers are determined to bring hope and innovative solutions to those who need them most.

### A yet-to-be-quantified public health emergency

Cerebellar ataxias are progressive conditions that impair coordination, balance, vision, speech, and swallow. For those afflicted, the impact is profound: many become wheelchair-bound, lose the ability to communicate effectively, and require assistance to eat and drink. Tragically, most patients with cerebellar ataxias die prematurely from a range of complications including choking and severe pneumonia related to swallowing difficulties, as well as the complications of falls.



▲ Associate Professor David Szmulewicz

The prevalence of cerebellar ataxias among remote Indigenous populations is staggering. In East Arnhem Land communities, it is estimated that the most common form of this condition can occur up to times 180 more frequently than worldwide. This disparity is compounded by limited access to specialist medical care and diagnostic services. Many affected individuals remain undiagnosed

and untreated, further exacerbating health inequities and leading to lifelong disabilities that could have been mitigated with early intervention.

### Pioneering solutions with cutting-edge technology

Associate Professor Szmulewicz and his team are developing a groundbreaking diagnostic platform that utilises wearable sensors and artificial intelligence to diagnose and accurately measure the progression of ataxia. This innovative approach allows clinicians to assess the condition in real-world scenarios, such as during walking, sitting, eating and drinking.



***“We have developed a medical device platform that can objectively measure the hallmarks of ataxia such as imbalance and incoordination and can be used by GPs, physiotherapists and nurses in remote communities.”***

- Associate Professor David Szmulewicz

### What our researchers aim to achieve

Accurate measurement is a crucial step in understanding these debilitating disorders and monitoring their progression. It also paves the way for developing new, effective treatments and ensuring that patients receive the best care available. Prototype devices have returned favourable results in early trials and our ultimate goal is to eliminate barriers to health care access, empowering individuals with ataxia to lead fuller, more independent lives.



Learn more

Front Image: Dr Oscar Murphy, Vance Joy and Prof Kate Hoy

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

Please give this autumn at  
[bionicsinstitute.org/donate](https://bionicsinstitute.org/donate)

