

# The Current

Bionics Institute Newsletter

SPRING 2022

**Gift in Will**  
boosts hearing  
research

New treatment for  
*Alzheimer's*

**Graeme Clark**  
**Oration**  
success



Bionics  
Institute

## A word from our CEO

**At the Bionics Institute, we know that bringing together great people leads to innovation and new ideas.**

I'm pleased to announce that we continue to grow the talent pool at the Bionics Institute. We've launched a new Alzheimer's disease research team under the leadership of Professor Kate Hoy, and I'm delighted to share with you that Ms Karen Campitelli has been promoted to the position of Chief Operating Officer.

Our Board has also grown with the addition of Ms Hannah Crawford, Ms Sujata Stead and Mr Mike Younger who all bring additional expertise at a time of rapid growth. I know you'll join me in congratulating this group on their appointments.

In this newsletter, our talented Bionics Institute researchers and engineers, Dr Niki Gunewardene, Dr Yingjie Hu and Associate Professor Andrew Wise describe their hearing therapeutics work.

This ground-breaking research uses nanotechnology to deliver drugs into the inner ear that could repair damaged cells and restore hearing. It has the potential to transform the lives of millions of people around the world.

Our hearing therapeutic research was made possible thanks to a generous gift in Will and we're incredibly grateful that one of our valued supporters has remembered the Bionics Institute in this way.

A gift in Will is a powerful way to make a lasting impact and enables us to future-proof our important work. Take a look at the back page to learn more about the impact of this bequest.

In July, we were delighted to host the Bionics Institute 2022 Graeme Clark Oration on the subject of Engineering your Heart's Health and in early September, we held the inaugural Bionics Institute 2022 Innovation Lecture. Both these events were incredibly successful and placed the Bionics Institute at the heart of innovation in Australia.

I look forward to seeing you at our future events, including our Alzheimer's disease online event on 20 October.

*“Thank you for your continued support of Innovation for Life at the Bionics Institute.”*



**Mr Robert Klupacs**  
CEO

### Leadership announcements

#### Welcome, Professor Kate Hoy - Alzheimer's disease research



We are delighted to welcome Professor Kate Hoy, an internationally recognised brain stimulation researcher, to the Bionics Institute to head our new Alzheimer's disease research projects.

Professor Hoy has led a number of world-first brain stimulation clinical trials, including for dementia treatment and prevention. The use of transcranial magnetic stimulation in the research carried out by Professor Hoy's team is a potential game-changer in the field. It's a non-invasive treatment that shows promise of improving cognition in Alzheimer's disease, schizophrenia and head injury.

*Read more about our Alzheimer's research on the next page.*

#### New appointment - Karen Campitelli, Chief Operating Officer



We're pleased to share with you that Ms Karen Campitelli has been appointed as Chief Operating Officer of the Bionics Institute.

Karen has made an enormous contribution to the Bionics Institute since she joined 11 years ago, ensuring the organisation meets its governance requirements, playing a key role in the successful commercialisation of several projects, and forging strong collaborative relationships with research and commercial partners.

# New Bionics Institute project into a treatment for Alzheimer's disease



Professor Kate Hoy will lead a new research team investigating magnetic stimulation of the brain as a potential treatment for Alzheimer's disease.

The most common form of dementia, Alzheimer's disease has been shown to interfere with critical networks in the brain. This disruption in neural communication is linked to the cognitive difficulties experienced by those with the disease.

There is currently no treatment to cure or reverse an Alzheimer patient's cognitive deterioration. Professor Hoy has developed a treatment program using Transcranial Magnetic Stimulation (TMS), which uses magnetic pulses to alter brain activity.

A safe and painless treatment option, TMS has shown potential to restore healthy neural network function and improve memory in Alzheimer's disease.

Our research team now aims to evaluate TMS in a larger clinical sample using a personalised treatment approach. Professor Hoy will be presenting on TMS as a treatment for Alzheimer's disease at our upcoming October online event.

*“I have long admired the work of the Bionics Institute. I look forward to collaborating with my fellow researchers to progress our Transcranial Magnetic Stimulation technology and make a difference to the lives of people around the world with cognitive impairment.”*

**Professor Kate Hoy**

Head, Cognitive Disorders Treatment Program



[Learn more](#)

## Upcoming Events

We look forward to seeing you at one of our upcoming free events. You can register by clicking on the link or opening the page on your phone using the QR code.

### Magnetic connections: the future of Alzheimer's treatment?

**When:** 1.00-2.00pm | Thursday 20 October

**Where:** via Zoom

**Guest speaker:** Professor Kate Hoy, a clinical expert and a patient carer.

Join us to learn how magnetic stimulation of the brain could be the key to restoring healthy neural network function and improving memory in Alzheimer's disease.



[Register now](#)

## Recent Events

If you missed any of our recent events, you can view a recording by clicking on the link, or opening the web page on your phone using the QR code.



### Bionics Institute 2022 Innovation Lecture

Our inaugural Innovation Lecture brought together more than 200 key med tech industry stakeholders to discuss how to build Australia from innovation and bridge the gap between research and commercialisation.



[View event](#)



### Bionics Institute 2022 Graeme Clark Oration

More than 800 people joined us at the Oration to hear Dr Natalia Trayanova (Johns Hopkins University) talk about her revolutionary 'digital heart twins' technology - virtual replicas of the heart that aim to predict heart attacks.



[View event](#)



### Women in STEMM Lunch (Graeme Clark Oration)

Dr Natalia Trayanova (Johns Hopkins University) and Professor Nilmini Wickramasinghe (Swinburne University of Technology) spoke to attendees about overcoming career barriers and advancing gender diversity in science.



[View event](#)

## Include a Charity Week 2022

During this year's Include a Charity Week, held from 5-11 September, we recognised the meaningful difference gifts in Wills make in helping us continue our ground-breaking research.

We thank all those who have left a gift in their Will to the Bionics Institute and helped us future-proof our important work, whilst leaving a legacy for generations to come.

Having an up-to-date Will is one of the most important things you can do for the people and causes closest to your heart, whilst also making sure your wishes are properly documented and protected. All gifts, no matter what size, make a real difference.

To learn more about the impact of a gift in Will, take a look at our back page article on hearing therapeutics.

### Have you heard our new Med Tech Talks Podcast?



Hear from med tech industry leaders about what drives successful and impactful innovation, and where Australia's med tech sector is headed. Guests include Professor Michelle McIntosh, (Monash Institute of Pharmaceutical Sciences), Associate Professor Tom Oxley (Synchron), Professor Mark Cook (Epi-Minder & Seer Medical) and more fascinating med tech innovators.

[Listen to the podcast](#)



### Learn about the Bionics Institute in our new video

The Bionics Institute has a long and impressive track record of translating medical device concepts into clinical reality. Discover more about our founder Professor Graeme Clark in our new video, and learn how his revolutionary bionic ear research paved the way for our team.

[Watch now](#)



## Donation Form

I would like to make a gift of:

\$50

\$100

\$250

\$500

\$1000



My choice



\$

\_\_\_\_\_



**Make this a MONTHLY gift\***

Making a regular gift is a quick and easy way of helping us plan ahead. By knowing that we have a regular income stream, we can look to the future and ensure our research will have the greatest impact.

*\*Your gift will be deducted on the 20th of each month and will continue unless you notify us to stop it.*

### My Details

Name

Street

Suburb

State

Postcode

Email

Mobile

### My Donation Details

Please debit my Visa



MasterCard



AMEX



Card no.

Expiry date

M

M

Y

Y

Cardholder

Signature

*All donations of \$2 or more are tax deductible. The Bionics Institute is compliant with Australian Privacy Principles and our Privacy Policy can be viewed at: [www.bionicsinstitute.org/privacy-statement](http://www.bionicsinstitute.org/privacy-statement)*



I have made a bank transfer to NAB  
BSB: **083-170** Account: **54-537-7254**



Enclosed is my cheque made payable to the Bionics Institute of Australia



I would like to receive information about making a gift in my Will

You are welcome to call and give us your credit card details over the phone: 03 9667 7500, or donate online at [www.bionicsinstitute.org](http://www.bionicsinstitute.org)

Thank you for supporting the Bionics Institute  
384—388 Albert Street, East Melbourne VIC 3002  
Email: [philanthropy@bionicsinstitute.org](mailto:philanthropy@bionicsinstitute.org)



## Philanthropy Update

I am really delighted that so many of you supported our 2022 tax appeal on tinnitus, such a debilitating condition for so many people. Our aim in developing the new objective test is to help silence the torment of tinnitus.

Thanks to your generosity, we raised over \$102,000, which directly benefits the tinnitus research team led by Dr Mehrnaz Shoushtarian. This is the highest amount that we have ever raised in our tax appeal, and we are grateful to all of you who contributed, and an especial thank you to our board members who showed great leadership and provided match funding.

The Bionics Institute has benefited in the past from the generosity of people who have left us money through bequests and we have just launched a new Gift in Will program. As part of this program, we have partnered with Gathered Here, one of Australia's leading Will-writing organisations. We are pleased to be able to offer a free Will service, available whether or not you nominate the Bionics Institute as a beneficiary of your estate, once you have looked after your family and friends. If any of you are considering leaving money to us in your Will and would like a confidential discussion, please don't hesitate to contact me.

For those of you who have already confirmed a gift in Will, we are humbled by your thinking of us and are most grateful for your help in making the Bionics Institute more sustainable into the future.

We have partnered with Chapel & York so that donors based in Canada, Hong Kong, the UK and the USA can make local donations in their own currency and receive local tax benefits. Our research may be based in Melbourne, but our innovative work has global impact, and we hope to encourage more donors outside Australia.

*“We really appreciate your interest in our research, your feedback on our work and your financial support. We are grateful for your donations, large and small; they all make a difference. Thank you.”*



**Ann Fazakerley**  
Head of Philanthropy

## In the News

### Silencing the torment of tinnitus

As part of our recent appeal, Dr Mehrnaz Shoushtarian spoke to Channel 7 News about our ground-breaking tinnitus research.



### Awards aplenty for our PhD students

Bionics Institute PhD candidates, Ishara Paranawithana and Ajmal Azees, were recently recognised for their early research talent by the MedTech Actuator and RMIT University.



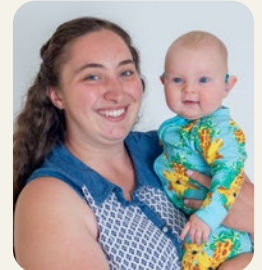
### Supporting girls to succeed in STEM

Our 2022 Girls in STEM Mentoring Program was launched with a 'meet your mentor' event, where students toured our lab and learned about our research.



### Infant hearing granted a significant boost

Our infant hearing team received a new MRFF Chronic Neurological Conditions grant to further our EarGenie™ technology, which aims to revolutionise hearing assessments for babies.



Read more of  
our news stories



### We'd love to hear your fundraising ideas!

If you're thinking about setting up a fundraiser to support Bionics Institute research, we'd love to chat to you. **Get in touch via:**

[philanthropy@bionicsinstitute.org](mailto:philanthropy@bionicsinstitute.org)



# Restoring the Magic of Hearing

Hearing loss affects nearly half a billion people worldwide and is set to increase two-fold by 2050.

Despite this, there are currently no drug treatments available to restore hearing function. Bionics Institute researchers are working to change that.

Dr Niki Gunewardene and Dr Yingjie Hu are working on a world-first treatment for hearing loss using nanotechnology, as part of a research team led by Associate Professor Andrew Wise.

*“It’s widely recognised that growth factors can repair damage to the sensory nerves in the inner ear. However, until now, there hasn’t been a safe and effective way to get high payloads of drug into the inner ear, impeding clinical translation of previous research.”*

*Dr Niki Gunewardene*  
Senior Research Fellow

The ground-breaking technology developed by our team loads a drug, called ‘growth factors’, into small drug-carrying particles created via nano-engineering. Once delivered into the inner ear, the growth factors can act to restore lost connections between the nerve fibres and sensory hair cells.

Our work paves the way for further research to develop this therapeutic technology and move towards a clinical trial to restore hearing in patients.



*“Our particle delivery system can increase the lifespan and improve distribution of growth factors delivered to the inner ear, which is an exciting development.”*

*Dr Yingjie Hu*  
Research and Development Engineer

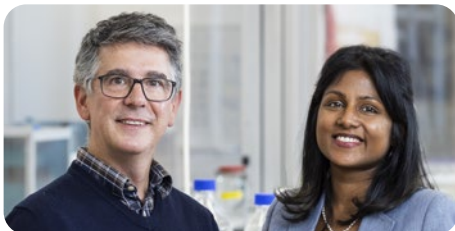
[View video](#)



## Thanks to a significant gift in Will, our hearing therapeutics researchers have been able to pioneer the development of a world-first treatment for hearing loss.

A generous bequest has enabled us to grow the research team, build bespoke laboratory facilities and accelerate the pace of our research project.

“This gift really set the foundation for our work. We were able to hire two new scientists and create a facility at the Bionics Institute to manufacture our drug delivery system. This facility is a huge step forward for the program as it enables us to develop and optimise the manufacturing process under controlled conditions, which is a key step in establishing a manufacturing process to produce clinical grade drug delivery particles for a first-in-human trial.”



*Associate Professor Andrew Wise*  
Lead Researcher,  
Hearing Therapeutics

## Plan for the future and complete your free Will in just 10 minutes!

Bionics Institute have partnered with Gathered Here to offer free Wills with unlimited updates for life, supported by a legal team of highly experienced Wills and estate lawyers.

*Complete your free Will today.*



[Find out more](#)

## The Current is published by the Bionics Institute

For the Bionics Institute’s latest research news, visit [www.bionicsinstitute.org](http://www.bionicsinstitute.org)  
If you would like to receive our email updates or have any queries, please contact us:

[supporterupdates@bionicsinstitute.org](mailto:supporterupdates@bionicsinstitute.org) [+61 \(3\) 9667 7500](tel:+61396677500)  
384-388 Albert Street, East Melbourne, VIC 3002



Bionics  
Institute

