NeuRA
Discover. Conquer. Cure.

# the NeuRA magazine

Issue 36 | **Autumn 2021**

## Using arcade-style dance games to keep older Australians on their feet

- Remembering Jeanne Little
- The new face of NeuRA Foundation
- Getting that happy hit when we can't travel
- Life at NeuRA's Sydney Brain Bank

# Message from our CEO

Professor Peter Schofield AO

Prof Peter Schofield AO

It is my pleasure to welcome you to the first edition of NeuRA Magazine for 2021.

This issue focuses on the rollout of NeuRA's brand new exercise program, *smart±step*, which is helping to keep older Australians on their feet. The program is one of NeuRA's signature fall prevention innovations, and is being trialled in Allity Aged Care Homes across the country.

We pay tribute to Australian icon, Jeanne Little who sadly left us, but leaves many memories. The Jeanne Little Alzheimer's Research Fund remains integral to advancing crucial research to prevent and treat dementia.

We introduce the NeuRA Foundation's new Executive Director, Carole Renouf. Carole has a wealth of experience in leading Australian and international medical research charities, most recently at Cancer Research UK. We are thrilled to have Carole on board.

You will have the opportunity to get to know more about our Sydney Brain Bank, including a day in the life of its Manager, Heather McCann.

Over the next few months, NeuRA will be stepping up its focus on healthy ageing research, and we look forward to sharing more insights into this work.

Prof Peter R Schofield AO *FAHMS PhD DSc*
CEO

From right: Jeanne Little with her daughter Katie and granddaughter.

# Remembering Jeanne Little

## May 11, 1938 – November 7, 2020

**It is with great sadness that we report the passing of Jeanne Mitchell OAM, professionally known as Jeanne Little, the Australian icon and renowned television star. Jeanne passed away late last year at the age of 82, after dazzling the world with her flamboyant personality and onscreen presence for three consecutive decades.**

Jeanne was diagnosed with Alzheimer's disease over 10 years ago, shortly after which her daughter, Katie Little, created the Jeanne Little Alzheimer's Research Fund at NeuRA.

"Mum always poured so much energy into supporting many, many charities for which she was awarded an Order of Australia," Katie said.

"She had huge compassion for people and was always trying to lift people's spirits and inspire them to make a difference. I know she'd love this research fund and would be thrilled to know she's still helping people," she said.

Jeanne's memorial service was broadcast live in November so that the whole world could partake in the celebration of her marvellous life. Our very own Professor Peter Schofield, NeuRA CEO, delivered a eulogy at the service that reminded the audience of NeuRA's commitment to move dementia research forward and make a difference to the lives of those affected by it.

**"She had huge compassion for people and was always trying to lift people's spirits and inspire them to make a difference. I know she'd love this research fund and would be thrilled to know she's still helping people," she said.**

With the help of our many supporters and the community, NeuRA continues to run clinical trials, improve treatments, develop prevention methods and draw nearer to finding a cure for Alzheimer's and other dementias. ●





Carole Renouf

# The new face of NeuRA Foundation

**Carole Renouf joined NeuRA as Executive Director of the Foundation just before the end of 2020.**

**You've been CEO of the Melanoma Institute Australia, National Breast Cancer Foundation and Garvan Research Foundation. What motivated you to take this role at NeuRA?**

I missed being in an institute setting where I work in direct partnership with the researchers. I've had several roles as a funder where I had to operate at one remove from the research, for example at NBCF and at Cancer Research UK.

I am a true believer in the power of medical research to change the future and much prefer working directly with the scientists and clinicians who perform that transformation.

**You're just a couple of months into the role. What are your impressions thus far?**

Due to starting very late in 2020, COVID and the holiday period, I am really only just getting going and haven't had the opportunity to meet many of our supporters yet. I am very much looking forward to doing this.

**I am a true believer in the power of medical research to change the future and much prefer working directly with the scientists and clinicians who perform that transformation.**

The Foundation team has a lot of practical ideas as to how we can bring our supporters closer to our research – there's something in there for everyone. A great deal of what we do is integral to ageing well (I am about to turn 68!).

We also study spinal cord injury, with the amazing goal of helping people walk again, and mental disorders. Quite a lot of the research is applied and has the potential to change clinical practice, so I am excited.

Needless to say though, it all depends on our success in building community support.

**Lastly, what do you enjoy doing in your spare time?**

I don't have much! But I do love spending time with my beautiful big dog, Nala, who made the journey with me from England.

And connecting with my 28-year old daughter, who sadly for me, opted to stay in London – so we talk on Whatsapp. ●

# Neuroscientists and aged care residents trial dance mats to stay on their feet

**Tom Stephens is 84 years old and, like many other Australians of this age, he is recovering from a bad fall that left him with a fractured hip.**

"I was tangle footed, and over I went," Tom explained.

However, Tom is one of the lucky few who is using a brand-new exercise program based on arcade-style dance games to reduce the risk of falling again.

The program is called *smart±step* and is currently being trialled by residents at three Allity Aged Care facilities in New South Wales and in Victoria, where Tom lives.

"We are excited to be undertaking this trial in partnership with Allity as this will enable our new technology to be used by thousands of people within aged care homes across Australia," said NeuRA's Dr Daina Sturnieks, who is the lead researcher behind *smart±step*.

**"One of the most popular games is 'La Cucaracha', which involves stepping on cockroaches while avoiding other objects. At the harder levels, even young players find the game tough. It's very addictive, and we love stoking competition to encourage participation in the program."**

Balance-challenging exercises can significantly reduce fall risk.

People in the program use a dance mat and adapted versions of popular video games to train the physical and cognitive functions that are key to fall prevention.

"You have to relearn where your feet are, and not be tangle footed anymore," said Tom, who has been using *smart±step* now for over two months.

The step training involved in *smart±step* has previously been shown to reduce a person's risk of falling and improve cognitive and physical functions that are risk factors for falls.

"Balance-challenging exercises can improve mobility and significantly reduce someone's risk of having a fall," said Dr Sturnieks.

Physiotherapists and other medical staff are only involved in some instances to ensure safety.


One of the most popular games is 'La Cucaracha', which involves stepping on cockroaches.

"To make this type of exercise more enjoyable and motivating, we have taken the fun elements of a game and converted them into a program that will improve the user's stability and thinking skills," she said.

To achieve the best results, people in the program are recommended to use *smart±step* for two hours each week. After a brief tutorial, physiotherapists and other medical staff are only involved in some instances to ensure safety.

This allows users to progress through the games independently, without requiring support from carers or clinicians.

In a residential aged care environment, staff are trained to ensure the safety of residents using *smart±step* while still encouraging independence as skills and confidence progress.

"There's one thing that's very disheartening when you aren't in good shape. It's to feel no improvement. That there's nowhere to go," explained Tom.

"And this is sort of a place to go. *smart±step* is motivating and fulfilling," he said.

Allity Chief Operating Officer Glen Hurley said, "We are thrilled to be able to provide residents with a scientifically proven, and

Dr Sturnieks visited Allity to talk residents through the program.

fun, way to maintain their quality of life as they age."

Dr Sturnieks added, "Our trials show people find the games extremely enjoyable. The competitive nature of games means that we are confident that *smart±step* participants will happily use the program to obtain the best possible health benefit."

"One of the most popular games is 'La Cucaracha', which involves stepping on cockroaches while avoiding other objects. At the harder levels, even young players find the game tough. It's very addictive, and we love stoking competition to encourage participation in the program."

"The best thing about *smart±step* is that it's so easy to use. The games are perfect for older people who prefer to exercise in their own home or are unable to access exercise classes because of the COVID-19 restrictions or other reasons," she said.

Once the current pilot finishes, *smart±step* will be part of a broader roll out across Allity Aged Care Homes that could benefit up to 3,000 residents in Australia.

After the trial at Allity Homes is complete, *smart±step* will become publicly available. ●

**For further information, please visit www.neura.edu.au/clinical-trial/smartstep/**

# A day in the life of the Sydney Brain Bank Manager, Heather McCann

**Heather McCann is Manager of the Sydney Brain Bank at NeuRA, and has been working with human brain tissue for almost 30 years.**

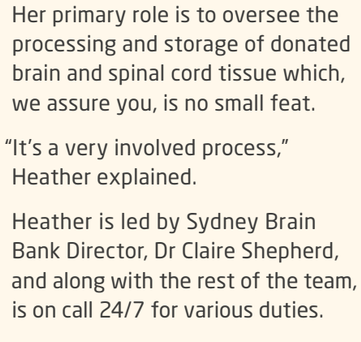
Her primary role is to oversee the processing and storage of donated brain and spinal cord tissue which, we assure you, is no small feat.

"It's a very involved process," Heather explained.

Heather is led by Sydney Brain Bank Director, Dr Claire Shepherd, and along with the rest of the team, is on call 24/7 for various duties.

"We have six staff in the team and everyone has a role to play. We have pager alert system for when a brain donor passes away, and a freezer failure alarm, both of which can go off at any time. And then we have a weekend roster so we can attend the lab if we need to do a brain dissection," Heather said.

"After the death of a donor, we collect the tissue as quickly as possible, ideally within a 36-hour window. This minimises disruption to the donor's family and ensures the brain tissue is in an optimal condition for research."



Heather McCann sampling brain tissue.

**"After tissue collection, preparation and examination, which takes several months, we communicate the results to the clinicians and families of donors, which assists in the refining of clinical diagnoses, and also gives loved ones a sense of closure," she said.**

"After tissue collection, preparation and examination, which takes several months, we communicate the results to the clinicians and families of donors, which assists in the refining of clinical diagnoses, and also gives loved ones a sense of closure," she said.

Heather is also responsible for ensuring that donated tissue is preserved correctly, so that these precious specimens remain fit for scientific analysis for years.

"Some of the brains in our freezer have been there for 15 to 20 years, and people are still using them successfully for their experiments," she said.

"We work very hard to maintain the quality of our tissue, as well as the records that come with it."

On a daily basis, Heather talks to researchers here in Australia and as far as Sweden about the type of cohorts they need for their studies, and whether tissue specimens from NeuRA's Sydney Brain Bank can help them.

When asked about the best part of the job, Heather said it is not only being able to play a part in facilitating world-class research into devastating neurodegenerative diseases, but also witnessing first-hand the remarkably long, healthy and productive lives some individuals can nowadays live.

"We currently have in storage a 105-year-old brain that is in better state than any other brain I've ever seen," she said. ●



# Thank you from the Sydney Brain Bank

**Parkinson's Disease. Dementia. Multiple System Atrophy. Three completely different incurable neurodegenerative diseases that devastated the family of much-loved Australian entertainer, Rhonda Burchmore.**

You may already have seen that Rhonda's tragic experience and eventual loss of her father Jack, sister Michelle, and mother Yvonne became the focus of NeuRA's most recent fundraising appeal.

To those that supported this endeavour we extend our sincere appreciation. Because of your generosity, we raised $100,000 over the course of just eight weeks.

NeuRA's Sydney Brain Bank relies on your donations to continue the research that is critical to preventing these diseases from taking the lives of our loved ones.

## IF YOU WOULD STILL LIKE TO CONTRIBUTE, IT ISN'T TOO LATE.

**A DONATION OF $50** pays for 15 litres of formalin, which will preserve eight brains for the next two years

**$100 WILL BUY** enough specialised drawer space for the long-term storage of several hundred preserved tissue samples

**$500 WILL BUY** a brain tissue slicer used to reveal the internal structures of the brain

**What's important to remember is that a breakthrough in one neurodegenerative disease could lead to a breakthrough in others.**

# DONATION FORM

☐ Yes, I would like to donate to research at NeuRA

*All gifts over $2 are tax deductible*

Title:

First Name:

Surname:

Address:

Suburb:

State:

Postcode:

Phone:

Email:

**How I choose to give my gift:**

☐ Please accept this one-off gift to support research at NeuRA

☐ I would like to invest in the future and become a *Discovery Partner* with a regular donation of

$ _____ ☐ monthly / ☐ quarterly *(please select)*

☐ $50 ☐ $100 ☐ $250 or ☐

☐ A cheque payable to the NeuRA Foundation is enclosed OR

☐ I wish to make my gift by credit card:

☐ Visa ☐ Mastercard ☐ American Express ☐ Diners

Card No:

Expiry Date:

Cardholder's Name:

Cardholder's Signature:

☐ *If you do not require a receipt, please tick here*

Please send me:

☐ Details about how I can support NeuRA in my Will

- Mail this coupon in the reply paid envelope
- Call us on **1300 888 019** to make a donation over the phone
- Make a secure online donation at **neura.edu.au/donate**

**A message from the NeuRA Foundation:** The NeuRA Foundation may co-operate with other like-minded reputable Australian charities to promote our work to our respective donors. If you'd prefer that NeuRA does not share your information with other charities, please phone us on **1300 888 019**, email us at **foundation@neura.edu.au** or write to us using the enclosed envelope.

*Thank you for generously supporting our research into diseases*

Neuroscience Research Australia Foundation, PO Box 1165, Randwick NSW 2031 ABN 57 008 429 961

# Ways to get that happy hit when we aren't able to travel

**There are two main chemicals in the brain that affect happiness, dopamine and serotonin. These 'feel good' chemicals interact with the areas in the brain that regulate mood and motivation, allowing us to get pleasure from the activities that we do.**

Low levels of dopamine and serotonin are associated with depression, a lack of motivation, and memory and concentration issues. So, it comes as no surprise that those of us with strong wanderlust might be feeling bored in the wake of COVID-19 travel restrictions, or a little lower in mood than usual.

There are, however, many other ways we can boost our happiness chemicals.

Dr Teri Furlong is a Postdoctoral Researcher in NeuRA's Brain Structure and Function team, and has put together a list of evidence-based recommendations:

- Research shows the brain's limbic system, which deals with emotion, is activated by seeing a picture of someone we love or a picture of nature. Try sitting down with a photo album or Googling wildlife photography.
- Mindfulness and yoga also activate the limbic system, but so does chocolate ice cream. Dr Furlong recommends both, but the latter in moderation!
- Engage in activities you can be completely absorbed by, such as learning a new language, listening to a good song, and even drinking coffee.
- Replicate the activities you normally do when you travel, but locally. Try going to a nearby art gallery or even better, visiting a different suburb for a meal or new sights.
- Tune out, relax and immerse yourself in something creative, such as reading for pleasure, completing a puzzle, or painting.
- Walking in nature can reduce stress and negative thoughts, increase positive mood and improve memory. Try picnicking in your garden or wandering through a local park.
- The anticipation of an activity can also raise dopamine levels. Try starting to plan your next holiday!

## We would like to thank you

**If you have left a gift to NeuRA in your Will, thank you – but please do let us know.** Your generosity deserves recognition in your lifetime and it's important for our future planning.

We would like to keep you up to date on our activities and vital research, as well as invite you to become a **BEQUEST FOR CURES** partner.

Maybe you are intending to leave a bequest to NeuRA? We'd love to discuss this with you. Be assured that we will keep your personal details in the strictest of confidence, and understand if you wish to remain anonymous. ●

**If you would like to discuss in confidence leaving a gift in your Will to NeuRA, please call Stephanie Grove, Gifts in Wills Manager on 02 9399 1270 or email s.grove@neura.edu.au**

## Thank you for your support

If you wish to update your preferred communications from NeuRA, please call 1300 888 019.

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