THE UNIVERSITY OF SYDNEY

Giving today. *Changing tomorrow.*

Revitalising a rare Renaissance text

Contents

We recognise and pay respect to the Elders and communities – past, present, and emerging – of the lands that the University of Sydney's campuses stand on. For thousands of years they have shared and exchanged knowledges across innumerable generations for the benefit of all.

The University of Sydney,
The Advancement Portfolio
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Credit: Stefanie Zingsheim

From the Chancellor *and* Vice-Chancellor

2024 HAS BEEN A MOMENTOUS YEAR for the University of Sydney, including our rise to 18th in the QS World University Rankings. This all-time high is a testament to the dedication and commitment of our community across Australia – from the Quadrangle, to NSW regional communities, to our research station in the Great Barrier Reef.

In June, we farewelled Belinda Hutchinson AC (BEc '76) as our 18th Chancellor. Many of you have come to know Belinda since she took office in 2013, and have seen first-hand her passion for the University's work, her dedication and unrivalled work ethic. As Chancellor, she presided over 65 graduation ceremonies, shaking hands with more than 8500 graduands. She has been a tireless advocate for the University externally. And under her leadership, the campus has been transformed, with new facilities enabling innovative approaches to multidisciplinary research and teaching.

Belinda's clear focus has been key to our success over the past decade, setting us up to become one of the best-governed and most successful universities in Australia. We have been very fortunate to have her as our Chancellor – and are deeply grateful to her and her family for their donations to the MySydney and Eureka Benevolent Foundation scholarships, which benefit rural and regional students.

With thanks to our supporters, the University has made great strides in the two years since the launch of the *Sydney in 2032* strategy towards more equitable access to education. The MySydney scholarships, for example, have enabled a 62 percent increase in enrolments from students from low-socioeconomic areas, and this comprehensive program has also improved retention rates for MySydney students compared to the broader undergraduate domestic cohort. We are proud to be building a place of learning that helps students from all backgrounds to thrive.

We are also working towards changing how Australia thinks about innovation and commercialisation, playing a leadership role in building an ecosystem that brings together academics, government and the private sector to transform academic research into commercial products and services, government policy or healthcare innovations. Much of this work has already begun – once again thanks to the generosity of our supporters.

You can find stories of how we are translating technology – taking it from the lab to serving communities – within these pages. Other stories highlight the diverse passions of our donor community, the students and researchers they empower, and the programs they enable. From groundbreaking heart health innovations to restoring a 450-year-old manuscript, and from improving food security to boosting mental health research, your contributions are enabling transformational change.

The work we do here at the University of Sydney is critical to the future success, wellbeing and prosperity of our nation. But this work does not happen in isolation – innovation and excellence in education and research can only occur through meaningful collaboration. As universities across Australia grapple with significant shifts in higher education policy, engagement with our community will be more important than ever. We are sincerely grateful to you, our friends and supporters, and look forward to our continued partnership over the coming years.

David Thodey AO, FTSE
Chancellor

Mark Scott AO
Vice-Chancellor and President
(BA '84, DipEd '84, MA '93, HonDLitt '15)

2.

Philanthropy is the engine that powers the University. From accelerating medical outcomes to transforming education, the University is dedicated to using every donation to build a thriving, enriched future for all. These snapshots provide a glimpse into the past year's activities, made possible by like-minded supporters who share our vision.

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Snapshot *of* 2023 & 2024

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1. Building Greece's legacy

Democracy, philosophy, astronomy, architecture: Western civilisation owes much to the Greeks. Determined to preserve this rich legacy, the Nicholas A Aroney Trust has created a research fund in the Faculty of Arts and Social Sciences and a Greek cultural fund at the Chau Chak Wing Museum. These programs will ensure the appreciation and study of Greek culture, and the influence of democracy, continues long into the future.

2. Accelerating discovery

The University's largest-ever capital investment, the Sydney Biomedical Accelerator (SBA), is underway. The health, education and research precinct is an Australian-first collaboration between government, university, philanthropists, and industry, and will help over 1200 biomedical researchers and clinicians tackle complex health challenges. The adjacent Innovation Hub is now open, with the SBA's completion scheduled for 2027.

3. Beating the heat

The rising risks of extreme heat due to climate change are expected to disproportionately affect vulnerable groups, including pregnant women and infants. Enabled by the Wellcome Trust, Professors Adrienne Gordon (MPH(Hons) '05, PhD '12), and Ollie Jay will co-lead this collaborative project between the University of Sydney and partners in Bangladesh and India. This study will help fill critical gaps in knowledge about the heat-health risks for pregnant women.

4. Design in mind

Acclaimed Japanese architects from studio Atelier Bow-Wow have been announced as the new Rothwell Co-Chairs in Architectural Design Leadership, established by Garry Rothwell AM (BArch '67, HonDArch '22) and Susan Rothwell AM (BArch '72, HonDArch '22). From 2024-26 Momoyo Kaijima, Yoshiharu Tsukamoto and Yoichi Tamai will bring their expertise to Sydney, and inspire the next generation of architects.

Supplied by Denton Corker Marshall/ HDR (2) and Tomo Ishiwatari (4).

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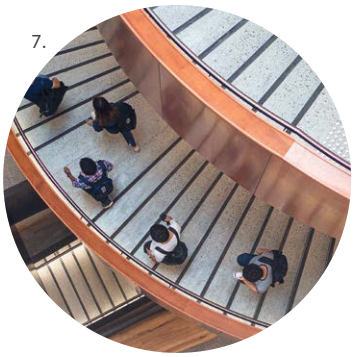

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5. In-vets-ing in koala care

The Sydney School of Veterinary Science has recently launched a new scholarship for students passionate about wildlife medicine, thanks to the generous support of the Cockbain Family Wildlife Trust. Doctor of Veterinary Medicine students awarded this scholarship will have the opportunity to visit Port Stephens Koala Hospital, where they will support veterinarians in diagnosing, treating, and providing critical care for koalas in need.

6. Judge gives back to alma mater

Sydney Law School students will benefit from a transformational $2.14 million bequest from the late Justice Alan Neaves (LLB '49). Born locally in Glebe, Justice Neaves would go on to graduate with First Class Honours from the University of Sydney, and later served as Secretary of the Attorney-General's Department and Judge of the Federal Court. His generous gift will promote teaching, research and scholarships in Australian and comparative constitutional law.

7. Indigenous business boost

Funding from an anonymous donor will create a business skills program for Indigenous entrepreneurs. Co-designed with communities, small-group courses will address identified skill gaps in subjects such as business management, marketing, procurement, and workplace safety. The program aims to catalyse the success of Indigenous-owned start-ups while benefitting remote communities through job creation.

8. Musical (theatre) makeover

Footbridge Theatre will return to its former glory after 20 years as a lecture hall. The scope of the project includes reinstating the fly tower, catwalk, and orchestra pit, with a focus on providing production space for students in the Conservatorium's Music Theatre stream. While the capital works are University-funded, generous gifts from donors like Alan Hyland will help bring student productions from the rehearsal room to the stage.

Community, *co-creation,* collaboration

Community is the common thread throughout Dr Simone Sherriff's academic journey. Working hand-in-hand with Aboriginal and Torres Strait Islander peoples across Australia, she is ensuring that their needs and voices are at the heart of research practice.

WORDS by Harriet Ticehurst

PHOTOGRAPHY by Chris Gordon

Co-creation is an approach to research practice that prioritises Aboriginal and Torres Strait Islander knowledges and ways of being, knowing and doing.

The bells of the University of Sydney's carillon chime as graduates stream out of the Great Hall. Among them, Dr Simone Sherriff (GradDipIndigHProm '13, MPH '17, PhD '24), a proud Wotjobaluk woman whose family are from the Wimmera region of north-west Victoria, walks onto the Quadrangle greens with her testamur in hand and her family, friends and mentors by her side.

Simone didn't always know she wanted to be a researcher. She started her career as an apprentice chef before stumbling upon a job advertisement for a research officer position in the Study of Environment on Aboriginal Resilience and Child Health (SEARCH) – an Indigenous-led and owned initiative dedicated to redefining research.

"In communities, 'research' can be a bit of a dirty word," Simone admits. Historically, studies on Aboriginal and Torres Strait Islander communities were exploitative and invasive, conducted in institutions that barred entry to Aboriginal people up until the 1960s and continued to exclude them from research practice until recent years.

Hesitant but intrigued, she applied for the role.

"If Aboriginal people can have ownership and control over how we do our research, it can be empowering for us. Seeing how our research could be translated into programs and services that could have tangible benefits for community really inspired me."

This marked the beginning of Simone's longstanding dedication to reclaiming research practice through a process called 'co-creation.' The collective aim is to centre Indigenous voices and knowledges, previously disregarded in colonial research practice, working alongside participants as active agents rather than recipients.

"I think research across the University – not just in Aboriginal health – can learn from co-creation. It's very difficult for research to share power, but I think when we work closely with community, the research is richer and more likely to be responsive to our people's needs," Simone explains.

The SEARCH experience was pivotal in Simone's decision to enrol at university – she was the first in her family to do so. Backed by her colleagues and community, she began her academic journey with the Graduate Diploma of Indigenous Health Promotion (GDIHP), swiftly followed by a Master of Public Health.

"The graduate diploma really helped support my transition into university life and studying. Without such a nurturing and culturally safe group, I wouldn't have succeeded at university," she reflects.

Simone knew she wanted to continue studying when her research interests shifted to address food insecurity faced by Aboriginal families.

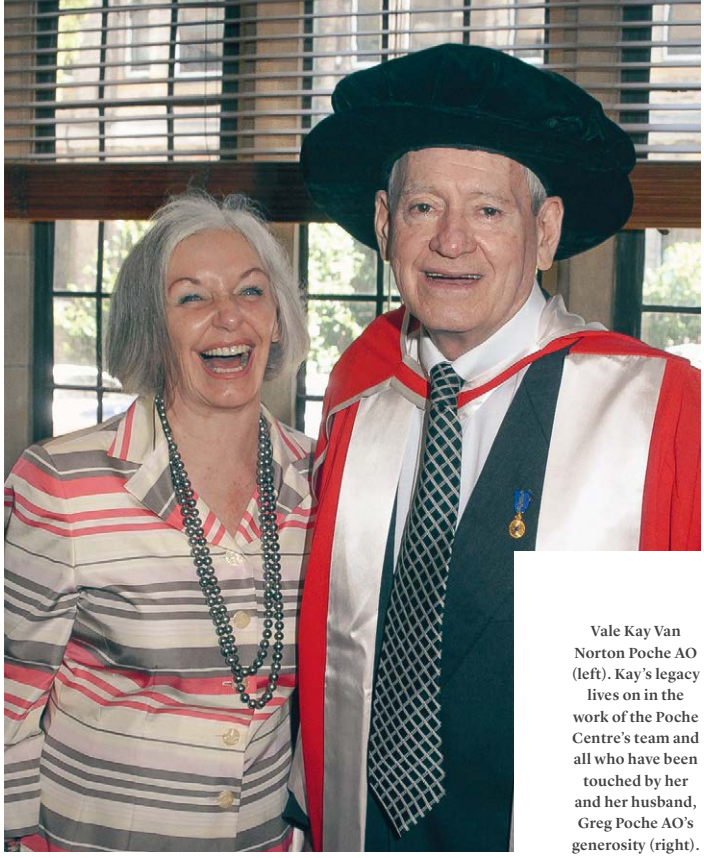
"At the time, I didn't really know what a PhD was," Simone laughs. Now balancing raising a young child and multiple research projects, she set her sights on scholarship opportunities.

A fortuitously-timed email to colleagues at the Charles Perkins Centre (CPC) pointed Simone to the *Turner PhD Scholarship*, which aligned perfectly with her research interests.

The scholarship was established through the generosity of Margaret Turner (MHS '94, BA '21). A retired physiotherapist and long-time Francophile, Margaret had recently returned to university to

Margaret Turner (left) and Simone Sherriff (right) reunite after the graduation ceremony.

Photography supplied



Vale Kay Van Norton Poche AO (left). Kay's legacy lives on in the work of the Poche Centre's team and all who have been touched by her and her husband, Greg Poche AO's generosity (right).

continue studying French language and literature. Following a tour of the CPC, Margaret was stirred by the financial barriers facing early-career researchers.

When Simone received the news that she was the recipient of the *Turner PhD Scholarship*, she was deeply moved.

"The scholarship changed my life, but also changed the lives of my family and community," she says, beaming. "I hope to be a role model for my children and other young people in my community."

Core to Simone's PhD project was the practice that first sparked her interest: co-creation. Her thesis, *Dalki Garringa* ('Good growing' in Wergaia), focused on building evidence with Aboriginal families to improve food security and the healthy growth of children across Australia. Her findings demonstrated that 96 percent of Aboriginal households in NSW are food insecure – or struggling to afford enough food – causing a cascade of other health concerns. In this project, Simone looked at the prevalence and protective factors for healthy weight status in Aboriginal children and led the development of a food planning tool to assist communities in discussing food security.

Upon completing her PhD project, Simone was appointed the inaugural research fellow at the Poche Centre for Indigenous Health – a flagship centre established through the transformative philanthropy of Greg Poche AO and the late Kay Van Norton Poche AO. Motivated by research excellence and improving health outcomes for Aboriginal and Torres Strait Islander peoples, Greg and Kay's visionary gift has created a pathway for First Nations researchers and fostered connections between universities nationwide.

Simone's current priority is *Yalbilinya miya* ('learn together' in Wiradjuri), a breastfeeding pilot program, designed by and for Aboriginal women. As research fellow, Simone leads this collaboration between the Riverina Medical and Dental Aboriginal Corporation, the Poche Centre, Lowitja and Sax Institutes.

"For 65,000 years, Aboriginal and Torres Strait Islander women have nurtured and sustained our babies through breastfeeding for up to four years of the baby's life. We now know that the breastfeeding period has been reduced to anywhere between a couple of days to a couple of weeks," she explains.

Research has shown that the lack of culturally safe breastfeeding support has led many women to bottle feed. Working closely with women and Elders, Simone is co-creating educational resources such as videos to share with the community. In just a few short months, the program has been met with resoundingly positive feedback and requests from communities across NSW to share these tools. The Poche Centre is keen to upscale Simone's project to continue empowering community through co-creation.

Stops along Simone's academic journey – from the GDIHP, through her PhD to becoming a research fellow – have been touched by the support of like-minded individuals who believe in the power of Indigenous-led research and indeed, in Simone. These champions have cleared a path for her and other aspiring researchers at the University of Sydney to empower Aboriginal and Torres Strait Islander people, transform policy, and enhance existing practices – not in isolation, but rather hand-in-hand with the communities at the heart of the research.

To the donors who have supported her along her journey, Simone says, "thank you for creating a space for us to gather and conduct research that privileges our ways of knowing, being and doing."

Adobe Stock

WORDS by George Dodd

PHOTOGRAPHY by Fiona Wolf

Heart of the *matter*

When a cardiac arrhythmia makes itself known, it could change your life or even take it. A team of early-career researchers are looking for solutions by following a new path.

Poonam's work focuses on understanding the effects of radiation treatment on heart cells.

The explorer

DR POONAM BALAJI

The electrical system in the human heart allows it to beat a staggering 100,000 times a day. The problem is that sometimes the electricals misfire, causing cardiac arrhythmias.

Arrhythmias can be debilitating or even deadly (the Stroke Foundation of Australia says that the most common, atrial fibrillation (AF), is implicated in one in four strokes). They are also difficult to treat effectively.

Medicinal approaches don't work for everyone. The pacemakers used for serious cases are more an emergency fallback than a direct treatment. Then there's ablation, where a catheter inserted in the groin is guided to the heart to scar – using radio frequencies or electrical pulse fields – the problem tissue.

This can be effective but is also hit and miss: 50 percent of patients must undergo the procedure multiple times. That said, ablation offers the most hope, and three University of Sydney researchers are working to address its weaknesses.

Collaborating at the Westmead Institute of Medical Research in western Sydney under the supervision of noted heart rhythm specialist, Dr Pierre Qian (PhD '20), the trio is part of an emerging generation of researchers expanding into product development and industry engagement.

From childhood, Poonam remembers loving science and particularly medicine. Today, she works to destroy the source points of arrhythmias non-invasively with an unlikely technique: radiation.

As in cancer treatment, the method involves directing beams of radiation at target points identified by a painstaking mapping process. Each beam can pass through tissue without damaging it – but at the point where they meet, the cells are irradiated and die.

It has already shown an 80–95 percent improvement in patient arrhythmia. Incredible, yes, but there is a catch. It is currently used only on compassionate grounds, where a person's arrhythmia is otherwise untreatable: just 200 times worldwide so far.

"The challenge is at this stage, we don't know what the long-term effects and risks are," says Poonam. "My project is to understand the mechanism of what radiation does to a heart cell so we can determine the safest and most effective treatment." She does this by manipulating ordinary human skin cells to become pluripotent stem cells, and then heart cells.

Under the microscope, the cells beat like tiny hearts as Poonam applies radiation. Looking at the cell function and biochemistry generates vast amounts of data to interpret. It's fair to say Poonam is busy. Still, she loves what she does and the procedure's potential.

"It has an amazing success rate, and you don't even have an anaesthetic during the procedure," she says. "It seems too good to be true, so we have to make sure it is true."

The inventor

DR DUC NGUYEN MINH

Duc is involved in both the research and commercialisation process for a solution to a common issue in cardiological procedures.

Born and raised in the Vietnamese capital of Hanoi, Duc (PhD '20) says, "It was my dream to be an inventor, so I went to Hanoi University of Science and Technology."

By twenty, Duc fell into making medical devices, "I love designing. It's like it puts dopamine into my head." An early device of his is still used in Vietnamese hospitals to filter blood. "I realised that the bigger problem in Vietnam was heart diseases, so I switched to that."

One of his cardiac devices earned him a full PhD scholarship at the University of Sydney. His work concentrates on a core problem in treating arrhythmias: "even though the ablation procedure is carefully planned, during the procedure, the cardiologist can't actually see what's going on inside the tissue."

If the catheter doesn't go deep enough, the target tissue may later recover, requiring another ablation. If it goes too deeply, organs beyond the heart might be affected. Surgeons refer to this navigation as the "clinical guess."

Duc's answer is a device called LesioLogic, an electrode vest worn by the patient that delivers biological values and images that allow the cardiologists to judge precisely when the target has been treated.

"The LesioLogic research is mostly done. Now we're spinning out a startup," says Duc with excitement. "This is the business side of getting through regulatory processes and looking for investors and government support."

In the past, it might have been unusual for the researcher to be part of the commercialisation process, but according to Duc, these days universities are "returning to the researchers, who really understand the idea, and saying, let's commercialise it together."

Edward is uniquely able to explain and pitch complex biomedical engineering ideas to investors and companies.

The bridge builder

DR EDWARD YANG

When talking to Edward (PhD '24) about high blood pressure, his passion for the topic is undeniable.

"People with hypertension can take several medications to control it," he says. "Yet up to 30 percent of people don't take their meds. Plenty of people also don't make the lifestyle changes they should."

So, could there be a surgical solution? In fact, there already is. Called renal denervation, it stops aging or damaged kidneys from causing hypertension through a similar process to ablation.

And like arrhythmia treatment, renal denervation is only used in people with severe and untreatable hypertension. Alongside the safety concerns, the technology needed work. "It was too big, so I worked to miniaturise it. In the process, we generated lots of technology patents."

Remembering himself as a quiet student, Edward's time at the University has caused a dramatic change.

"Thinking about what I really wanted to do brought out something new in me. I realised I wasn't actually an introvert."

Exploring his options with cardiologist Dr Qian gave Edward his new path in biomedical engineering. As he developed his skillset, the one-time introvert found himself pitching ideas to investors and manufacturing companies – for example, ideas using high-resolution 3D printing that work at scales thinner than a human hair.

"We 3D print our ablation catheters, so we can do very unique stuff," he says. "When we showed the cardiologists, they were astounded, and came back with even more ideas for us to test."

Edward's abilities have made him invaluable in the research process. "Academics and businesspeople can really struggle to talk to each other," he says. "I've found I can be a translator for academics to business, and business to academics. It makes collaboration so much easier."

The supporters

THE MCCUSKER CHARITABLE FOUNDATION

These three researchers have an important thing in common: support from the McCusker Charitable Foundation.

Many university researchers aren't employed by the university – they have access to university resources but must fund their own wages by applying for grants. This onerous – albeit critical – task takes Poonam, Duc and Edward away from their research projects, and the technical work required to propel their ambitious developments in cardiovascular technologies.

Tonya McCusker AM and the Honourable Malcolm McCusker AC CVO KC of the McCusker Charitable Foundation wanted to lighten the load by funding the three researchers in the critical first year of the project. "We want young researchers to focus on their research rather than spending time writing grant applications."

Tonya and Malcolm have supported Australian medical research for more than 20 years. They believe the puzzles posed by the human body can "only be solved by investing in, and supporting, early-career researchers. We need to provide all the support possible to attract and retain them in the medical research industry."

Remembering Tim

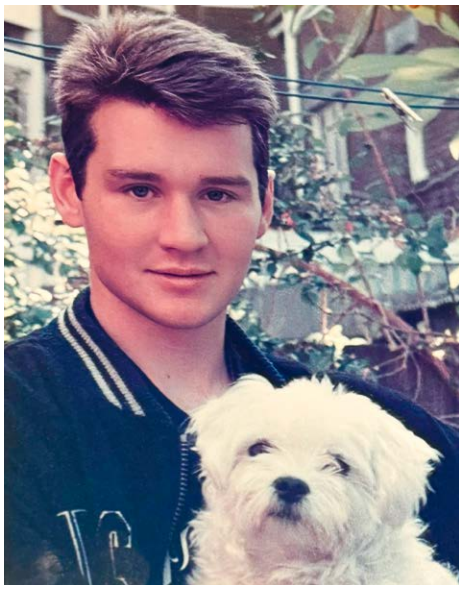
Through a devastating tragedy, Marian Haire has found a way to honour the love and legacy of her son.

WORDS by Chloe Pryce

PHOTOGRAPHY by Fiona Wolf

Please note, this story contains content about self-harm and suicide. If you or someone you know needs support, resources can be found at the end of this article.

Alumna, teacher, mother, donor – Marian has had a long and meaningful journey back to the University.



Tim Haire with family dog, Oscar, shortly before his death. Tim was a black belt in karate and is remembered as intelligent and gregarious.

Marian Haire (GradDipEd '86) has had one of those glorious, meandering careers. She graduated from University College Dublin in 1969, moving to Canada with her husband. Her early jobs were as a "check-out chick" and a telephone service representative, work which she says gave her amazing customer service training: "it's hard yakka, but it teaches you what the basics are about. It's important to learn the discipline of hard work."

Following a few years of raising children and volunteering, Marian retrained as a science teacher, completing her Diploma of Education (Secondary) at the University of Sydney. Marian first taught in western Sydney, before becoming a science consultant for the region, and was then asked to join a project related to the Olympics called Measurement in Sport. She spent two decades with the National Measurement Institute, and has even come out of retirement to consult for ASEAN (the Association of Southeast Asian Nations).

"It's a journey I would never have envisaged," she says. "I thought I was going to get a Diploma of Education, and stay in Ireland and teach. That was the limit of my vision! But I always say to people, you just have to grab the opportunities as they come."

Marian is also the co-author of several successful science textbooks. The offer to contribute to these came in the midst of a very traumatic period – her son Tim, who had been diagnosed with schizophrenia a few years earlier, had taken his own life. For Marian, work provided a sense of purpose in her grief.

"I think if he hadn't died, I would have been in a state of thinking I couldn't do it. But I thought, 'what else could happen?'"

Tim Haire was born in 1975, and died in 1995. Marian describes how when he was two, he said to her, "Mummy, I've got a really good brain!"

"And he did have a good brain," she recalls. "He wasn't a linear thinker. I remember he made a model of a Wimshurst machine, and was trying to make a mag-train. When he was about six or seven, he decided he didn't want to do cursive and instead taught himself lovely script writing. He was a very high-achieving young man, and a very handsome fellow."

Like many people with schizophrenia, Tim's diagnosis took place in late adolescence, a year into his Bachelor of Pharmacy at the University of Sydney. He had several experiences which the family would later recognise as psychotic episodes, including an occasion where the police had to be called to the family home.

"All I can say is, it was hell," says Marian. "The police removed Tim from our home and he was sectioned [placed in a hospital under the Mental Health Act]. So that was our introduction to schizophrenia. It was pretty bloody raw."

Schizophrenia affects approximately one percent of Australians. Symptoms can include delusions, inappropriate emotional responses, paranoia, and depersonalisation. However, schizophrenia is also widely misunderstood – for instance, people with schizophrenia are far more likely to be victims than perpetrators of violence. The onset of symptoms and diagnosis can also be isolating for the families of people with schizophrenia, due to public perception of the illness and a lack of information and resources.

After her retirement in 2018, Marian was looking for ways to give back and get involved. Through the University of Sydney, she was introduced to Anthony Harris (MBBS '85, PhD '03), a Professor of Psychiatry at Westmead Clinical School, Head of Psychiatry in the Sydney Medical School, and Clinical Director of Westmead's Brain Dynamics Centre.

Professor Harris' research focuses on young people with serious mental illnesses such as schizophrenia, aiming to understand how the brain causes some people to hear voices, relapse or "lose their cognitive thinking skills." His work uses wearable devices to better predict when episodes may occur, and focuses on improving the day-to-day lives of people with a severe mental illness like schizophrenia.

Photography supplied

Meeting Professor Harris and seeing the work that he and his team are undertaking was a turning point for Marian: "it made a difference that it was to do with Tim's illness. I think it's already known that we're not likely to solve schizophrenia, but it's important to help people live with it."

Helping people to live with schizophrenia is indeed critical: it is one of the mental disorders with the highest risk of mortality, associated with a 15–20-year average reduction in life expectancy. One in twenty people diagnosed with schizophrenia will die of suicide.

After meeting the team at Westmead, Marian decided to create an endowment in Tim's memory to support early-career researchers, enabling them to initiate innovative research projects by purchasing necessary consumables, attend conferences, and take up other important opportunities to share knowledge and build professional networks.

"These illnesses still seem to push people away," explains Professor Harris. "It is only people who have been so severely affected, like Marian, that focus on these illnesses. Marian's gift is a great boost to young researchers coming into the field – it helps us foster people who might otherwise not stay in research."

For Marian, the gift is also significant because of its longevity – it is designed to be awarded in perpetuity.

"I liked the idea of the endowment because it'll still be here long after I'm gone. It's very important to me that Tim's name is remembered and mentioned in relation to this work. Tim didn't have an opportunity to do anything with his life – and we all want to do something worthwhile. In my view, this research is what he's doing with the life he didn't have, this is his contribution.

"And it's healing, in a way. It's been 29 years since Tim died, and if there ever can be closure, this has helped to give me closure."

IF YOU OR SOMEONE YOU KNOW NEEDS HELP, CALL:

- Lifeline on 13 11 14
- MensLine Australia on 1300 789 978
- Suicide Call Back Service on 1300 659 467
- Beyond Blue on 1300 22 46 36
- Headspace on 1800 650 890
- QLife on 1800 184 527
- SANE Australia on 1800 187 263
- Mental Health Line 1800 011 511

MARIAN'S DONOR EXPERIENCE

WHAT IS THE PURPOSE OF THE TIM HAIRE ENDOWMENT?

"It gives opportunities to young, emerging researchers – they will likely use the interest accrued on the account to go to conferences. When I was going through my career, I really valued those kinds of opportunities. I know that it's often the difference between them being able to go or not. And the people you meet when you go to these conferences are crucial – you're then able to collaborate and work together throughout your life."

WHAT HAS YOUR EXPERIENCE BEEN WITH THE GIFT SO FAR?

"The gift was possible because I bought an apartment, and I give the rent from that to the University. I have enough to live on, without the rental income, so this is something that works for me. 2024 is the first year the funds have been divided up, and I was gratified to see how much the principal has already grown. In other words, the University has been able to invest the money I've given very strategically, and put those returns back into the account. It's showing me that the fund will be minded well to keep that endowment going."

WHAT WOULD YOU SAY TO SOMEONE THINKING ABOUT GETTING INVOLVED?

"There's a great need for support, that's the first thing. And you can feel very confident that the money that you give to the University of Sydney will be handled appropriately. I also know there's a lot of respect for me, as an individual, from the people I have interacted with. For instance, Professor Harris recommended me to the Ethics Committee, which I am now a part of. You know you're doing something worthwhile, but it's not just me doing something for other people. This has been so beneficial to me as well."

A *leaf out* of *Copernicus' book*

A 1950s bequest to the Library continues to bring Renaissance history to life, 70 years on.

WORDS by Chloe Pryce

PHOTOGRAPHY by Vanessa Low

To the untrained eye, watching Julie Sommerfeldt open the 450-year-old book in front of her and leaf through the pages – with her bare hands – may seem shocking. But the notion of a dusty tome being handled with white gloves is something of a "fallacy," according to the University Library's Rare Books and Special Collections Manager.

"These books are here to be used," she says, detailing how the restoration process just completed on this book also rejuvenated the materials, leaving them stronger than before. Paper from the early modern period was made of recycled textiles like hemp, linen and cotton, which makes it hardier than modern wood-pulp paper. Moreover, the loose fabric of a cotton glove is more likely to damage a fragile manuscript or book than clean, dry hands.

This book, ponderously titled *De revolutionibus orbium coelestium* (*On the Revolutions of the Heavenly Spheres*), was the seminal text on heliocentricity by Nicolaus Copernicus, a renowned Renaissance mathematician and astronomer. At the time, the accepted knowledge was that the universe was geocentric – or revolved around the Earth. Copernicus' work provided a mathematical model of the universe which instead revolved around the sun, a theory which would eventually lead scientists to another unthinkable leap forward: that the universe does not revolve around any object in our solar system.

The Copernicus was in need of significant restoration, with brittle, dark pages and broken binding.

1

A second edition, the book was made by printer Heinrich Petri in Basel, Switzerland in 1566. In 2024, expert conservator Gillian McElroy was brought in to carefully take apart the binding, remove dirt and damage, wash the pages and brush them in a gelatine solution, before carefully realigning and binding the pages into the original cover.

"We have a duty of care for these objects," Julie explains. "This book will outlive us, it will be here for hundreds of years to come. One way I like to think about these collections is the number of hands each book has passed through to reach us here at the Library."

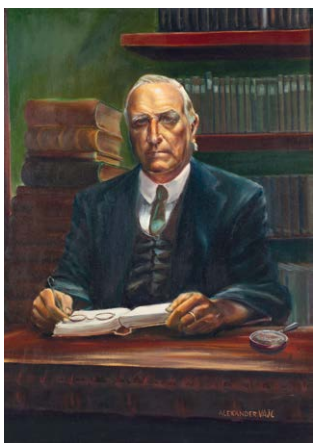
De revolutionibus orbium coelestium is no different in that respect. In 1566, in candlelit workshops in Basel, a printer arranged the printing press's movable type by hand, applied the ink and paper, and sent the printed sheets to the binder to fold, sew and bind the pages with the vellum cover to create the finished book.

One owner bought it, then another and another – one even leaving their mark with handwritten annotations, notes made as they pored over the Latin text and diagrams. By the 20th century, it had found its way to the collection of eminent astrophysicist Owen Gingerich, who applied a bookplate to mark his ownership. Finally, thanks to a donation by William Houison Deane (BSc '29), it was purchased by the University of Sydney in 1983.

In the four decades since, countless students, academics, and visitors have come to the Library and engaged with this piece of history. In 2024, conservator Gillian carefully handled each individual page to bring the book back from its brittle, stained, and unusable state. And now, sitting at Julie's fingertips, it is ready to be read and studied in earnest once more.

According to Julie, the scholarly potential of the restored text is enormous. *De revolutionibus orbium coelestium* not only represents an early copy of Copernicus' revolutionary ideas, but its physical form contains bountiful avenues for research. As an object, the book tells us the story of papermakers, printmakers, binders and booksellers, and of trade routes and philosophical exchanges of the 16th century. How were Copernicus' ideas received at the time of publication and in subsequent years? Who was the mysterious scribbler and what notes have they hidden in the margins? What can its bookplates and stamps tell us about provenance, family histories, and the book's movements across the centuries? These stories of groundbreaking scientific discovery and everyday lives are tantalisingly close as Julie turns the pages to show each hidden detail.

And this is just one of over 300,000 items in the Rare Books and Special



Alexander Vajc's undated oil portrait of William H Deane is part of the University Art Collection.

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1. First, the book is examined for damage.

2. The binding is removed and each page is cleaned using powdered rubber.

3. The dirt and rubber particles are removed with a soft brush.

4. The pages are floated in an alkaline bath to remove dirt and acidic materials, and stains are lifted through capillary action.

5. Once dry, the pages are pressed, and the book is sewn together with double linen cords.

6. The text is returned to the repaired vellum binding, now restored.

Collections catalogue. Caring for this vast trove, and ensuring its treasures remain accessible, is a costly endeavour – which is what makes donations like that made by W H Deane all the more important.

An eccentric and intellectual man, Deane came from a legal family of considerable means, and did not need to work for a living, instead pursuing his many and varied interests. He was a passionate collector of works on sexology, demonology, witchcraft, archaeology, sociology, as well as the foundational works in the history of science.

In the 1950s, Deane offered more than 5000 books from his personal library to the University of Sydney, along with two endowed funds to ensure the growth and maintenance of the collection. He wrote in a letter, "let us hope that in time it will help our Library to obtain some of those rarer items of the kind one finds only in those great old libraries of Europe." Both funds were started with small sums which Deane added to over the years as his circumstances permitted, living very frugally and saving every dollar to add to the funds. He told then Vice-Chancellor, Sir Stephen Henry Roberts CMG, that his intention was "until my death to keep paying into this account everything I can."

According to former University Librarian Dr Neil Radford (BEc '64), "Deane's generosity to the Library is matched only by that of Thomas Fisher, for whom the Library is named. [Deane] was a modest man and sought no thanks or gratitude from the University, and said that it was he who should thank the University and the Library for making it possible for him to derive such satisfaction from helping to build up its research collections."

Though his initial gift is older than the current Fisher Library building, the two funds started by W H Deane continue to expand the Library's large and unique collections, and to fund their ongoing care to this day. Advances in technology since his death have also allowed for the digitisation of key items in the Library, allowing more people than ever to access these important historical works, both in Australia and around the world.

Asked about the significance of donors like W H Deane to the University Library, Julie replies with awed sincerity. "It's incredible. Rare Books depends almost entirely on bequest funds for the purchase, restoration, and digitisation of our collections. Without these donations, none of this," she gestures around at the expansive walls of Fisher, "would be possible."

WORDS Elizabeth Jo

PHOTOGRAPHY by Fiona Wolf

Teaching the *teachers*

With a national teacher workforce shortage, philanthropy is helping to retain our educators by enabling a practice of lifelong learning and professional readiness.

Eddie Woo, also known as MisterWooTube, is Australia's most famous maths teacher and has inspired millions to love the subject and the process of learning itself.

Attracting and retaining teachers is a nation-wide priority, and can in turn raise the standard of learning in Australia.

Confucious, Aristotle, Maria Montessori, *Matilda*'s Miss Honey, John Keating from *Dead Poets Society*, Bill Nye the Science Guy, the list of great teachers from history and pop culture goes on and on. Perhaps you have had at least one great teacher in your life, too: maybe they read aloud from story books, took the extra time to help you understand a tricky concept, or maybe they were the person who believed in your potential and would change the trajectory of your life.

For Professor Eddie Woo (BEd(Sec)(Hons)'08), a chance encounter did just that. He was in line to enrol in the Faculty of Education, set on becoming a history or English teacher, when a University of Sydney professor struck up a conversation with him.

"He encouraged me to change my teaching area to mathematics," Eddie recalls, who until then, had struggled with the subject. "For me, becoming a teacher wasn't about my love for a particular subject, it was about having a personal impact on the lives of young people. I had seen firsthand at school what a lasting and positive difference a great teacher can make. I wanted to do that for someone, and I didn't care what subject I did it in."

Neither the professor nor Eddie could have foreseen the impact of that one conversation. Eddie is now fondly known as Mister WooTube – Australia's most famous maths teacher. He started a YouTube channel in 2012 to help sick and absent students with their studies. As of September 2024, the *MisterWooTube* channel boasts over 1.85 million subscribers, 170 million views and almost 5000 videos. Although his online lessons have reached countless students who otherwise would not have come through his classroom, Eddie recognises that "there's no substitute for immediate contact." Among his many epithets, accolades and titles, Eddie is also the Professor of Practice (PoP) for Mathematics at the Sydney School of Education and Social Work. As a PoP, Eddie shares his real-world knowledge with University of Sydney teaching students while continuing his core passion of making maths fun and accessible in his high school classroom.

"I think it's fantastic that the University wants to ensure its students have access to current industrial experience and expertise," Eddie enthuses. "It makes so much sense to me, that if we want to train people to enter a profession, you want people who are still actively involved in leading that profession to be part of their initial teacher-learning experience." One of the most important lessons Eddie has imparted to aspiring teachers has been "adopting the mindset of a lifelong learner who can engage in the adaptive decision-making required to work successfully in a school." Embracing this 'lifelong learner' approach ensures the teacher is continuously acquiring new knowledge, and positions them in the perspective of the student to truly understand how a pupil thinks, operates, and as a result, learns.

Teachers today face unprecedented demands in terms of extra-curricular hours and responsibilities, which for some leads them to leave the profession. The Australian government created the *National Teacher Workforce Action Plan* in December 2022, recognising that the workforce shortage was, and remains, a national priority. The plan acknowledged well-known challenges: stagnant salaries, overpopulated classrooms, tight budgets, and lingering stressors from the pandemic, to name a few.

"All around the world there are chronic teacher shortages," Vice-Chancellor and President of the University of Sydney, Professor Mark Scott AO (BA '84, DipEd '84, MA '93, HonDLitt '15), explains. "There is no silver bullet to that." Professor Scott has been one of the key figures spearheading this issue due to his deep involvement in the sector, both at the University and as Secretary of

Adobe Stock

> "TOGETHER, WE CAN BUILD THE FUTURE OF WHAT EDUCATION LOOKS LIKE AT THE UNIVERSITY AND ACROSS AUSTRALIA."
>
> – Professor Eddie Woo

the NSW Department of Education from 2016 to 2021. Recently, Professor Scott chaired the Teaching Education Expert Panel. In the panel's report, he stressed "the importance of teachers cannot be overstated. When we are young, we can explore and master new talents and skills, discover new passions, test our potential and build our independence. These are all things we start to learn at school with our teachers."

Veteran educators like Eddie echo Professor Scott's sentiments and suggest the need for a larger cultural shift to develop and retain quality teachers, identifying that "one of the longstanding challenges in education is the divide between theory and practice." Thanks to like-minded donors, the University is helping to bridge this divide and facilitate a smoother transition into the workforce by investing in pedagogy – the teaching of teachers. The PoP program is enabled by donors like Thomas (Tom) Yim (LLB '73), esteemed alumnus and philanthropist, and Dott. (Dr) Maria Teresa Savio Hooke OAM, a psychoanalyst with a deep interest in mentorship and communities of learning.

Recently, Tom and Maria Teresa have given the PoP initiative a significant boost to establish new positions in STEM (Science, Technology, Engineering and Mathematics) and Education Leadership. Professor Scott Sleap is the newly appointed STEM PoP, and like Eddie, he will remain active in the sector and work at the University part-time to share his expertise with aspiring teachers.

Looking ahead, once the Professor of Education Leadership is appointed, the PoP initiative will be enhanced by the new Global Visiting Scholar Program. This donor-funded program aims to bring both established and emerging international academics with a focus on pedagogy to the University. These world-class educators will study, analyse, and adapt international knowledge – such as how different countries are addressing issues like declining student literacy and workforce shortages – to fit the Australian context.

While the teacher shortage is a complex problem, these initiatives go to the heart of what makes a great teacher: sustaining their passion for education. This approach connects them to the best, latest methods across the global education sector. In turn, this can raise standards of learning for Australian students, from the first days of preschool through to their final university exams, and beyond. As Eddie says: "together, we can build the future of what education looks like at the University and across Australia."

Supplied by MisterWooTube

Professor Scott (left) and Eddie (right) discuss teaching and how to unlock a love of learning on Episode 2 of the *Solutionist* podcast.

Ellie Taylor enjoys the social connection and independence that U2B provides.

Study through serendipity

When a unique program for students with intellectual disabilities was on the verge of closing, a chance connection ensured it could continue to transform lives.

WORDS by Saman Shad

PHOTOGRAPHY by Stefanie Zingsheim

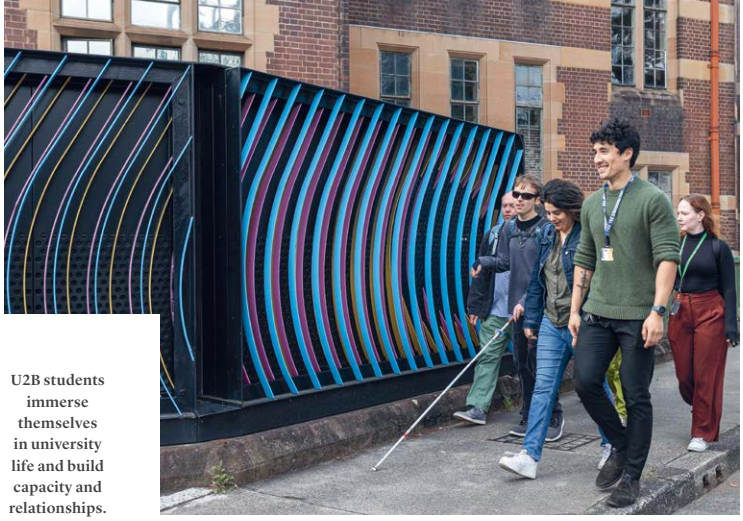
The Centre for Disability Studies (CDS), a not-for-profit organisation affiliated with the University of Sydney, is transforming social inclusion opportunities. Their award-winning program, Uni 2 Beyond (U2B), offers people with intellectual disabilities the chance to immerse themselves in university life.

When discussing the JACE Foundation's partnership with the U2B program, the word 'serendipity' often comes up. This remarkable program, which provides people with intellectual disabilities the opportunity to attend university classes over two years, had recently halted due to funding shortages. Everything changed when the JACE Foundation's founder, who wishes to remain anonymous, learned about the program and felt an instant connection.

"I said, 'well, that's right up my alley of what JACE would support and love to support'," they say.

The reason why is deeply personal and has driven the JACE Foundation's choice of causes to support.

"My daughter is autistic. She was diagnosed when she was two," the founder says. "And recently, her school said she



U2B students immerse themselves in university life and build capacity and relationships.

was presenting more with intellectual disabilities and wouldn't be able to access the standard high school program. She is now 13 and we've moved her to a high school where they handle intellectual disabilities and have a modified course for them throughout school."

This prompted the founder of the JACE Foundation to consider life for their daughter after school. What programs were available for students with intellectual disabilities who wished to attend university? Surprisingly, there were very few.

"The [U2B] program is one of only two programs like it in Australia," says Mary-Ann O'Donovan, Associate Professor of Disability Studies and CEO of the CDS, who is based in the Susan Wakil Health Building at the University.

For Benny Dominish, who was part of the program from 2018 to 2020, U2B paved the way to transform his passion into a career where he now enhances inclusion opportunities for others. "This program will change your life dramatically," he says. He describes his time in the program as "simply amazing."

"I enjoyed it more than anything else, because I got to experience what it's like to actually be a uni student, to go to classes, do lectures and things of that nature."

Benny is now a social inclusion officer at the CDS, a role that gives him immense joy. "Working here is the unexpected icing on the cake." As Associate Professor O'Donovan says, "what the program demonstrates is that people with intellectual disability have potential, they have capacity, desire and ambition, and can achieve great things with the right structure, support and pathway."

Associate Professor O'Donovan explains that a lot of the time this pathway doesn't exist because of the criteria to get into university from high school, and then the rigours of assessments to complete university education.

As the U2B program doesn't result in formal qualifications, participating in tests and assessments is optional. However, there are students who choose to take them. One such student, Bruce Eric O'Brien, participated in the program in 2021 and 2022. Bruce, who dreamed of becoming a maths teacher while in school, enrolled in both maths and German classes at the University, and completed assessments for German. Not surprisingly, German became his favourite subject during his time in the program.

The learning component is just one aspect, another vital part of the program is the social side.

"One of the key things with the program is social connection," Associate Professor O'Donovan says. "So, we know people build their social connections in university, and that can then be your network for later on in life."

The social aspect of university life stood out to Ellie Taylor, another U2B student, who mentions the lunches on campus and the discussions in class related to what they were learning. "We would get into groups and talk about the subjects," she says. "I wanted to experience uni, and do it independently with some help and support."

The benefits of the program are clear and are not exclusive to just the students who participate in it but society at large. As Associate Professor O'Donovan mentions, "the students benefit, but the teaching staff benefits – the rest of the student population benefits, the whole community benefits – there's so much of a ripple effect."

Swell by Bridget Kelly (2022). Bridget is a U2B graduate and a successful visual artist in Sydney. Find her at @itsbridgetkelly on Instagram.

Beyond borders

Sydney medical students are given a once-in-a-lifetime opportunity to undertake an elective term overseas, immersing themselves in new cultures and reshaping their understanding of medicine.

WORDS by Elizabeth Jo

Harry's trip to India was both professionally and personally enriching.

Most of us will only have a handful of truly life-altering experiences. For third-year medical student, Harry de Souza (MD '23), one of these was travelling from Sydney to southern India as part of his degree. Harry's grandparents had migrated to Australia from India in the 1960s in pursuit of their own medical careers and better opportunities for their children. He wanted to "honour them by experiencing the healthcare system in India firsthand." Thanks to the *Julia and Francis Miller Family Medical Elective Term Scholarship*, Harry was able to do precisely that.

Arriving in Vellore, Harry was swept up in a flurry of new sights, scents, and sounds. Amidst the energy of the city, the Christian Medical College (CMC) stands as a steadfast sanctuary of healing. What began as a single-bed clinic in 1900, grew into a 3000-bed healthcare system with six campuses, and is where Harry conducted most of his elective term.

Each day brought new challenges and lessons, with the most memorable being Harry's time in the CMC's Community Health and Development (CHAD) outreach program. As part of CHAD, Harry provided primary care services to rural and remote communities near Vellore, from regular check-ups for the elderly and pregnant, to more confronting encounters with infectious diseases he had only read about in textbooks: tuberculosis, malaria, dengue fever, and scrub typhus.

Above all, Harry was struck by the individuals he encountered. "I will always remember the resourcefulness and resilience of the healthcare providers in the face of limited resources," Harry says. "And the patients were so rich in spirit and happiness. These were people experiencing true hardship and yet they would unhesitatingly offer me

Photography supplied

food and a cup of chai." It was moments like this that made medicine become more than just a science to Harry. As he describes, "it was a truly a life-changing experience that I will cherish and use to guide my future practice."

Patrick helped perform routine check ups and monitored the children's growth rate.

PATRICK RYAN, the 2024 scholarship recipient, saw firsthand the challenges of global health during his time in Quetzaltenango, Guatemala, a rural valley region with some of the highest poverty rates in the country. Patrick was based at *Clinica Primeros Pasos* ("First Steps Clinic"), which is led by Guatemalan women and focuses on providing affordable primary care to a largely Indigenous community.

Alongside the dedicated staff, Patrick immersed himself in hands-on care. From routine check-ups and recording medical histories to wart removal and organising the pharmacy, no two days were the same. Patrick particularly enjoyed working with the children in the community. With the average adult income being US$2 a day, the unfortunate reality is that kids experience high rates of malnutrition, making the clinic's outreach work a lifeline. "I was amazed to see how quickly these children grew with simply the right nutritional support and knowledge," Patrick remarks. "The power and efficiency of well-targeted primary healthcare is incredible."

In Quetzaltenango, Patrick began to see medicine in a new light as he learned the true essence of being a practitioner – treating the person, and not just the illness. "I got to really understand Guatemalan culture and the importance of tailoring healthcare to the community. By combining elements of Indigenous healthcare and Western medicine, we connected on a deeper level, and the care we provided was far more effective," Patrick explains.

These types of learnings are difficult to grasp from textbooks, yet they are crucial for shaping a good practitioner. "I got such a unique insight into the community and their specific needs," Patrick says. "It embodied why I originally went into medicine: to help others and make a true impact."

LIKE ITS RECIPIENTS, the anonymous donor of the *Julia and Francis Miller Family Medical Elective Term Scholarship* knows the importance of real-world experience. Back in the 1960s, the donor embarked on her first trip outside of Australia to volunteer in Rabaul, Papua New Guinea. Her main recollection was simply "how beautiful the people were," and "the contrast of the cultures."

The trip affirmed the donor's calling to serve others, a value which her grandparents had instilled in her. She enrolled as a teaching student, sparking a 32-year career in education, and throughout her career volunteered on trips back to Papua New Guinea, and to countries like Timor-Leste.

The scholarship was inspired both by her grandparents and a local family who established a similar bursary in memory of their son. "I thought it was a wonderful idea," she explains. "I had some money available over the years and thought it would be valuable to humanity."

Since 2017, this scholarship has enabled Doctor of Medicine students to travel to developing countries or areas of infectious diseases. As the generous donor remarks, "I hope it leaves a lasting memory for them and that in turn, they will pass on their own generosity to others."

The scholarship was named after the donor's grandparents, Julia and Francis Miller, pictured here on their wedding day in 1911.

Roar and score

One Sydney alumna-turned-Olympian has shown what community support makes possible.

WORDS by Chloe Pryce

Left: Keesja holds daughter Teleri, already wearing her Lions uniform.

Below: Fred Mayer appears in PIX magazine, 1952.

For the Mayers, food, footy, and philanthropy have always been a family affair.

Fred Mayer arrived in Australia from Hungary in the 1950s, and quickly established himself as a success in the food import game, a lifelong Roosters fan, and an adept surf lifesaver. But his true vocation lay in water polo: starting out playing for the Bondi team, Fred found in this sport a community of mates that would stay with him throughout the decades.

Fred played water polo for the Sydney University Lions for more than 30 years. He also passed his passion on to sons Sam and Robbie: Fred's final match at age 70 was alongside his two boys in the Metropolitan M5 Championships.

As Sam Mayer tells it, "we won the grand final 8-6. My brother and I both scored four goals. Dad took a lot of pleasure in being able to say that between the three Mayers, we scored all 8 goals."

It was this long history with the Lions which spurred his sons to give back to the club through the Fred Mayer Foundation. Their donation, which funds the Fred Mayer Awards, helps water polo players up to the elite level to compete in the sport they love.

Most recently, the awards supported some of the University's – and Australia's – top water polo players to travel to Paris for the 2024 Olympic Games. This included Sydney alumna Keesja Gofers (BDesArch '12), who competed in her third Olympics as part of the women's national team, the Stingers. She was cheered on by her husband Scott Nicholson (BA '12) and her 16-month-old-daughter Teleri.

"Balancing motherhood with preparing for the Olympics was the biggest challenge I've ever faced," describes Keesja. "I have a rule that however things go at training, I leave it there. It's made me a better athlete and a better mum."

Grants like those provided by the Fred Mayer Foundation are critical for elite athletes, who make huge sacrifices in their work and personal lives – and incur significant expenses – to pursue their dreams and commit themselves to training for an event like the Olympics. Many of Australia's fastest, strongest, and most determined athletes conduct rigorous training for their sport while also balancing demanding degrees like engineering, architecture and medicine.

"Support from generous people like the Mayers is so important when you're balancing sport and study," explains Keesja.

As well as the national team, Keesja still plays for Sydney University, a club she has belonged to since she was 10. Along with her fellow Lions players, Matilda Kearns and Sienna Green, Keesja made it through several nail-biting rounds in Paris – including three penalty shoot-outs against the Netherlands, Hungary, and world champions USA – to the Stingers' first Olympic final since 2000, and a silver medal.

The longevity of both Fred and Keesja's careers with the University club is a testament to the strength and passion of Sydney's water polo community. And the Mayers aren't the only water polo family at Sydney: Keesja's three sisters, Chivonne, Allira, and Taniele (BA(Hons) '11), who won a bronze medal at Beijing, have all been Lions. Her husband Scott has both played for and coaches at the club.

Along with more Olympic gold, silver and bronze, Sam Mayer's hope for the future is that the community continues to grow, with senior players pitching in with the juniors, and teams rallying to support one another.

"Dad was a big advocate for how good sport is for people, relying on other people, them relying on you," explains Sam.

In this too, he is carrying on Fred's legacy of mateship and camaraderie. As Fred put it at the close of his 1998 memoir, "I would like to see us play on the same side together, family, friends, and world. After all, everyone's a mate!"

Photography supplied and care of the National Library of Australia

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You have just finished reading stories of hope, discovery, and triumph. We want to hear your story and about the impact university has made on your life.

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