Giving today. Changing tomorrow.



Improving life in the post-pandemic world

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From the Chancellor *and* Vice-Chancellor

2021 HAS BEEN A YEAR of great promise – we have renewed determination to improve how we live and work and create a better future for all, despite every challenge that COVID has thrown at us. At a global scale – as well as here at the University – we have seen an amazing, united effort to produce compelling teaching and research excellence. Even though we're 171 years old, there is great potential for us to build on our rich history and heritage and lead more transformative change, through our ultratalented staff and students.

The ongoing pandemic has increased the value of innovative research exponentially and ramped up the important role that universities play in the health of our country and the world. At Sydney our researchers are at the forefront of tackling the biggest global challenges; our students are embracing their education so they can follow in their footsteps and become inspirational leaders; and our alumni are providing countless success stories of positive change. Of course, your wonderful support is critical to making this all happen – we're constantly humbled by your generosity and your faith in us.

Throughout this publication you'll see the enormous power of gifts to change lives. These stories are just a few examples of the profound legacy of your support, across topics that include responding to the pandemic, preserving archaeology, helping to restore vision, transformative scholarships, research supporting the health of babies, and saving beloved pets. We also see that sometimes generosity can come from unexpected places, such as the recent gift from the late Marie Knispel to support extensive biomedical research that unlocks answers from both science and medicine on how to cure and treat disease.

These stories were all told during lockdown and show how the continued dedication of the University community, despite great adversity, echoes our optimism for a brighter future. We hope that you get a big kick out of reading these snapshots of positivity and resilience, which we need now more than ever.

We'd like to express our deep gratitude to you, our donors, as you stand with us, shoulder to shoulder, on this journey. Thank you so much for everything you have done and continue to do.





Belinda Hutchinson AC (BEc '76), Chancellor

Belinda Hudrinson

Ker Cus

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



We are truly grateful for every gift we receive from generous donors, alumni, friends, parents, organisations and estates.

Here are just a few examples of donations that are driving innovation, advancing knowledge and supporting the mission of the University.



Snapshot *of* 2020/2021



3.

Preventing inherited diseases in animals

1.

A thoughtful bequest from Ronald Anstee will support the development of the Anstee Hub for Inherited Diseases in Animals (AHIDA). The hub will be a user-friendly online platform for researchers, veterinarians, breed societies, farmers and other animal owners to collaborate, and share observations and diagnostic information for the better health of animals big and small.

2. New hope for cancer research

Cancer Council NSW and the University of Sydney have partnered in a milestone joint venture - The Daffodil Centre. The partnership is an exciting opportunity which will mean new cancer research findings and discoveries can be more efficiently translated into tangible policy change, such as better prevention, early detection and care strategies - ultimately saving many more lives across NSW, Australia and globally.

3. Marie's legacy

A generous bequest from alumna the late Marie Knispel, will see enormous leaps forward in biomedical research. Dr Knispel graduated in 1951 and worked as a general practitioner for many years. Her gift will create a Chair in Biomedical Research and support infrastructure development. Biomedical science sits at the intersection of science and healthcare, studying the human body to find new ways to cure and treat diseases.

4. Lifeline for students in need

Many students have lost employment as a result of the pandemic and are struggling to make ends meet. This year, our community raised over \$350,000 for student bursaries to help them get back on their feet. Bursaries enable students to afford necessities like food, rent, medication and medical treatments during critical times, so they can focus on their studies.



5. A boost for immunotherapy research

A \$20 million gift from the **CLEARbridge Foundation** will support immunotherapy research. A new Professorial Chair will commence in 2022 and the funding will extend to a lab and vital resources. With this promising emerging treatment, we're now closer to a day when researchers will fully understand the immune system's role in the fight against cancer, and other immune-related diseases like rheumatoid arthritis and multiple sclerosis.

Decoding images in a digital world

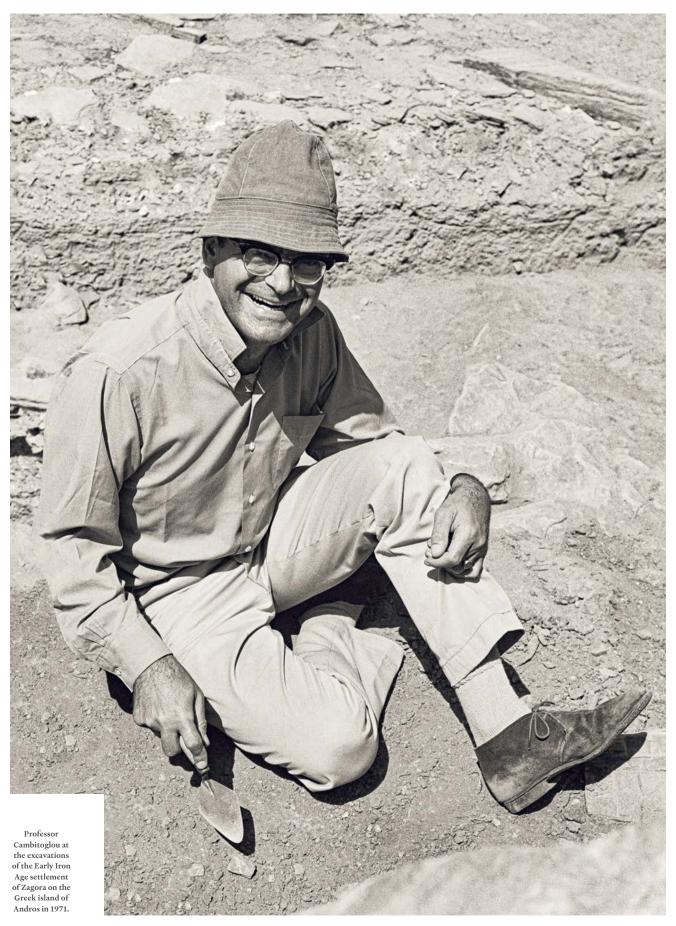
A gift from architect and alumna Penelope Seidler AM will improve students' visual literacy and help researchers understand how images shape the world. Through teaching, research and public outreach programs, the Visual Understanding Initiative will use skills and ideas from art history and theory to increase understanding of images in other disciplines, including medicine, science, media and communications, and architecture.

7. Bold thinking in mental health

The BHP Foundation has partnered with the Brain and Mind Centre to stimulate bold thinking and change the way local communities invest in youth mental health and social care. The five-year program, 'Right care, first time, where you live,' will harness the latest advances in systems modelling and simulation to guide national and local investments in sustained, coordinated and digitally enhanced youth mental health care.

8. Support for MBA students and NanoHealth

Eight years after establishing a scholarship for MBA students from the not-for-profit sector, David Anstice has generously extended this emerging leaders program for a further five years. He's also supporting NanoHealth, a multidisciplinary project innovating medicine and health, at the University of Sydney Nano Institute. Conditions such as cancer and Parkinson's are often unknown until symptoms present; NanoHealth, operating between 1 and 100 nanometers, holds the power to change this.



Giving today. Changing tomorrow.

A passion for the glories of ancient Greece drove his desire to give more people a chance to also connect with them. Through his many generous gifts, Professor Alexander Cambitoglou is now enriching the future.

A glorious past enriching the future

t is one of the most tragic and affecting moments from the epic stories of the Trojan wars: the death of Achilles.

It was preordained that for the Greeks to take Troy, their most brave, handsome, and indeed, invincible warrior, Achilles, would have to die. It seemed an impossible outcome until the god Apollo, played his hand.

As Paris, a prince of Troy, shot an arrow at Achilles, Apollo guided it towards the one spot on the body of Achilles where he was vulnerable to death: his heel.

Visitors to the University's Chau Chak Wing Museum can see a moment from that story – where the body of Achilles is carried off the field of battle by his cousin, Ajax – on a vase from the sixth century BCE, which is now forever linked with one of the University's most generous and transforming benefactors, Professor Alexander Cambitoglou (MA '89).

A meticulous man of rare intellect and determination, and always immaculately dressed, Cambitoglou passed away in 2019 at the age of 97, though he lives on in the indelible experiences and opportunities he has created for so many through his gifts.

Born in Greece's second-largest city, Thessaloniki, Cambitoglou found such richness in the artistic and intellectual legacy of ancient Greece that he went into archaeology to learn and uncover more. Later, he also became a benefactor helping people access the objects and ideas that continue to influence our thinking to this day.

A fundamental insight that drove Cambitoglou's approach to giving was his belief that photographs can only convey so much. For true understanding, people, and particularly students, need real objects to touch, question and react to, and real experiences. This saw him create opportunities for people, like Dr Stavros Paspalas (BA '86 MA '91) to go on archaeological digs.

WORDS by George Dodd
PHOTOGRAPHY by University of Sydney

"It was the end of my second year at Sydney, in the break," says Paspalas via a lockdown phone call. "Professor Cambitoglou asked me if I wanted to participate in his excavation at the site of Torone in Northern Greece. Of course, I said 'yes'. That pretty much set me on my career trajectory."

For the young archaeology student, this was the first of many times he'd get his hands dirty on digs with Cambitoglou. Certainly, many of the University's digs only happened with Cambitoglou's support, and generations of archaeology students have Cambitoglou to thank for their formative University experiences.

As Paspalas points out, a number went on to further research and some now teach internationally and in Australia.

Cambitoglou took his support of Australians wanting to explore Greek history a dramatic step further in 1980, by creating the Australian Archaeological Institute at Athens (AAIA). This is an organisational resource that has connections with 16 other foreign institutes in Athens, Greek universities, museums, libraries, and the Greek Ministry of Culture.

One-time Cambitoglou student, Paspalas, is now the Director of the Institute.

"The Institute is, and has been, a fantastic resource for Australians from around the country pursuing higher degrees and research," he says. "But its greatest benefits come from how it puts people in contact with people.

"There is no doubt that the AAIA has been a major contributing factor to the flourishing of Australian participation in Greek archaeology."

As a young archaeologist, Cambitoglou's particular interest was in the Greek painted vases of southern Italy. In the 1950s, this prompted a rich exchange of letters with A. D. Trendall, the University's Chair of Greek and Curator of the Nicholson Museum, an exchange which eventually led to Trendall making a job offer.

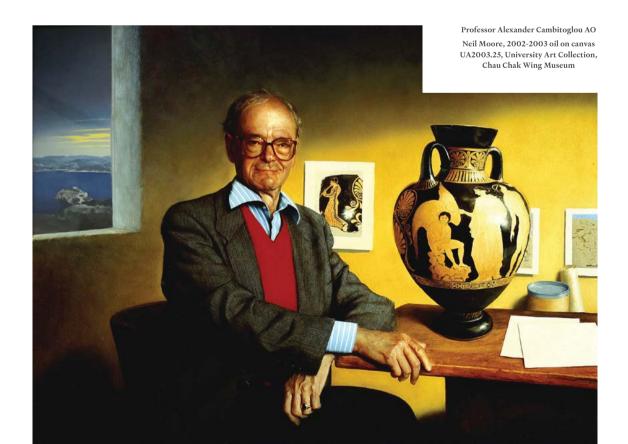
Cambitoglou arrived in Sydney in 1961 to become a Senior Lecturer in Classical Archaeology, falling instantly in love with the city that would remain his home for the rest of his life.

Continuing his career at the University, Cambitoglou himself became the Curator of the University's Nicholson Museum, completely transforming the brash, barn-like space into an intimate environment where people could feel close to and really appreciate objects of great beauty and antiquity.

This prompted a surge in donations and bequests that allowed Cambitoglou to enrich the collection by purchasing precious objects, including the marble busts of the Roman emperors, Claudius and Germanicus, that are now signature pieces of the Nicholson collection.

Over the years Cambitoglou, an astute collector himself, donated a number of precious, historic and beautiful objects to the University. On his final visit to the Nicholson Museum in 2018, prior to the collection moving to the Chau Chak Wing Museum, he would have walked past at least some of them.

He was there for an evening in his honour for his many years of being a



generous and thoughtful supporter.

Somewhat frail, but as always, sharp and immaculately turned out, he was surrounded by other museum supporters; people who knew and respected him, and a number more who had their lives transformed by him.

Obviously moved, he accepted the tribute of having the ancient Achilles vase named for him: the Cambitoglou Amphora.

It later emerged that on his passing, and in a final act of generosity, Cambitoglou had left a generous bequest to the AAIA. This will help the Institute in its mission to ensure that future generations can explore the beauty, grandeur and insights of the classical Greek world that Cambitoglou loved so much.

He has left an invincible legacy. %

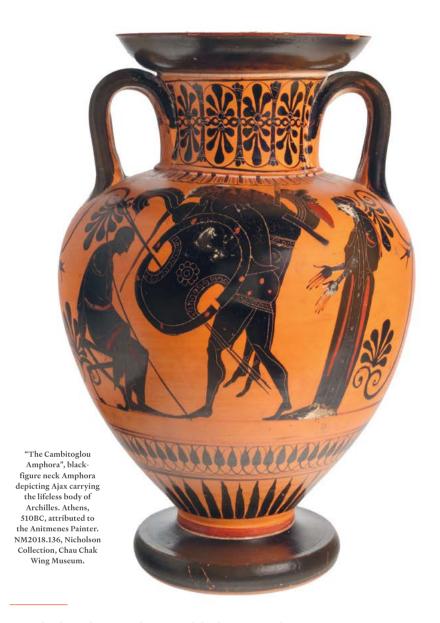
An act of generosity that will forever enrich our understanding of ancient Greece. To enquire about leaving your own gift to the University of Sydney, please contact Moira Saunders.

Phone: +61 2 9002 7455

Email: moira.saunders@sydney.edu.au

"THE INSTITUTE IS, AND HAS BEEN, A FANTASTIC RESOURCE... BUT ITS GREATEST BENEFITS COME FROM HOW IT PUTS PEOPLE IN CONTACT WITH PEOPLE"

- Dr Stavros Paspalas



THE STORY OF THE CAMBITOGLOU AMPHORA

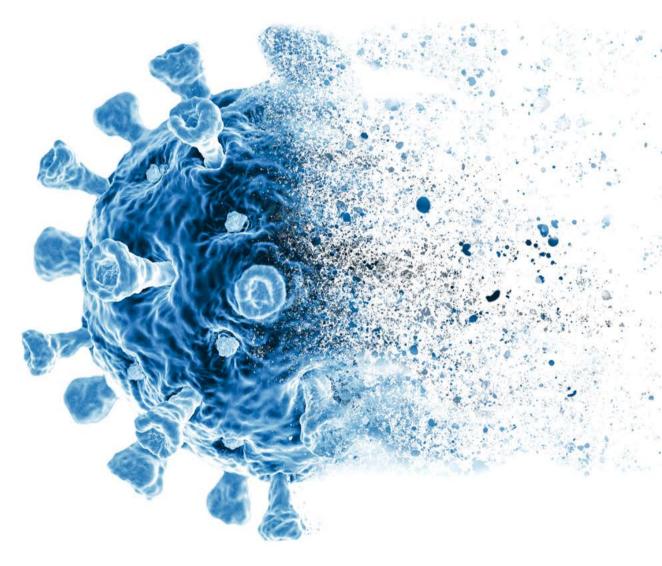
Called Attic black figure pottery, the method of its creation had been lost for centuries. It is now known the vases were made of highly refined clay with layers of even finer clay added during a complicated, three-phase firing process.

The Nicholson can only purchase objects using donated funds, and the Cambitoglou Amphora found a home in the Nicholson Collections thanks to two bequests. The first was from Professor Cambitoglou's own Departmental Secretary of some years, Shirley Atkinson, who also left bequests for research into microsurgery

and otolaryngology as well as to the Chancellor's Committee.

The larger share of the purchase was made thanks to a gift from Mary Tancred who had a long involvement with the Australian Archaeological Institute at Athens (AAIA). Tancred had previously funded the purchase of the celebrated black-figured Antimenes Amphora, depicting one of the Labours of Herakles (called Hercules by the Romans). Coincidentally, this and the Cambitoglou Amphora were painted in the same workshop more than 25 centuries ago.

Living in the new 'normal'



WORDS by Rekha Patel

With COVID-19 here to stay, how is philanthropy helping us to live in the current and post-pandemic world?

ockdowns, economic crises, vaccines, 'the new normal' – if the events of the last 20 months have shown us anything, it's that COVID-19 is not planning on leaving soon. However, amongst the fear and unknown, the pandemic has also generated an extraordinary response.

University of Sydney experts have been at the forefront of COVID-19 research, from understanding its genetic origins to assisting recovery efforts and public health.

Internationally renowned infectious diseases expert and Co-Director of the Sydney Institute for Infectious Diseases, Professor Tania Sorrell AM, has been one of the many University expert voices during this time.

"Our academics and researchers have made important contributions across a range of areas, whether it be public policy advice guided by interdisciplinary modelling of the impacts of public health measures and vaccination on community protection, or the minutiae of the effect that COVID-19 has on cardiovascular, lung, brain, kidney function and mental health," she says. "The University plays a crucial role by engaging with policy makers, public health units and other professional colleagues, and contributing to and analysing emerging data on COVID-19 to help guide the discourse and support public policy in open and honest ways."

A generous gift from the Snow Medical Research Foundation to a BEAT COVID-19 research consortium, led by the Universities of Sydney and Melbourne and other partners, is supporting the slow road to recovery. This gift came at a critical point – a month after the World Health Organisation declared COVID-19 a pandemic. This helped research teams to react quickly and initiate programs that have now expanded nationally and internationally, and which are important in informing Australia's immediate public health response to COVID-19, and further building our future pandemic response capability.

"COVID-19 has had a devastating effect on Australia and the world – this is the biggest thing to hit the globe since 1945 and it will have a lasting impact for years to come," said Snow Medical Founder, Terry Snow. "These measures are aimed at getting Australians back

to work safely, making treatment more effective and efficient and getting our economy working again."

"This consortium is particularly notable because of its national reach and collaborative networks," Snow continued. "It draws on research expertise from over 15 universities and medical research institutes, their affiliated public hospitals, state health departments, public health authorities, pathology services, and the Australian Red Cross Blood Service, to provide a truly national picture and coordinated approach to beating COVID-19."

SPRINGBOARD FOR CAREERS

Dr Eunok Lee: As part of Professor Tony Cunningham and Professor Sarah Palmer's research team at Westmead Institute for Medical Research (WIMR), Dr Eunok Lee is a valued contributor to BEAT COVID-19.

Having completed her PhD in December 2020, Dr Lee supported the whole team to immediately pivot from HIV to COVID-19 research. Importantly, she has done some key work measuring long term immunity and vaccine effectiveness. The team has identified fragments of COVID proteins that can be used to better track immunity and COVID vaccine effectiveness. The results, published in the Journal of Virology, are significant because they identify the fragments of COVID-19 proteins that rarely mutate. As such, they are good candidates for global tests to measure long term immunity following infection or vaccination. It also means that they could be particularly useful in boosters for at-risk groups and to protect against new variants able to evade current vaccines.

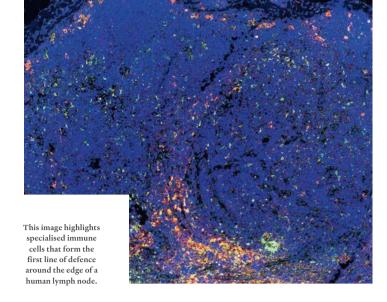
"As an early career researcher, I am especially grateful to Snow Medical for helping me undertake cutting-edge research and further establish my credentials in our field," says Lee. "In particular, these funds allow me to continue my work and focus on developing a new assay to evaluate the level and duration of T-cell response within COVID-19 patients post-recovery. This study will help answer an important but under-studied question: how long does infection-induced immunity to SARS-CoV-2 last in the aging, a population at high risk of succumbing to this infectious disease?"

Dr John-Sebastian Eden: Funding from Snow Medical has enabled Early Career Researcher Dr John-Sebastian Eden, to push the boundaries of traditional medical science and pioneer novel technology based on blue-sky thinking.

Dr Eden's work focuses on genomic RNA sequencing of human respiratory samples which contain many "resident" bacteria and other microbes (the microbiome), as well as infecting viruses that can make people sick (the pathogens). The approach of meta-genomics detects all genetic material in a given sample and hence all microbes and human genes present. Not only can it detect multiple causes of infection in a single sample but it also allows the discovery of new infectious pathogens, for example COVID-19. The long-term goal is to bring RNA-based meta-genomic sequencing technology into day-to-day lab diagnostics.

"Genomic sequencing gives a much more 'complete picture' so health professionals can decide the correct treatment pathway. For example, viral respiratory diseases are often treated with antibiotics to manage secondary bacterial infections that arise," says Eden. "Genomic sequencing tests have the ability to detect antibiotic-resistant bacteria in the body; therefore, the treatment can be tailored very precisely for that patient."

Funding from Snow Medical was integral to developing COVID-19 genome sequencing, which directly informs the NSW public health response. "While the initial method for genome sequencing worked well, there was much opportunity for improvement, for example, accelerating the speed of



the tests and their sensitivity so they can detect even the mildest of COVID-19 cases. As a result of this work, the sequencing now takes less than 24 hours compared to the several weeks it took previously," he says.

Dr Eden is working on optimising this work. Over the next few months, he'll pilot test his novel sequencing techniques at Westmead Hospital with a view to a national rollout. This is the first step toward introducing the use of metagenomics as a reliable and accredited test.

"Traditionally, attitudes towards genomic sequencing within the medical community have been mixed, with some questioning why it's done. This work is proving its importance in diagnosis and treatment of diseases and demonstrating its validity in the future of medical research," says Eden.

"It's incredible for Early Career Researchers like me to receive these funding opportunities to make a mark in my field. I couldn't be more grateful." 5-

MEET SOME OF THE OTHER RESEARCHERS WHO ARE PART OF THE 'BEAT COVID-19' CONSORTIUM

Professor Kristine Macartney

is leading three serosurveys to estimate population immunity. They have been important in tracking SARS-CoV-2 spread in key groups including schoolaged children, pregnant women, healthcare workers and the elderly, and inform the government health response.

Professor Tom Snelling

is focusing on clinical trials and disease outcomes for better management of infected patients. Having a template to build 'adaptive trials' avoids starting from scratch amid future pandemics. He is also investigating the optimal timing and spacing of COVID-19 vaccine doses.

Professor Stuart Grieve

is developing the C19 iBank. This national resource will contain detailed lung CT imaging data and an automated means of scoring the damage caused by COVID-19 to the lungs.

Associate Professor Ben Tang

is developing and validating tools to improve patient triage in a pandemic, working with 48 Australian and international collaborators. They aim to develop a blood test to predict which patients may acquire life-threatening secondary infections, demanding urgent medical treatment.

Links between a mother's health through pregnancy and the health of her baby are well established. Through the Baby1000 program, Professor Adrienne Gordon and her team are pioneering work to discover the early interventions that will improve health for the next generation.

The first thousand days











s Professor Adrienne Gordon completed her training as a neonatologist, first in her native Scotland then later in her adopted homeland, Australia, she reached a clear conclusion. The factors that led to the best overall health and survival rates for newborn babies were all those that affected the mother before birth. As Professor Gordon puts it from her home in Sydney, "A healthy pregnancy is the best gift that we can give to an unborn baby."

In her early days working in a hospital in Glasgow, she saw first-hand how the effects of social disadvantage and the mother's lifestyle would affect the health of babies, not just as children but throughout their life. Now a senior staff specialist neonatologist in the RPA centre for newborn care and Clinical Professor in obstetrics, gynaecology and neonatology at the University of Sydney's Central Clinical School, this realisation drew Professor Gordon to the emerging Baby1000 project in early 2015.

Housed at the Charles Perkins Centre (CPC), the Baby1000 program aims to track the progress of babies during their first 1000 days and to identify risks and subsequent interventions to improve future health. Significantly, the groundbreaking Baby1000 program begins its tracking before conception, making it a rarity amongst international studies into pregnancy and neonatal health.

"A HEALTHY PREGNANCY IS THE BEST GIFT THAT WE CAN GIVE TO AN UNBORN BABY."

- Professor Adrienne Gordon



Extensive research using new technologies has shown that a child's genetic programming from factors such as whether the mother smokes, obesity, nutrition, stress, lifestyle and environment, can be conditioned during or even before pregnancy and can have subsequent health outcomes later in life.

Despite the well-known existence of these connections, a deeper understanding of why and how they occur is yet to be developed. As a result, clarity around which interventions might be effective in improving the health of parents and their babies is still lacking.

Professor Gordon is hopeful that the ambitious Baby1000 program can change this by harnessing the crossdisciplinary expertise within the team at the CPC, along with the study's emphasis on producing research that can be easily integrated into clinical practice. This perfectly complements Professor Gordon's passion for bringing the sometimes-distant worlds of public health research and clinical practice closer together.

"There are lots of amazing scientists who do incredible work but don't know how to implement it because they don't interact with clinicians, and vice versa," says Gordon. "Clinical training can be quite siloed. You are encouraged to specialise in one demographic. In reality, public health is not like that – it is about trying to put interventions where there is most benefit."

Professor Gordon aims to treat the mother and baby in tandem and believes this approach has improved both her clinical practice and her research.

One fascinating intervention that









the team is currently trialling is to see whether a custom-designed pillow will allow women to sleep more comfortably on their side, rather than on their back, which has a proven association with stillbirth in late pregnancy. Recruitment for a trial providing pregnant women with a side-sleeping pillow is underway, with monitoring of the 400 participants' sleeping positions due to be conducted via a small wearable device. The pillowcase is designed to be stuffed with standard pillows or even the mother's own clothes, reducing production costs and making it an affordable option for women in low to middle-income countries in future.

Meanwhile, in the lab, technological innovation is proving useful. Resembling a small space capsule, a device known as the 'BodPod' is a cutting-edge instrument for the measurement of body fat through air displacement. A smaller version, charmingly named the 'PeaPod', is used for babies and small children. This technology has been vital to ongoing research into the relationship between maternal weight before conception and newborn health.

Baby1000 also takes advantage of the NSW Health Statewide Biobank, a world-class facility that uses highly sophisticated technology to store and process samples of human tissue, blood, DNA and cells in temperature-controlled systems. The quality of this storage means that the samples gathered during Baby1000 can be preserved and shared with other research projects in future.

The data gathered from the biosamples includes cortisol analysis of saliva samples to measure maternal stress levels, and analysis of dietary and gut microbiome data, aiming to identify the links between nutrition and gut health in mothers and infants.

The project would not have been possible without the incredible generosity of the late Dr Lynn Joseph, whose contribution towards Baby1000 has been crucial. Dr Joseph, an alumnus of the University of Sydney, developed a passion for maternal and infant health whilst working as a general practitioner (GP) in Maroubra, Sydney, in a period when it was common for GPs to deliver babies. Dr Joseph was such a mainstay at his practice that he eventually came

The BodPod measures body fat through air displacement. A smaller version, the PeaPod, is used for babies.



to deliver the babies of babies he had delivered many years before.

The bequest was made in the name of Dr Joseph and his three brothers, Maurice, Neil and Douglas, all of whom graduated from medicine at the University of Sydney and went on to have distinguished careers. The gift leaves a wonderful legacy for the brothers, befitting the family's extensive involvement in medicine.

"The funding from the Joseph family has been amazing," reflects Professor Gordon. "We simply wouldn't have been able to do our work without it."

The Baby1000 program continues to make progress, with significant project milestones on the horizon. Children recruited to the program have begun to reach 24 months of age, the endpoint of the first 1000 days.

"It's inspiring collaborating with talented doctors and scientists," says Gordon. "We are all working to ensure the best lifelong health outcomes for the next generation. The earlier we can make these preventative interventions, the better." %

Thanks to the generosity of donors like the Joseph family, life-changing research is possible. To make an enquiry about leaving a gift in your will to the University of Sydney, please contact Moira Saunders. Phone: +61 2 9002 7455 Email: moira.saunders@sydney.edu.au



Connecting the dots

A desire to improve Aboriginal and Torres Strait Islander mental health, a well-timed scholarship, and a deep connection to community has enhanced Mick Scarcella's meaningful career.

WORDS by Cecilia Robinson

PHOTOGRAPHY by Louise M Cooper

ick Scarcella, growing up with a father from Italy, an Aboriginal mother and three brothers, was exposed at a young age to how community, culture and wellbeing are inextricably linked.

He knew his parents made sacrifices to ensure their sons had access to education and a sense of their culture, and Mick felt he needed to give back to his community.

"I feel like I am obliged to help out where I can for Aboriginal people because I've had the opportunities that others have not had access to," he says.

It was within his established career in the culinary world that he found an opportunity to fulfill this purpose by establishing an Aboriginal Support Network for Aboriginal and Torres Strait Islander staff. He so valued this opportunity to champion these connections, that he shifted away from

the kitchen and into new roles working directly with those communities in Sydney. His most recent role is Aboriginal Health Management Advisor for the Sydney Children's Hospital Network.

One day, a fortuitously timed email from a colleague ignited a new opportunity. The email was promoting a newly established Social and Emotional Wellbeing (SEWB) and Mental Health cohort within the Graduate Diploma of Indigenous Health Promotion (GDIHP).

Mental health and SEWB are complex and multidimensional concepts. However, conventional ideas often neglect the elements of healing that go beyond the individual, something that is especially important in Aboriginal and Torres Strait Islander communities. SEWB refers to the cultural, spiritual and social wellbeing of the individual, family and community. It also examines the impact of environmental, ideological, political, social, economic, mental and physical factors on a person's health and wellness. Instead of considering mental health on its own, an SEWB approach provides a more effective, all-encompassing understanding of the myriad factors that influence health and wellness.

The University of Sydney was looking for Aboriginal and Torres Strait Islander health workers who wanted to expand their repertoire of SEWB health promotion skills. A missing piece was coming together – both for SEWB health promotion education, and for Mick.

For almost 20 years, the GDIHP has transformed the futures of many health workers. However, until recently, a dedicated SEWB focus was notably absent from its curriculum. This changed as a result of the exceptional generosity of Sandra and Peter Cadwallader.

During a trip to the Northern Territory, Peter and Sandra met a young girl whose brother had passed away by suicide. The Cadwalladers decided that this tragedy had to be addressed.

"We know how to solve medical health problems, but we have no idea how to solve mental health problems in Aboriginal communities," Cadwallader said.

The Cadwalladers have had a long history of commitment to supporting Aboriginal and Torres Strait Islander communities. With this gift, they funded the degree to include the SEWB mental health promotion component, and also covered the entire tuition costs for students to pursue the degree.

Mick had thought his educational years were over, but when he read about the opportunity to study without the financial burden, he jumped at the chance.

"I said, you know what – I am not too old for school and here I am. There would have been no way I could afford it myself, so I had to put my hand up."

The Cadwallader's gift was so meaningful to Mick, who was diagnosed with bipolar disorder in 2001. Beyond providing access to further education, the scholarship would provide Mick with important SEWB health promotion skills, to further enhance his work in the Sydney Children's Hospital Network.

"It is a debilitating disease. It destroys lives, families, work, relationships, everything. I've noticed in the Western suburbs of Sydney, where I am from, that it is a massive issue. This local community also has the biggest population of Indigenous peoples in the country and the situation is not getting any better, it is getting worse."

Mick is seeing that even now, 20 years later, the situation hasn't significantly improved.

Yet, he remains optimistic that programs like this will make a real difference. The framework he is learning

"IN LESS THAN ONE YEAR, I'VE GOT MORE TRACTION WITH THIS PARTNERSHIP THAN I HAVE IN THE LAST THREE."

- Mick Scarcella

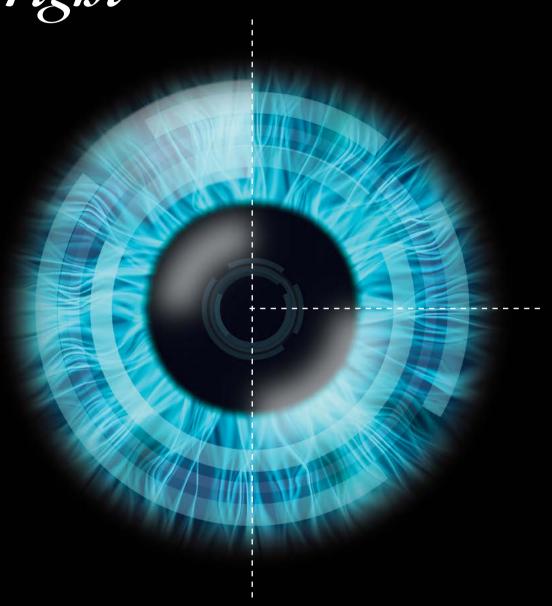
has already contributed to his role. He's been working on building a strategy to solidify partnerships with Aboriginal and Torres Strait Islander health organisations for nearly three years, which has been a difficult task.

"But, without them knowing, I developed a program in my studies that would help them. The best part about it is that we've opened a dialogue. This course gave me the tools I needed to approach them."

"I feel so lucky and privileged for this opportunity. It's allowed me to go out there, not just as a Sydney Children's Hospital representative, but as a concerned member of the community. In less than one year, I've got more traction with this partnership than I have in the last three."

By placing Aboriginal and Torres
Strait Islander approaches like social
and emotional wellbeing at the forefront
of our mental health approach, change
is possible. With the generosity of
donors like the Cadwalladers, and with
committed and spirited teams working
directly with communities, we can make a
difference to the lives of so many people. \$\square\$

Eyes right



WORDS by George Dodd

INFOGRAPHIC by Fábio Dias

For people with impaired eyesight or no sight at all, the world is an enormous obstacle course. Professor Gregg Suaning is pushing vision capture and nerve stimulation technologies beyond their limits to help clear a path.

s research goals go, it is bold with perhaps a touch of the miraculous. For more than twenty years, Professor Gregg Suaning has been working to bring sight to the blind. Though in the early days, the idea was almost all he had.

"We were dismantling radios and car electricals to make the equipment we needed," Suaning says, obviously enjoying the memory. "One time we were making bespoke electrodes and we ended up using a capacitor out of a big, old-style television."

Those early hurdles have long been cleared and today, Suaning's work is at a point where the broad technology of delivering a sense of sight exists. In principle, it's not unlike the cochlear implant and related technologies which now help millions of hearing-impaired people.

A camera on a pair of glasses collects the visual information which is then sent to a mobile phone and processed. The result is sent wirelessly to a microchip implanted in the retina which decodes the wireless signal and sends electrical impulses to the part of the brain that produces vision: the visual cortex.

While the technology might be cochlear-like, the degree of difficulty is many times greater because vision is so much more information dense than sound. Where hearing technologies can deliver a more than acceptable result using 14 channels of information, Suaning's work currently uses 100 channels with the limits of the process always being pushed out.

The challenge plays to Suaning's natural impulses. He grew up wanting to be a motor mechanic before discovering

mechanical engineering, then biomedical engineering. In fact, he was an engineer at Cochlear in its very early days, and it was there that he set himself the goal of helping blind people see.

"It hasn't been easy," says Suaning in his Australian-inflected San Franciscan accent, having met his Australian wife in a Jerusalem Youth Hostel. "Keeping in mind that full vision is like a million channels of information, it really helps that the brain can also make a lot out of very little."

This was demonstrated in 2014 when the sight technology was still cumbersome, and lab-bound. As part of a national project where researchers were developing an Australian bionic eye, three blind volunteers came to a Melbourne University lab, and were implanted with a rudimentary electrode array and connected to laboratory-based electronics.

"Two didn't get much of a reaction, but one of them did really well," remembers Suaning. "Going through an obstacle course she avoided and even identified obstacles, including a chair. Though it wouldn't have been a fully realised chair, just a few dots. But her brain filled in enough of the gaps."

This represents a key challenge for the research: making the visual information captured and communicated actually meaningful for the blind person, meaningful being a key term here.

"We're working towards something so blind people can navigate the world," Suaning says. "To help them recognise objects, avoid obstacles and move about more confidently. Will it ever be the full visual experience sighted people have? Thinking about the huge advances there've been in video game technology, it might be possible, but we're not there yet."



Professor Gregg Suaning

Still, over the years, people have been inspired by the huge promise of the technology and even offered muchneeded financial support ("One blind person called me wanting to donate to the work - though I think he was deaf as well. He was absolutely screaming into the phone because he was so excited.") But recent support from the Neil and Norma Hill Foundation has sent Suaning and the technology down a new path.

Where the research focus for Suaning has always been on a rare, blindness-inducing condition called retina pigmentosa, which can strike people in their 30s and 40s, causing initial tunnel vision that later narrows to full vision loss, the Foundation gift brought macular degeneration (MD) into the frame.

As the Trustee of the Foundation says, "When we heard about Professor Suaning's work we felt compelled to help. We are so pleased that our philanthropy could help to ease the burden in some way for people with macular degeneration and their families."

In some ways, MD is like the reverse of retina pigmentosa since the damage starts in the middle of the field of vision and works outward. Certainly, it's much more common than retina pigmentosa, with one in seven Australians over 50 having some age-related MD, and about 17% of those going on to suffer vision loss.

That being the case, the reason Suaning didn't focus on MD in the early days of his research was out of concern for his volunteers. People with severe retina pigmentosa can suffer full vision loss, whereas people with MD usually retain some sight around the central area of retinal damage. Suaning didn't want to risk whatever sight was still retained by MD volunteers.

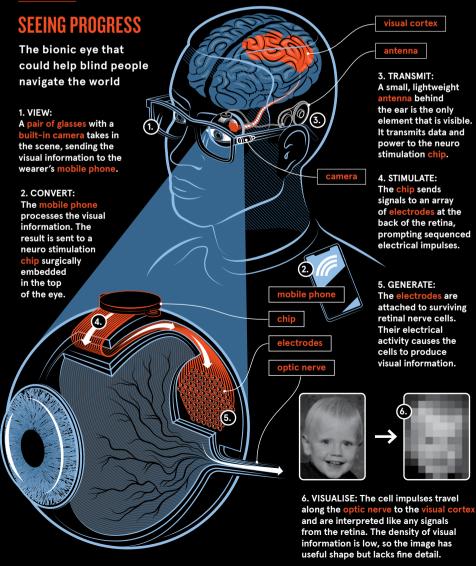
Allowing that significant advances have been made since those early days, Suaning is now preparing for the first human trials where the volunteers will use wearable equipment that they can take home. To even contemplate using human volunteers in this way, Suaning has had to demonstrate the safety of what he's doing to the highest possible standards.

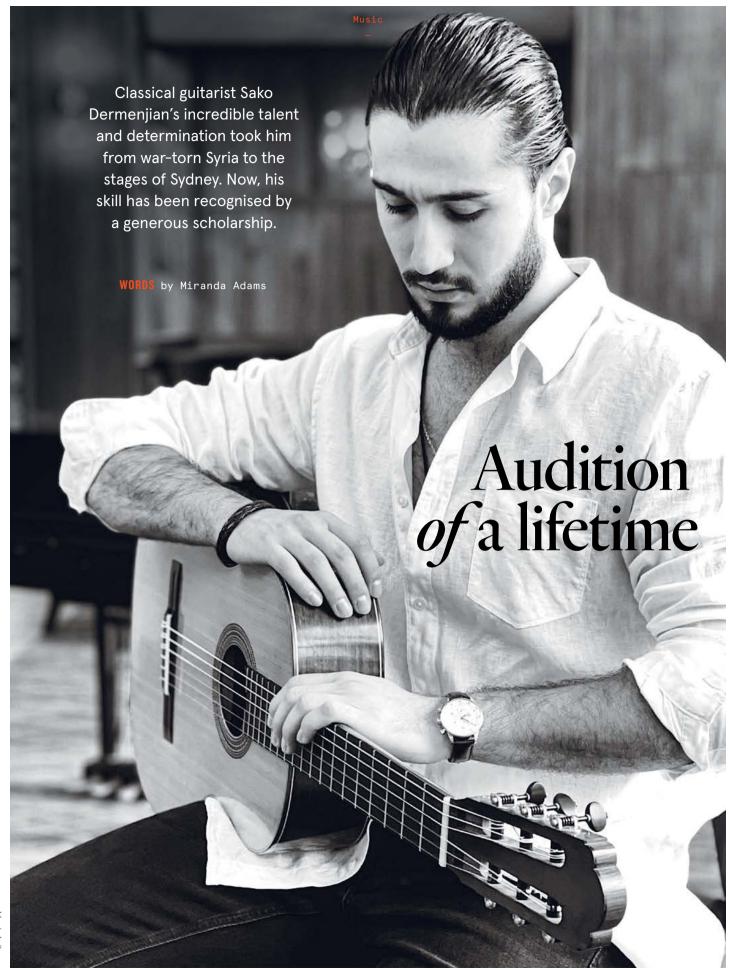
This he has done, and in the process seen for himself that the newest expression of the technology would present a minimal threat to any volunteer participating, including someone with MD.

This has also seen him looking differently at the technology itself. For retina pigmentosa, the in-eye electrode array is arranged for the outside-toinside progress of the condition, whereas the new MD array must work inside-tooutside. Having to do this thinking has fed new and useful ideas into the process.

Another thing that has helped Suaning's work is his move to the University of Sydney, "There's so much multidisciplinary stuff that happens here," he says. "As part of one ecosystem there's the technical side, medical, business, even the psychological aspects.

"That makes every advancement even more immediate. You can see the effect it could have, maybe not tomorrow, but you can see it; something is emerging that will help people." >>





hotography suppl

SAKO DERMENJIAN

DEGREE Master of Music Studies (Performance)

SCHOLARSHIP Greta Davis equity Scholarship for Musically Talented Students

o say Sako Dermenjian was always going to be a guitarist is an understatement. Born and raised in Syria, his prodigious talent had him going places in the world of classical guitar ever since his grandmother gave him his first guitar aged six. By eleven, he was half-way through his instruction with celebrated classical guitar teacher, Mazen Al-Saleh, in Damascus. And by 15, he was teaching after school at the Higher Institute of Music, Syria's main music conservatorium. But the road to becoming the Yamaha-endorsed artist he is today hasn't always been an easy one.

When the war erupted, his family, who are of Armenian descent, were forced to flee. Dermenjian ended up completing his final year of high school during his short passage through Lebanon on his way to Australia.

"I had mixed feelings when we arrived in Australia. We didn't know anyone here, but we were happy to be in such a beautiful country. Instead of beaches being five hours away, we now lived five minutes from glorious beaches."

Newly settled in Wollongong, it seemed for a moment that his musical dreams had become caught in a rip tide. Due to circumstances out of their control, the students in his year couldn't receive their year 12 grades and, without grades on his transcript, he was told he'd need to get a TAFE qualification before he could apply to university.

But his story would prove that sometimes the currents are simply



leading somewhere new. One of his TAFE teachers, Dr Michael Barker, was a Sydney Conservatorium of Music alumnus.

Barker took Dermenjian under his wing, encouraging him to take on any performing opportunities that came his way. This included the City of Wollongong's Australia Day celebrations in 2016 and a TEDx Global event. Understanding the practical side of being a working musician, Dermenjian mixed TAFE courses in music with business and programming, turning the two years from setback to opportunity.

Then, finally, TAFE diploma in hand, he had an audition at the Sydney Conservatorium of Music.

It was a significant moment. Years earlier, he had familiarised himself with the work of the Conservatorium's internationally-acclaimed guitarist, Dr Vladimir Gorbach, over the internet. If he got in, he'd be able to learn from Gorbach directly.

"The audition lasted a minute," laughs Dermenjian. "That was it."

His musical career in tune again, he set about absorbing as much as he could from Gorbach, who Dermenjian describes as having masterful technique. It was



Greta Davis

"I AM SO GRATEFUL TO GRETA FOR THE OPPORTUNITY. IT'S GREAT THAT THERE ARE PEOPLE OUT THERE WHO VALUE MUSIC AND WANT TO HELP OTHERS TELL THEIR STORIES."

- Sako Dermenjian

Gorbach's virtuoso spirit that appealed to him. He remembers watching how quickly and skillfully Gorbach played.

"I knew how unique it was to play like that and I wanted him to teach me more."

Dermenjian's interest in a range of musical styles didn't daunt Gorbach, either. The two built a solid working relationship based on a mutual respect for each other's skills as a guitarist.

Drawing from Armenian, Spanish, Middle Eastern and a touch of Flamenco sounds, Dermenjian explains how each piece of music he plays reflects various experiences in his life. He plucks the strings a little differently, the oeuvre shifting and morphing to express his style and emotions.

"Every time I play my guitar, it takes me from one reality into another. I reflect on my past, my present and my future and it shows me that six strings can really change the world."

A NEW OPPORTUNITY

Dermenjian's studies also helped with reframing his role in music, mentally transitioning himself from classical guitarist to musician, and growing musically broader and more collaborative.

"When I came to Australia, I met most of my best friends through music," says Dermenjian. "Just playing together was how we became friends so collaboration became really important to me. Classical guitar is usually solo, but I like to also perform with other musicians and bands."

In fact, Dermenjian was performing three to four gigs per week, playing at festivals around the country, professional sporting events, appearing on radio and in theatres and, a credit to his enormous talent, he's now an officially endorsed Yamaha musician. But when coronavirus took hold in 2020, it all but decimated live musical performance, his major source of income.

Determined not to sit around, Dermenjian decided to apply to do his masters at the beginning of 2021 and put more time into his original music. But the costs of postgraduate study were daunting to a musician in an interminable income freeze.

Then he discovered the Greta Davis Equity Scholarship for Musically Talented Students. He quickly applied and was awarded the scholarship because of his exceptional grades and indisputable talent.

THE IMPACT WAS EMOTIONAL.

"I am so grateful to Greta for the opportunity. It's great that there are people out there who value music and want to help others tell their stories."

Davis and Dermenjian hope to meet when the pandemic allows. In the meantime, Davis says it's fate that the scholarship, which is open to any instrument, has gone to a classical guitarist. A retired IT professional, her own thoughts about music were influenced by her time in Armidale in the early 1970s where she worked with statistician and classical guitarist, Associate Professor Vic Bofinger.

"I was considering learning the recorder at the time and Vic encouraged me by confirming that the recorder is worthy of serious study."

While the recorder ultimately didn't take, a desire to learn the oboe post-retirement did. A life-long love of music led Davis to set up two scholarships as gifts in her will: one, a travelling scholarship for a woodwind musician to study overseas, and the other for an asylum seeker, refugee or First Nations student.

"I then decided I wanted to see some of these benefits in my lifetime," says Davis. "It is not easy to meet the Con's high admission standards and refugees and First Nations people have so many more challenges to overcome. It takes a lot of work to be really good at music and I wanted to recognise and assist people that have achieved that in difficult circumstances."

Greta's generosity is already opening up new possibilities for deserving and talented musicians like Sako. To learn more about this story or to support student scholarships, please contact Community Giving. Phone: +61 2 9552 2539 Email: development.fund@sydney.edu.au



Barney's second chance

After a shocking cancer diagnosis,
Tom's dog Barney needed highly
specialised surgery. With donor support,
the University Veterinary Teaching
Hospital stepped in to save him.

WORDS by Julie-Anne Macintyre and Laura Catherall
PHOTOGRAPHY by Christopher Landenberger

arney was seven years old when he received his diagnosis.

Three years ago, Tom received the news that every pet owner dreads — his beloved dog, Barney, had cancer. They'd been together since Barney was a tiny, six-weekold pup, so Tom was devastated.

"My vet told me it was a grade three mast cell tumour, one of the most aggressive tumours a dog could have, and it was inoperable. There was nothing they could do. He only had a matter of months."

Desperate to do anything he could, Tom took Barney to the University of Sydney Veterinary Teaching Hospital. To better understand Barney's condition, they suggested a CT scan.

When the results came back, it was good news. The cancer was contained and hadn't spread. It wasn't going to be an easy road, but surgery was an option for Barney.

Because of the complexities of the case — the type of tumour, its location, and how aggressive it was — the treatment Barney needed couldn't be done at a

"I COULDN'T THINK ABOUT ANYTHING ELSE BUT BARNEY. THE THOUGHT OF LOSING HIM WAS DEVASTATING."

- Tom, Barney's owner

general practice. It needed a specialist team, and it was going to be expensive.

"I was told what it might cost, and it was totally out of my reach," says Tom.

The decision to go ahead was no longer about Tom wanting to save Barney, but if he could afford to. Having spent his savings on vet bills and the CT scan, Tom was heartbroken to realise he had no way to cover the costs of the surgery.

He prepared himself to say goodbye. "I wasn't thinking about anything else but Barney. The thought of losing him was devastating."

HOW DONORS MADE A DIFFERENCE

Just when Tom thought all hope was lost, Barney's vets suggested the Animals in Need Fund. Launched by the Sydney School of Veterinary Science in 2012, the donor-supported fund helps the University's teaching hospitals treat animals whose owners cannot afford to pay for their care.

Dr Jason Hoon, along with Dr Laurencie Brunel and Dr Katrina Cheng, was on Barney's veterinary team at the University Teaching Hospital. "As vets, you always want to do what's best for the patient," he says. "But obviously, finances play a huge role."

For Tom, the Animals in Need Fund was the difference between going ahead with the surgery or not. "I was given that little bit of hope, and I immediately switched to fight mode. I needed to fight



They've been together since Barney was a six-week-old puppy. Tom even takes Barney to work with him every day.

for Barney." It didn't cover all the costs, but it was enough to ensure Barney had his surgery. "There was no way I could've afforded the treatment without it."

A MULTIDISCIPLINARY APPROACH

The successful surgery was followed by six months of chemotherapy.

For Dr Hoon, Barney isn't a case he will forget in a hurry. "He was one of my first patients when I started at the University, and it's not a procedure that is done on a routine basis. We had to remove the tumour, as well as do quite a fair bit of complex reconstruction work to re-route Barney's urinary tract."

"The unique benefit here at the teaching hospital, is we have a multidisciplinary centre. Multiple specialists are involved in the surgery and medicine departments as well as imaging and anesthesia. We're able to all come together to provide the right treatment and the right aftercare."

Three years on, Barney is healthy and cancer-free. He continues to visit the University Veterinary Teaching Hospital for his annual check-ups and is also now part of a unique vaccine trial. Led by a team of researchers at the University, the trial uses specific samples of Barney's tumour to create a vaccine for the patients.

Tom couldn't be happier. "I look at him every day and thank my lucky stars he's still here." >>

To learn more about this story or to support the vital work of the Animals in Need fund, please contact Judith O'Hagan. Phone: +61 2 9552 2539.

Email: development.fund@sydney.edu.au.

ANNESSA ISMAIL

DEGREE Bachelor of Commerce

SCHOLARSHIP Inspired by Business Scholarship

Filled with amazing academic potential, a scholarship made Annessa Ismail's dream of a university education possible.

The gift of a dream realised

WORDS by Melany Clark

he first time Annessa Ismail visited the University of Sydney, she knew exactly where she wanted to study. "I was enthralled by how large it was, the fascinating traditional buildings integrated with modern facilities. I felt like I was learning something just by walking around, seeing throngs of people who were studying what they're passionate about."

Ismail was on campus with two cousins visiting from Indonesia, all three of them abuzz with possibilities. But at that time, the dream seemed out of reach.

Having gone to school in Gosford on the NSW Central Coast, Sydney felt quite far away, and her parents, although having studied in Indonesia, hadn't received a tertiary education in Australia. For Ismail, it felt like the odds were stacked against her.

She recalls the phone call that brought her dream into reality. It was the Scholarships Office telling her she'd received a scholarship through the Inspired by Business program. This program, funded by multiple donors, aims to break down barriers to tertiary education and ensures outstanding secondary students can receive support to achieve their full potential.

"Fulfilling my ambitions at the University of Sydney is a dream come true. It is one of the top business schools in Australia and worldwide, and I value being a part of its community. Coming from an immigrant background, my family could never have imagined I'd receive a tertiary education and be supported to realise my goals."

She's now embarking on the last semester of her Bachelor of Commerce degree majoring in Business Information Systems and International Business. Her passion for business was no coincidence, ignited first by her mum who studied business, then her high school business teacher.

"Business is so exciting; you can see it all around. To understand the facets of globalisation and digital transformation and be at the forefront of real-world problems piqued my curiosity early on, and I aspire to become an active global citizen."

She sees it as a basis to understand real-world problems and find opportunities to make a difference in the gaps in society, like uneven access to education, health, and infrastructure.

The Business School also grants funding for Inspired by Business students to receive additional training, mentoring, and career-coaching, which Ismail has wholly embraced. She spent ten weeks interning at Deloitte gaining invaluable industry experience, and as part of the Dalyell Scholars Program, engaged in an interdisciplinary unit with students in the United States in a global collaboration to realise UN Sustainable Development Goals. She's also mentored younger business students.

In the classroom, her studies have allowed her to refine her problem-solving skills. "We look at various possibilities and hypothesise how to tackle challenges. We're learning how to build the world we want to live in."

The future is bright for Ismail. She will return to Deloitte as a graduate starting next year and hopes to give back to the community once she's established in her career. To the donors who have supported her, she's incredibly grateful.

"Thank you for helping to realise the dreams of young students. Sometimes certain restraints make it seem that these things won't be possible but being part of these programs has truly made an enormous impact on me. I'm realising my dreams and growing into the person I want to be for myself, and for my family, in the future." >

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