

THE UNIVERSITY OF QUEENSLAND ALUMNI AND COMMUNITY MAGAZINE

CONTACT

summer 2017

A photograph of a man with short, light-colored hair, seen from behind, sitting on a bed. He is wearing a dark, short-sleeved shirt. He is looking out a window with white frames and brown curtains. To the left of the man, a teddy bear is sitting on a tufted, light-colored chair. The room is dimly lit, with light coming from the window.

Window of HOPE

TOGETHER, WE CAN IMPROVE
THE LIVES OF PEOPLE
LIVING WITH DEMENTIA

Not if, when
UQ LAUNCHES CAMPAIGN
TO CREATE CHANGE

ALUMNI AWARDS
*celebrating
excellence*

Girl on fire
THE RISE OF NETBALL
STAR GABI SIMPSON

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COVER IMAGE

UQ alumnus John Quinn, who is living with younger-onset Alzheimer's disease.



CONTACT APP

The *Contact* app can be read on your smartphone, iPad or other tablet device.

To download the app, visit the iTunes™ App Store or Google Play™ store and search for **UQ Contact**.



Our goal is to change lives by fostering support for research, students in need and teaching leadership.

MESSAGE from the Chancellery

UQ Chancellor Peter Varghese AO (left) and Vice-Chancellor and President Professor Peter Høj.

Thirty-one years ago, an up-and-coming physician and immunologist who had recently joined UQ took a surprising phone call.

A woman he did not know was interested in supporting research into one of the most common female cancers, cervical cancer, which was killing an estimated 275,000 women each year.

The phone conversation led to a \$120,000 gift from a Queensland family, and to an extraordinary series of outcomes that continue to unfold.

The researcher, Professor Ian Frazer AC, used the donation to buy vital new equipment, and five years later he and a colleague, Dr Jian Zhou, invented a vaccine against the virus that causes cervical cancer, human papillomavirus (HPV).

This gift and other acts of philanthropy have had such strong influence on Professor Frazer's capacity to make a difference for individuals and society that he and his wife, UQ alumnus Caroline Frazer, now chair UQ's first comprehensive philanthropic campaign,

Not If, When – the Campaign to Create Change.

The campaign is a partnership between donors and the UQ community, and will magnify a tradition of generosity that has shaped lives for more than a century. Our goal is to change lives by fostering support for research, students in need and teaching leadership.

There are some certainties in this campaign. One is that gifts of all sizes will make a difference.

Another is that the long-term impact of our donors is boundless. Could those who funded Professor Frazer's scholarship at the University of Edinburgh have known what he would later accomplish? Could members of the family who donated to his research in the 1980s have foreseen that their act would help save millions from premature death and suffering?

More than 200 million doses of the vaccine have been distributed globally,

and evidence of its health benefits continues to manifest. However, an ongoing challenge is to deliver it in developing regions, where most cervical cancer deaths occur. Progress is being spurred by philanthropists, including Professor Frazer, who supports delivery of the vaccine in poor countries.

And so a beneficiary has become a giver, paying it forward to support others. It is all part of a wondrous cycle of philanthropy – a cycle that will be supercharged by the partnerships formed through this historic campaign.

The story of the HPV vaccine, and of other enhancements arising from generosity towards UQ students and staff, illustrate the transformative power of philanthropy. We now invite you to consider joining us to further enable change for the better, at the individual, societal and global level.

Thank you.

Peter Varghese AO, Chancellor

Professor Peter Høj, Vice-Chancellor and President

Features



LIGHTING UP THE COURT

Contact sits down with netball star Gabi Simpson ahead of the Gold Coast 2018 Commonwealth Games.



NOT IF, WHEN

How your support can help UQ improve lives and create hope for a better world.



THE BONE WHISPERER

Alumnus and forensic anthropologist Donna MacGregor unearths the secrets of skeletons.



THE HISTORIC 'YES'

Contact talks to members of UQ's Indigenous community 50 years after the 1967 referendum.

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UQ researchers discuss whether society is becoming freer or more oppressed.

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UQ's budding entrepreneurs are put through their paces in Shanghai's booming startup world.

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Learn how the Brisbane Broncos are staying ahead of the game off the field.



REUNITE WITH YOUR MATES

Class of 1963 Dentistry
 10 March 2018
 Tour of the UQ Oral Health Centre, UQ Herston, 10-11am.
 Lunch at Tattersall's Club, Brisbane, 12-4pm

Engineering Reunion Week

The Faculty of Engineering, Architecture and Information Technology will be holding an Engineering Reunion Week in the first week of October 2018.

For more information about these reunions, or for RSVP details, please contact Alumni and Community Events Officer Prue Roche on +61 7 3443 3206 or email prue.roche@uq.edu.au.



SEND US YOUR FEEDBACK

To provide feedback or send a letter to the editor, phone +61 7 3365 9723 or email contact-magazine@uq.edu.au.

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The University of Queensland Alumni group

THE BIG QUESTION

Is society becoming freer or more oppressed?



Professor Elizabeth Eakin
 Associate Dean (Research), Faculty of Medicine
 Director, Cancer Prevention Research Centre

"From a medical research perspective, the freedom to collaborate – across disciplines and geographic boundaries – is essential. It's key to solving the world's big health problems: cancer, infectious disease (antibiotic resistance), obesity and climate change, to name just a few. This includes collaboration that extends outside the University and includes our industry, health services and community partners. So, are we becoming freer? Absolutely. We have to in order to thrive."



Dr Nicholas Carah
 Senior Lecturer, School of Communication and Arts

"The past decade seems significant because of the opening up of technologies that enable free public expression. Now we are finding ourselves having to reckon with the new kinds of oppression this brings. Disinformation thrives online. Platforms like Facebook and Twitter are the sites of the greatest commercialisation of free expression in history. We find ourselves ill-equipped to deal with the unleashing of hateful and harmful expression spilling into the public domain. And so, we find ourselves once again dealing with the complicated relationship between freedom and control."



Associate Professor Jacinta O'Hagan
 Director, Graduate Centre in Governance and International Affairs
 School of Political Science and International Studies

"As a white, educated woman living in Australia, I enjoy political, economic and social freedoms that would have been inconceivable to my grandmother. But it would be different if I were a Rohingya or Yazidi woman, or even an academic or journalist in Turkey today. Liberties can be won, but also lost or surrendered, particularly in the face of fear. Fear presents liberal societies with a dilemma: what liberties are we prepared to trade in our quest to protect our own sense of freedom?"



Dr Michael Bromley
 Senior Lecturer, School of Mathematics and Physics

"Society faces challenges on various socio-economic-techno-environmental fronts. The freedoms of internet-connected individuals are fuelling the fire of opinion over fact, leading to a lack of evidence-based policy making. Experts, like judges and climate scientists, are being challenged by ignorance, meaningless sound bites, and clickbait that manipulates and oppresses. Next-generation experts should be encouraged to study across borders and disciplines – not by increased fees or funding cuts. Only then will wise discussions and nuanced points of view determine our future."

Research impact

POLLEN ADDING STING TO SUPERBUG RESEARCH



UQ researchers are taking inspiration from pollen to create more effective antimicrobial medicine that could help tackle the problem of antimicrobial resistance.

Antimicrobial resistance – where microorganisms such as bacteria and viruses are no longer susceptible to antibiotics and antivirals – is described by the World Health Organization (WHO) as "one of the biggest threats to global health, food security and development today".

Now, Professor Chengzhong (Michael) Yu from UQ's Australian Institute for Bioengineering and Nanotechnology is pioneering technology inspired by pollen to make antimicrobial delivery more effective.

"If we can ensure a better way for medicines to be administered during the early stages of disease, we can wipe out infections before they get stronger,

and so prevent a whole new breed of 'superbugs'," Yu said.

Yu and his team have engineered hollow silica nanoparticles with rough surfaces similar to pollen, enabling them to adhere to pili, the hair-like appendages found on the surface of most bacteria.

These nanoparticles are well-suited to delivering lysozyme, an enzyme that occurs naturally in human and animal immune systems. Lysozyme has strong antimicrobial properties with minimal side effects, but has an unstable nature that makes it difficult to deliver – a problem that the nanoparticles help to overcome.

"Considering the number of deaths caused by infections globally, the potential implications of this finding for healthcare are significant," Yu said.

Yu and his team are now testing the nanoparticles in livestock, where antibiotic resistance can cause problems not only for animal health, welfare and production, but also for humans who

can be infected directly by animals, through groundwater contaminated with farmyard run-off, or through food-borne diseases.

"The development of natural and biocompatible antibacterial nano-formulations holds great promise for replacing the current antibiotic supplements in animal feed, which is one of the main causes of 'super-bugs' that threaten human health."

"If we can ensure a better way for medicines to be administered during the early stages of disease, we can wipe out infections before they get stronger."

RESEARCH IMPACT: highlighting some of the groundbreaking research being produced at UQ.

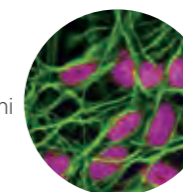
Troubled waters

Dr Simon Albert is tapping into local knowledge and exploring innovative technology to help the Solomon Islands tackle sea level rise.



Teaming up for survival

Professor Sunil Lakhani is collaborating with scientists around the globe to tackle a fatal complication of breast cancer – metastatic tumours spreading to the brain.



Sticks and stones

Professor Katharine Gelber's research into hate speech is shining a light on the experiences of minority communities.

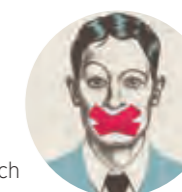


Image: © iStock.com/axVIII

Learn more about UQ's research impact online at uq.edu.au/research/impact.

The girl on FIRE

Netball sensation Gabi Simpson has a résumé to match the greatest players in history. But the Queensland Firebirds and Australian Diamonds star is only 24 years old. And her career is just getting started.

top 5

INFLUENTIAL SPORTSPEOPLE

1. **Laura Geitz (netball):**

"I've played with her for a while. She's a great person. On the court, she's a game changer and thrives under pressure."

2. **Clare McMeniman (netball):**

"Another game changer who always puts the team first. Took a while to get to the top but proves that persistence is key, finishing her career as Australian Diamonds captain."

3. **Roger Federer (tennis):**

"What I love most about Roger is his love for tennis and appreciation for what the game has given him. He's been in the game for so long yet is still at his peak."

4. **Bethany Hamilton (surfing):**

"What an amazing athlete. The pro surfer lost an arm to a shark when she was 13, and was back in the water just two months later."

5. **Sally Pearson (athletics):**

"I did a lot of track and field as a kid and looked up to Sally. To win an Olympic gold medal is a phenomenal feat."

It's been a crazy few years for Gabi Simpson. After relocating from Sydney to chase her netball dream five years ago, she won back-to-back championships for the Queensland Firebirds in 2015–16; cemented her place in the Australian Diamonds team; and earlier this year won the coveted Liz Ellis Diamond, awarded for the most outstanding performance by an Australian player. This year she was also named Firebirds captain – taking over from the great Laura Geitz – and will compete in her first Commonwealth Games next year on the Gold Coast, all while juggling her Bachelor of Physiotherapy studies at UQ. Simpson sat down with *Contact* to reflect on her whirlwind rise to the top.

Did you ever imagine you would achieve so much at such a young age?

Not at all. My aim was always to play for Australia and have an influential role in the team. But looking back on the past two years, it has been quite overwhelming to see what has unfolded. I have been learning to lead and a lot of my effort was put into off-court work, so to then be awarded the Liz Ellis Diamond for my performance on the court was really special. It forced me to look back on how I played over the last year or so. Leading the Firebirds has been great because it's taken me out of my own head and I'm focusing on everything that's unfolding from a team perspective. The amazing thing about taking over the captaincy from Laura Geitz is that I have been able to learn from her over the last four years. They are big shoes to fill and I'm still trying to fit into them, but that means I have a lot of room to grow.

How much hard work has led to your success on the court?

It goes all the way back to 'Year 12 Gabi', who was ridiculous. I would wake up early and travel to netball training at Homebush, which was about an hour west of where I lived in

Sydney's eastern suburbs. I would come back to go to school, then head back to Homebush to train again in the afternoon, before coming home to do homework until about 10pm. I would wake up the next day and do it all again. The sacrifices I made then are benefiting me now from a study and netball perspective. Also, I was in the Australian squad for three years before I was actually selected to play. A lot of the other girls in the squad who were my age were selected to play a lot earlier than me. I had to endure a lot of phone calls from coaches telling me I wasn't good enough. That was hard at the time, but it pushed me to another level.

Why did you choose to study physiotherapy at UQ?

I started my degree at the University of Sydney. I was offered a contract to play netball in Queensland and UQ's physiotherapy course has a strong reputation – especially as a practical course. I have also been very lucky to receive a UQ Sports Achievement Scholarship. It has given me great resources to help my time-management skills. The financial assistance is also extremely helpful as it means I can focus more on my studies and training. I am proud to be an ambassador for the UQ–Firebirds partnership.

Are you excited to play in front of Queensland fans at the Gold Coast 2018 Commonwealth Games?

Queensland crowds are phenomenal. There is no better feeling than stepping onto the court with 10,000 people cheering you on. To have that support at the Commonwealth Games will be so important.

web To learn more about UQ's partnership with the Firebirds, view this article online at contact-magazine.uq.edu.au or download the *Contact* app.



"I am proud to be an ambassador for the UQ–Firebirds partnership."

Generosity empowers HUMANITY

Welcome to *Not If, When* – the Campaign to Create Change. Launched this year, it is the first comprehensive philanthropic campaign in UQ's history. As Co-Chairs of the campaign, Professor Ian Frazer AC and Caroline Frazer (Master of Educational Studies '97) reflect on how vital philanthropy was to the successful research and commercialisation of Professor Frazer's own work, and how you can do the same by contributing to causes you care about.

Work on the world's first cervical cancer vaccine was a team effort, and one that was helped enormously in its early stages because of a generous donation from a Queensland family. The value of this gift transcends its dollar figure, given what it has helped to achieve and the millions of lives that will continue to be saved.

This is what makes philanthropy extraordinarily powerful: the fact that one act of generosity can help humanity so much more than the raw numbers behind the actual donation.

We have also both benefited personally from the generosity of others, such as when we received financial support that enabled us to study at university.

Ian's career in medicine began with a philanthropic scholarship to attend the University of Edinburgh, and his career since, including the research that underpinned the vaccine discovery, has been supported by individuals and organisations that saw his potential.

So for us, giving back has been as important as receiving. We are grateful and humbled by the support we have received and now, more than ever, we recognise the need to support the next generation of students and researchers to tackle the problems that we all face.

Everyone has a different passion, but the universal link to solving our society's problems is the advancement of

knowledge – through research, teaching and empowering students to succeed.

This is why we have volunteered our time to lead the first philanthropic campaign for The University of Queensland.

Because of the partnership between donors and UQ over many decades, in fact right back to the very foundation of the University, wonderful things have been achieved. There is so much more to do, and we want to be bold and proactive in getting it done.

The essence of *Not If, When* – the Campaign to Create Change is that together, our greatest days lie ahead. In order to live up to that ideal, we are looking for those with vision who want to partner with UQ's expertise to empower student success, drive discovery and impact, and transform teaching and learning.

We personally have partnered with UQ because we recognise that it is a centre of excellence that has access to the resources, researchers and bright minds to address the issues that are important to our community.

Our personal interests predominantly lie in two areas. The first is in ensuring any student who has the drive and talent to pursue an education is not prevented by either distance or lack of financial means. The second is in driving discovery into healthy ageing and medical research,

and this means an increasing focus on the brain as the next frontier for medical breakthroughs.

The brain is the essence of self, it defines us in a way no other organ does, and yet, it is the one major organ that we understand the least about. We still have only the vaguest idea of how the brain forms our personalities and our sense of self.

While we are close to a potential cure for dementia, a terrible disease that has also touched our family, we cannot truly address the range of neurological and mental health concerns that plague our society without understanding how the brain operates on a fundamental level.

This is a unique time in the field of medical research, and approaches like the *Not if, when* campaign will accelerate discovery and outcomes that will benefit us all.

While that motivates us, you may have a passion to create change in other areas. Whatever your passion may be, we would encourage you to reach out to us to establish how we might be able to help you achieve the change you want to see in the world.

web To learn more about how you can make a genuine difference, visit uq.edu.au/giving.

“This is what makes philanthropy extraordinarily powerful: the fact that one act of generosity can help humanity so much more than the raw numbers behind the actual donation.”

NOT IF, WHEN.

These stories highlight the goal of *Not If, When* – the Campaign to Create Change, which is to galvanise the community to help raise significant funds to support three key priorities: empowering student success, transforming teaching and learning, and driving discovery and impact.

SCHOLARSHIP BREAKS BARRIERS

EMPOWERING STUDENT SUCCESS

Donor-funded scholarships transform lives. Kate Heliotis's dream of becoming an engineer depended on it.

While building stick bridges over a creek in her backyard as a child, Heliotis (Bachelor of Engineering (First Class Honours) '16) realised a career in engineering would be perfect for her. However, a difficult and sometimes violent home life almost destroyed these aspirations. Having since graduated from UQ and secured her dream job in structural engineering, she remembers when the belief and support of others – including school teachers, a pastor, UQ mentors, and donors – were offered when she needed it most.

"As a teenager, there were very dark days, and even my teachers were concerned



about my home life. I was conditioned to believe that I wasn't smart enough, and that education and my personal dreams did not matter," Heliotis recalled.

The torment of a difficult home life and a strong sense of moral obligation to family duty were barriers to finding self-worth and believing she could ever be happy.

"When I received my letter of offer to study at UQ, I was blown away but I still had a huge fear of failing," she said.

Heliotis (pictured) credits a second-year scholarship, funded by a UQ donor, with changing her life.

It encouraged self-belief and provided financial support to focus on study, research, volunteering, and participating in study tours.

"In my first semester I managed to achieve a Dean's Commendation for Academic Excellence and was instilled with this new energy and focus. I was proud of what I could achieve on my own," Heliotis said.

"Knowing that donor support was there motivated me to excel at my studies. Being considered for a scholarship changed my life, and now as a graduate, I mentor students and want to give back to those who, like me, don't know their potential and what they can achieve."

LAW STUDENTS FIGHT FOR A FAIRER WORLD

TRANSFORMING TEACHING AND LEARNING

Providing free legal services to vulnerable members of the community does not sound like core business for lawyers but that's how UQ Law students are championing the public good.

Student Zoe Brereton already has formidable experience in international humanitarian law, having supported human rights in Uganda and helped abused women in India, but it was volunteering at a small, suburban Brisbane community legal service that changed her life.

The UQ Pro Bono Centre in the TC Beirne School of Law places students like Brereton with professional lawyers at community legal centres, to

assist disadvantaged and marginalised groups such as asylum seekers, people with a disability and vulnerable housing renters.

"I realised I didn't have to be overseas or at the apex of a big legal career to fight for people who can't afford to use the legal system," Brereton said.

"I love working with senior social justice lawyers who've dedicated their careers to the public good, easing people's fear and arguing for their right to justice."

UQ Pro Bono Centre Director Monica Taylor (pictured, left) said it was a win-win as students gain skills, insights and passion for the public good, while providing legal help to those in need.

"Access to justice is difficult for people in need. Our students make a real difference



and are highly valued by the community groups with whom we partner," she said.

"They develop a keen sense of social responsibility, a commitment to ethical legal practice and a commitment to making the legal system more accessible. These are core professional values UQ seeks to instil in its students."

Brereton is thankful to the Pro Bono Centre and its donors for helping set her on a rewarding career path.

"Senior lawyers and barristers do contribute to social justice work, and in 50 years I want to look back and know I stood up for the rights of others and was part of the solution, not the problem."

SCIENTISTS IN RACE TO SAVE NATURAL WONDER



DRIVING DISCOVERY AND IMPACT

The power of attraction is an unlikely ally in saving the Great Barrier Reef from the destructive scourge of its fiercest enemy, the crown-of-thorns starfish, and could play a major role in helping to save coral reefs and other marine environments globally.

Husband-and-wife UQ researchers Professor Bernard Degnan and Associate Professor Sandie Degnan (pictured, inset) of UQ's Faculty of Science found that the coral-eating starfish gather en masse when mating due to pheromones – a scent the researchers have decoded so the prickly pests can be lured together for their capture.

It's a possible solution and an alternative to the current expensive and largely ineffective methods such as diver collection, injections or robotics.

"Now we've found the genes the starfish use to communicate, we can begin fabricating environmentally safe baits that trick them into gathering in one place, making it easier to remove reproductively primed animals," Bernard said.

However, without new funding it could take another five years to develop and deploy the technology.

"The world needs a big win when it comes to stopping marine destruction by invasive species and we want to go to the next stage by deploying pheromone baits on a massive scale," Sandie said.

At stake are coral reefs and marine environments not only along the Queensland coast but around the world.

"For an already struggling Great Barrier Reef, and indeed any reefs across the Indo-Pacific region, these starfish pose an enormous threat due to the ability of a single female to produce up to 120 million offspring in one spawning season," Bernard said.

Sandie said the research was a lifeline when so much was at stake.

"The loss of this natural wonder would be devastating and not just in economic terms. I worry our children and grandchildren won't ever get to experience or work with the reef if we don't act now. This discovery holds our hope," she said.

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To find out how you can support a cause that motivates you, visit uq.edu.au/giving.

HOPE RETURNS *as memories fade*

There is currently no treatment or cure for dementia – the second leading cause of death in Australia, the leading cause of death for Australian women, and a disease that affects almost one in 10 people over the age of 65. Now a UQ breakthrough is offering hope to millions around the world.

DRIVING DISCOVERY AND IMPACT

When his wife Glenys Petrie was seriously injured in a car crash in 2008, John Quinn stepped up to care for her – thankful that he had the time to be at her side.

With John's support Glenys recovered, but it was a bitter journey and one that promised no easy end. Because at the time of the accident, Glenys had been caring for John.

Only weeks earlier, John had been forced to take extended sick leave from work because of difficulty with planning, making decisions and problem solving, symptoms the then 57-year-old would later learn were a result of younger-onset Alzheimer's disease.

John's world stopped when he was eventually diagnosed in 2010. Alzheimer's, he thought, was an old person's disease. He remembered his mother "fading away" in a nursing home and how the disease stripped her of her dignity as well as her memory.

Once an enthusiastic school principal whose personal identity was fused with the intellectual satisfaction of his job, John found himself sinking.

"I felt a deep sense of hopelessness and despair. I was in a deep hole and just sat in my chair not showing any emotions, staring at the four walls and wondering what my life would be," he said.

John (Bachelor of Commerce '86) felt humiliated by the stigma of Alzheimer's and that for him there was no way out. He "hit rock bottom" and felt that he had betrayed his family by failing as the primary breadwinner.

"My darkest moments lasted six years. It took two years to tell my son. I didn't know what to tell him, I was so ashamed."

Glenys said the journey after John's health began to decline was arduous for the whole family.

"My car accident was just six weeks after John had to leave work, so while he was coping with his own illness he also became my carer," she said.

"He had to take on the task of physically lifting and assisting me while I recovered. My recovery is ongoing, but where my injuries were predominantly physical, John's are mostly hidden.

"We have worked together to push and support each other in our recoveries.

"We coined this term 'care partners' and, at the time, we didn't even know the term was a part of the modern lexicon for those living with dementia until we became more involved with community initiatives.

"John and I still support each other. He is my rock and our focus now is on living the best possible life we both can.

"John is very active and we have a vibrant life, but the shadow of dementia is something that continues to haunt us even in the happiest of times."

Alzheimer's is the most common form of dementia, and accounts for up to 80 per cent of all dementia cases. It can mean a long and slow descent into senility, then death. There is no cure or treatment. ►



“I felt a deep sense of hopelessness and despair... staring at the four walls and wondering what my life would be.”



John Quinn is living with Alzheimer's disease.

Finding a cure is the powerful dream that occupies the waking hours of Professor Pankaj Sah and his team of researchers at UQ's Queensland Brain Institute (QBI).

The stakes are high, not just for John and Glenys but for the 1.1 million Australians whose lives will be diminished by the disease by 2056.

Sah described how an unexpected UQ discovery is turning the dream of a cure into reality.

“We were using ultrasound to open up blood vessels to deliver drugs into the brain, but it turned out the

ultrasound cleared the plaque away even without the drug,” Sah said.

It is a discovery that has the potential to reverse Alzheimer's symptoms, restore memories and give hope to millions around the world.

“The word ‘breakthrough’ is often misused,” Sah said, “but in this case I think this really does fundamentally change our understanding of how to treat this disease and other diseases as well.”

UQ's non-invasive approach works by enabling the safe penetration of the brain's highly evolved blood barrier, which is situated between the

brain's blood vessels, cells and other components that make up brain tissue.

The blood-brain barrier prevents most things from leaving the bloodstream and entering the brain. While it is beneficial in stopping foreign substances such as toxins or bacteria from entering the brain, it is an impediment to drug development for brain disorders. Not surprisingly, vast resources have been devoted to designing barrier-penetrating drugs.

In looking for a way through the barrier, QBI researchers found that not only could ultrasound temporarily open up the blood-brain barrier, but it activated

immune cells that could clear toxic protein clumps and restore memory function.

This discovery is the result of world-class scientists moving to Queensland and building greater scientific capability in dementia. Researchers, engineers and clinicians are now working to advance this work to human patients as quickly as possible.

A treatment could be in clinical trial as early as three to five years from now, if funding can be found.

“We now have an effective and safe mechanism with which to beat Alzheimer's disease, and I foresee the development at UQ of a device that is effective, cheap and mobile,” Sah said.

That can't come soon enough for John, who is going about his daily life – visiting friends at the local café or exercising – but feeling ever more despair at his changing symptoms and vulnerability to the inevitable.

“Alzheimer's has many faces. When I come home I'm exhausted by the overload on my brain of just having a conversation,” John said.

“I don't really follow what people are saying even if they think I do. If they revisit the conversation it's obvious I didn't understand what was said. It's humiliating.”

With the support of donors, there is hope for hundreds of thousands of Australians like John.

“The research that QBI is undertaking into dementia is phenomenal. We hold out hope that one day John might be able to make it to the trials if they receive the support they need to move forward,” Glenys said.

“Dementia touches so many families, so many lives, and what we have here is a possible cure, and that fills us with such hope, not just for us, but for the millions of families living with this disease.”

web To join the community of children, partners, patients, researchers, advocates, donors and clinicians at UQ helping to find a treatment for this disease, visit uq.edu.au/giving.

**NOT IF,
WHEN.**

Robbing us of memories and life



effective treatments for dementia



Australians diagnosed with dementia every day



Australians over the age of 65 living with dementia



Australians predicted to be living with dementia by 2056

Source: Dementia Australia, 2017

But there is hope...

Ultrasound technology developed at the Queensland Brain Institute at UQ allows researchers to open the blood-brain barrier temporarily, and direct antibodies and drugs to clear the areas of the brain affected by the build-up of toxic plaque. Here's how it works:



Toxic plaque builds up in the brains of people living with dementia. This plaque damages brain cells and leads to cognitive decline, memory loss, aggression and eventually death.



Ultrasound technology directed through the skull exerts mechanical forces on blood vessels, temporarily opening the blood-brain barrier.



In combination with ultrasound, drugs and antibodies can enter the brain to break down and clear away toxic plaque – stopping the progression of dementia.

To learn more about the work being done at the Queensland Brain Institute, visit qbi.uq.edu.au/dementia.



Benjamin Gibbons makes the most of the 24-hour, seven-days-a-week access to the collection in the Walter Harrison Law Library (far left), and Kate Cincotta, Michael Chen and Keilin Anderson in the group learning space (left).

Dr Kai Luck with student Emily McClelland (right). Students are encouraged to ask for advice and meet with academics in the new collaborative spaces.



LAW AND ORDER *meets Grand Designs*



The Forgan Smith building is the visual centrepiece of UQ and home to the School that has nurtured some of Australia's most influential legal professionals, politicians and business leaders.

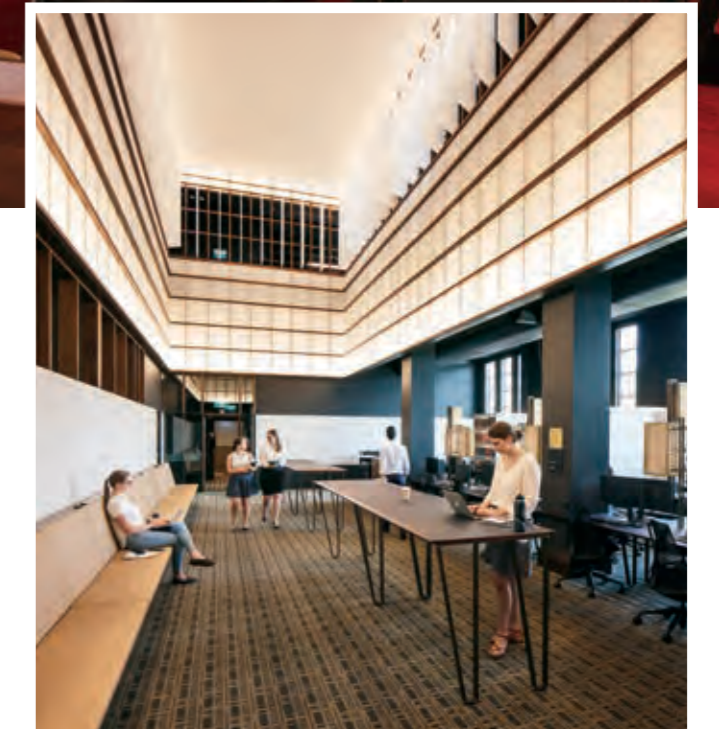
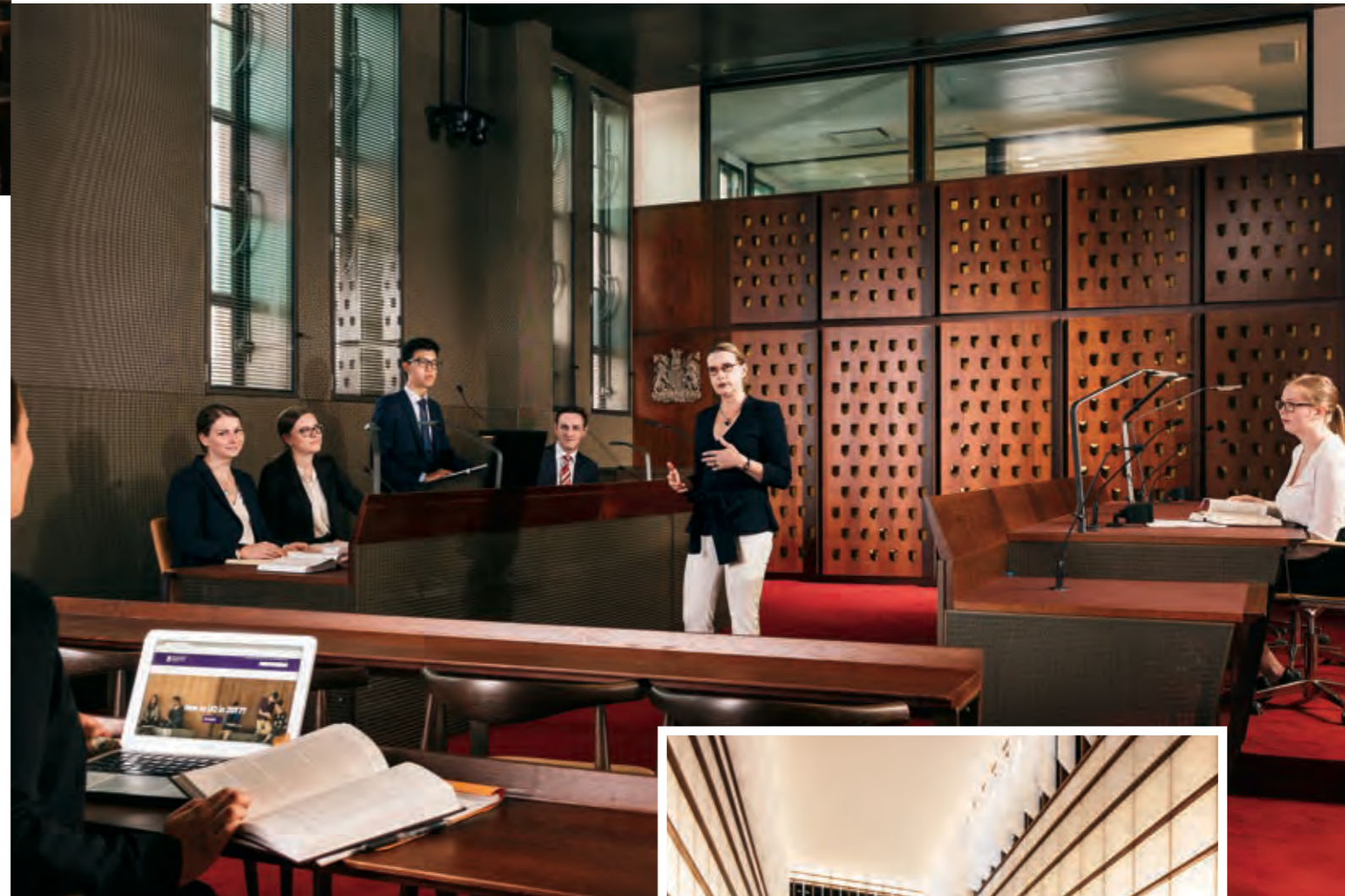
Contact previewed plans for the refurbishment of the Forgan Smith building in its Winter 2016 edition and can now reveal the breathtaking internal transformation of the home of UQ's TC Beirne School of Law.

Head of School and Dean of Law Professor Sarah Derrington said the refurbishment meant UQ and Brisbane could continue to attract and

retain the best and brightest legal minds. The recent refurbishment, supported by University capital works funding and philanthropic donations, includes collaborative research spaces, independent study areas, and facilities for mobile technology and innovative learning.

The reimagination was designed by BVN Architecture's Brian Donovan and Damian Eckersley under the guidance of heritage architect Andrew Ladlay.

video To take a virtual tour of the TC Beirne School of Law, view this article online at contact-magazine.uq.edu.au or download the *Contact* app.



Students practise mooting under the direction of Dean of Law Professor Sarah Derrington (above), and donor books acknowledge the generous philanthropic donations towards the refurbishment (middle left).

The refurbishment features a light, open design with more contemporary spaces to learn and study (left and right).

Images: Sam Scoufos/Compadre Picture Co.



BODY *of evidence*

Forensic anthropologist
Donna MacGregor.

Donna MacGregor has seen death. As a forensic anthropologist, police officer and Army reservist, she's seen it all. The UQ alumnus studies skeletons. It can be shocking, sometimes chilling, but always fascinating.

Buried beneath World War II battlefields in Papua New Guinea (PNG), they wait.

For more than 70 years they've waited. More than 2000 missing soldiers, with no known graves, casualties of Australia's three-year campaign in the Pacific.

They were young men. Some just boys. And they never got to say goodbye.

Seventy-two years after the fighting ended in 1945, and thousands of Australians lost their lives, Unrecovered War Casualties – Army (UWC-A) is helping to identify those brave soldiers and give them the dignified farewells they deserve.

Donna MacGregor (Bachelor of Science (Honours) '94) is an Army reservist and the only forensic anthropologist in the Army. Her role is to read skeletal remains to help determine identities.

In her day job, she's a lecturer at Queensland University of Technology (QUT) teaching anatomy and forensic anthropology, having previously worked for 10 years with the Queensland Police.

"These soldiers are the ultimate cold cases," MacGregor told *Contact*.

"The goal is to give them a final resting place and a name on a headstone.

"It's a long, complicated process and the shortlist of identities could be hundreds of people.

"A forensic anthropologist's role is to study the skeletal remains to provide biological profiles, which then starts a shortlist of those who are missing. Genealogists, biologists and investigators will then try to match family reference samples.

"These soldiers are the ultimate cold cases. The goal is to give them a final resting place and a name on a headstone."

"It's difficult because these soldiers have been buried for 70 years, and some family lines no longer exist."

UWC-A also conducts investigations in countries like France, Belgium, Turkey, Timor and Malaysia, and MacGregor has travelled with the team searching for missing Australian soldiers from World War II and Vietnam conflicts.

"Last year, I was part of a team that brought home the remains of 33 Australians from the Terendak Military Cemetery in Malaysia, a burial site for soldiers who served in the Vietnam War," MacGregor said.

"We were in the hangar at the RAAF airbase at Richmond in New South Wales with the families when the coffins arrived. They were direct relatives – husbands, wives, children.

"To see the emotion was amazing because the families had been petitioning to have them brought home for a long time. When you see how it affects families, it is quite rewarding.

"As an anthropologist, I don't often interact with the families. The investigators are the points of contact. But it's nice to know that the work you do makes a difference."

Despite a career spanning more than two decades, MacGregor is still fascinated by what bones can reveal about how a person lived and died. ▶





Donna MacGregor at work at a crime scene with the Queensland Police Service (above) and in her role as a university lecturer (right).

“Bones tell us so much, from ancestry to sex, age and stature,” she told *Contact* while studying radiographs in a teaching laboratory.

“We might be able to assess whether the deceased had any metabolic diseases, or whether they had a healed injury. We can also look at traumas and any anomalies.

“If you have a radiograph to compare against, that can assist towards identification. It can all depend on the quantity of remains. Sometimes we might only get a few fragments of bones; other times we might get a complete skeleton.

“Over the past few years we have seen a vast increase in the access to computer tomography (CT) technology and this has allowed us to develop a lot of new techniques.

“We are able to see into bones more deeply, rather than just observing their surface. We can better understand bone development and healing, and see the internal structures that reveal more about age.”

MacGregor never dreamed of a career in forensics or examining dead bodies when she began her science degree at UQ in the early 1990s.

“I went to UQ with the aim to pursue maths and chemistry teaching,” she said.

“I was soon exposed to all of the sciences, including anatomy and

physiology, and I was hooked. Shocked at first, but completely fascinated.

“From the outset, you’re dealing with human cadavers. It’s part of the teaching process to understand three-dimensional structures and variation.

“Part of that process is realising you are working with deceased people who have donated their bodies, but you need to build some emotional separation into it.

“During my postgrad years, one of my supervisors and lecturers, Dr Wally Wood, ran forensic programs. He was doing a bit of work with the police and that sparked my interest.”

MacGregor joined the Queensland Police Service in 2000 and spent three years as a general duties officer before moving into the forensic services branch, where she worked until 2010.

“I valued those early years in general duties as I learnt to appreciate how hard police officers work and how difficult the job can be,” she said.

“There are great risks that come with being a police officer in general duties. When I moved into forensic services, I was coming along after the incident and not dealing with the frontline responses and risks.”

MacGregor stepped away from full-time police duties in 2010 to pursue teaching, but is still a sworn officer and works part-time with the Queensland Police.

“It’s about trying to bring closure to the families. Some families are out there looking for years and years.”

She is on call when skeletal remains are found.

One of the biggest investigations she was involved in with Queensland Police in recent years was that of missing Sunshine Coast boy, Daniel Morcombe.

The 13-year-old was abducted and murdered in 2003 and the case remained open until a breakthrough arrest in 2011. MacGregor was part of the team that finally recovered and identified Daniel’s remains.

“The jobs that have stayed with me a little bit longer are the ones that involve children – not just the case of Daniel,” MacGregor said.

“Adults can sometimes be victims of their own circumstances, but children are just innocent. They are trusting and it hurts to think what people can do.

“With Daniel, it was nice to be part of the team that found him and gave him back to his family.

“That’s what any case is about. It’s about trying to bring closure to the families.

“Some families are out there looking for years and years, and I can’t begin to imagine what that would feel like.”

MacGregor admits that her career choice might seem sombre, and at times grisly, but she feels lucky to have so much variety in her working life.

“Having the policing background equipped me well for the Army because battlefields can be similar to crime scenes in terms of the complexity and time associated with examining the sites,” she said.

“I’m lucky that I can work in both those fields and add value. And I have the teaching that provides a foundation to build my expertise and knowledge.”



MacGregor teaches more than 130 students in her university role and has worked in PNG during 2017 over several field activities with UWC-A.

“It depends on where remains are reported, but we have worked in areas related to the Kokoda campaign. We’re typically working in jungle conditions. Some areas of PNG are very remote,” MacGregor said.

According to UWC-A, more than 2000 World War II soldiers are still unaccounted for in PNG.

“These soldiers gave their lives for their country and deserve to be honoured and laid to rest. And their families deserve that closure,” MacGregor said.

And so they wait. ■

HONOURING OUR FALLEN HEROES



Unrecovered War Casualties – Army is responsible for finding, recovering and identifying Australian soldiers from past conflicts. Cases are currently being investigated in Papua New Guinea, France, Belgium, Timor and Turkey.

Investigations occur when human remains have been discovered and there is evidence that they may be those of an Australian soldier. Investigations can last months or even years.

Each investigation involves a team of forensic and historical experts.

The identities of every soldier who went missing in the area under examination are closely examined for clues. Commonwealth War Graves Commission records are also examined.

For more information about UWC-A, visit army.gov.au/our-work/unrecovered-war-casualties.



INNOVATORS EMBRACE *the fast pace*

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UQ Idea Hub Director Nimrod Klayman with China Mobility Program student entrepreneurs Jonathan Bester, Luis Ayoramarin, Isabelle Barrass and Michael Mersiades at the Caohejing Hi-Tech Park (top left); students Lachlan Jensen, Chloe Chai and Michael Fosyth (top right); and Chai working at Chinese startup business Urbem TasteCard (left).



China Mobility Program student entrepreneurs Alexander Bell, Lachlan Jensen, Ben Coughlin and Oskar Rafferty at the Caohejing Hi-Tech Park (above); and Jensen, Gemma Macarthur, Chloe Chai and Alex Barnett at Chinaccelerator, a leading startup accelerator in Shanghai (far left).

Images: Bodhi Connolly and Nimrod Klayman.



SPOTLIGHT ON CHINA

6559
Chinese students enrolled in UQ programs

2872
Publications between UQ and Chinese institutions between 2012 and September 2017

70
research projects involving Chinese institutions between 2012 and 2017, worth more than \$20.3 million

11,343
UQ alumni born in China

194
UQ academic staff members from China

Amid the hustle and bustle of Shanghai, a select group of UQ students are living their dreams in China's fast-paced and ever-growing startup business world.

More than 70,000 startups have reportedly set up in Shanghai since mid-2016, and each year students from a range of backgrounds are embracing the opportunity to spend four weeks learning from these businesses through the UQ China Mobility Program.

The program is an initiative of the UQ Idea Hub, one of the University's campus-based idea incubators and accelerators, where students learn the process of founding, investing and growing an early-stage business in China.

Commerce and business management student Chloe Chai spent a month this year working at Urbem TasteCard, a startup offering culinary recommendations as well as exclusive dining offers to VIP members. It operates as a platform on WeChat, one of China's largest social media applications that integrates instant messaging, commerce and payment services.

Chai said that learning in a fast-paced and passionate environment was a priceless opportunity.

"Chinese entrepreneurs are known to possess a pragmatic approach to their work ethics and seek to find the quickest route to success," she said.

"The ability to watch a Chinese startup work in a market where consumers adopt new technology and services at extreme speed was valuable as these consumer behaviours are not typically found elsewhere."

Chai said one of the biggest differences between the Australian and Chinese startup landscapes was the sheer size of the consumer market.

"Chinese entrepreneurs have to break through the noise and execute at an outstanding level to be considered as a player," she said.

"People and companies in China not only move fast, but are also not afraid of embracing risk, something Australia can definitely learn from."

Each UQ Idea Hub round is run over a period of six weeks. Teams of students,

alumni and successful entrepreneurs form around ideas through a process of pitching and critique. They attend workshops covering topics such as research, pitching and storytelling, prototyping, market validation, and business models.

web To see more photos from Shanghai, view this article online at contact-magazine.uq.edu.au or download the *Contact* app.





From little things **BIG THINGS GROW**

1967 was a big year for Kev Carmody. That was the year he turned 21, got married and witnessed a resounding 'yes' vote in the 27 May referendum – a vote that carried hope to improve the lives of Indigenous people.

For the singer-songwriter once dubbed 'Australia's black Bob Dylan', this was a major turning point in his and fellow Aboriginal and Torres Strait Islander peoples' lives.

"We were finally being recognised as blacks, with our own culture and identity," he said.

"We actually had rights to go into the picture theatre or the pub, we could vote... this was unheard of in a society with such institutionalised racism. I just couldn't get my head around it."

For, despite being proud of his 65,000-year Lama Lama and Bundjalung heritage, Carmody (Diploma of Education '81) was used to hiding his identity – in fact, his whole body.

"As a child growing up in a droving family in western Queensland, my younger brother and I were taught to run and hide whenever we heard a motor car or engine because they [the authorities] were just taking all the kids away at that stage," Carmody said.

"We thought it was a game. But that all stopped when an old Catholic priest convinced my parents to put us in his boarding school to 'get the authorities off your back'. I was nine or 10 at the time and found it hard being put in the Grade 1 class to learn how to read and write.

"I remember thinking to myself that my intellect was going to be crammed with their way of thinking, yet I had all

these skills they didn't have – tracking, fencing, horse-handling. At age 10, I already knew how to make a living; I could survive, and I didn't see why I needed to learn whitefella ways."

Still, he stayed at school until early 1964, after which he spent several years working as a drover, wool presser, welder and labourer before enrolling at the Darling Downs Institute of Advanced Education to complete a Bachelor of Arts. He had already been studying music part-time and his teacher thought he would cope.

Carmody then moved to Brisbane and completed a Diploma of Education at UQ, later enrolling in master's and PhD programs. However, he spent much of his time involved in student politics and forging his music career.

"UQ was a very political place during the 1960s, '70s and '80s, but so was the rest of the world," he said.

"You had the Vietnam War, the civil rights movement in America – there was change happening. The dominance of Christian theology had started to erode and the traditional political system was having trouble coming to terms with everything."

Since 1957, Queensland had been ruled by a conservative coalition government and protests had been effectively banned. But this did not stop about 4000 UQ students and staff from taking part in the first civil liberties march from

UQ's St Lucia campus to the Brisbane CBD on 8 September 1967. A turning point in activism in Australia, it led to the arrest of many.

So for the referendum to have been passed earlier that year was perhaps inevitable in such times of change. Carmody certainly thinks so, and believes that era was also the start of the land rights movement.

"In 1966, word was starting to spread about the drovers walking off Vestey [Wave Hill] Station in the Northern



Children on the Builders Labourers Federation float during the May Day procession in 1967. Image: Grahame Garner Collection/Fryer Library

Aboriginal and Torres Strait Islander audiences are warned that this photograph may contain images of deceased persons, which may cause sadness or distress.



“To imagine my people not being considered as human is just disgusting, and also frightening.”

Territory because of the appalling conditions – not only with the wages and living conditions, but what was happening with the women when the men were off mustering. It made the news each night and in a sense consolidated a lot of Australia who started saying, ‘well this is just deplorable that these people haven’t even got the vote.’”

By the time Carmody arrived at UQ years later, many other issues – such as campus safety, sexism and police brutality – had captured his attention. With community Radio 4ZZ located on campus, he would take his guitar down to the studio and do a song live to air that would then be sent all around Australia.

“It was like an open conference. I would just make up a song on the spot when we held our little protests,” said Carmody, who would later co-write ‘From Little Things Big Things Grow’, a song about the Indigenous struggle for land rights and reconciliation.

One of these ‘little protests’ included working with UQ’s first Aboriginal tutor Lilla Watson and social work academic Matt Foley (who later became Queensland Attorney-General) to help establish what is now the Aboriginal and Torres Strait Islander Studies (ATSIS) Unit on campus.

“We had to face the full Academic Board and explain why they were getting [Indigenous] students but not keeping them, because our mob’s used to having big communities around them. Thank goodness they finally got it, and the retention rates went up straight away,” Carmody said.

Fast forward to 2017 and another 21-year-old, Tionne Seden (Bachelor of Health Sciences ‘16), visits the ATSIS Unit almost daily. Currently studying a Doctor of Medicine program, Seden is a proud Torres Strait Islander woman and appreciates having a ‘home’ away from her home in Cairns.



Doctor of Medicine student Tionne Seden (far left), Senior Lecturer Dr Chelsea Bond, Research Fellow Michael Aird and PhD graduate Dr Pearl Duncan.

“The ATSIS Unit is a cultural haven for me on campus. I feel a sense of belonging here,” Seden said.

Although not alive at the time, she believes the 1967 referendum was instrumental to her pride, identity and educational opportunities.

“To imagine my people not being considered as human is just disgusting, and also frightening. Without the ‘yes’ vote, I wouldn’t be able to walk around campus or in shopping centres and be proud of who I am and where I come from,” she said.

“It makes sense why my Athe (grandfather) encourages and praises us, his grandchildren who are at school and university, to get qualifications and make the most of our opportunities.”

Dr Pearl Duncan (Doctor of Philosophy ‘14), who worked as a teacher in New South Wales in 1967, agrees that education needed improving in the ‘60s.

“Aboriginal people couldn’t live in white suburbs or get a job, schools could refuse to accept Aboriginal children, or parents could band together and get Aboriginal children removed from schools,” she said.

At the time of the referendum, she said the topic of the vote was in all the media and most people were all for it.

“I was accosted in the streets by [non-Indigenous] people saying they would be voting ‘yes’ in the referendum and that they were excited to be involved, saying it was long overdue,” she said.

Duncan said things did improve for her people after the referendum, and “rather quickly” once Gough Whitlam took power.

“It was about time people could make up their own mind and be able to influence government policies.”

Senior Lecturer in the ATSIS Unit and Munanjahli woman, Dr Chelsea Bond (Bachelor of Applied Health Science (Hons) ‘01, Doctor of Philosophy ‘07), believes we still have a long way to go.

“While it was a remarkable feat that, 50 years ago, 90 per cent of Australians supported (in principle) the idea of a fair go for Aborigines, we cannot get too swept away with the idea that attending to the power of race is unfinished, or that it is confined to a constitutional clause or two,” she said.

“Fifty years on, there remain some uncomfortable truths about what those amendments did to improve the relationship between Indigenous and non-Indigenous Australia... I cannot be blinded to the ways in which my presence is read racially, regardless of how hard working I am, how articulate I might be or how acceptable my presence might appear.”

UQ Research Fellow Michael Aird (Bachelor of Arts ‘90) agrees somewhat, as demonstrated in his *From relics to rights* exhibition currently on show at the UQ Anthropology Museum.

“The 1967 referendum was a symbol of nothing really changing very much

legally, but it was an incredible show of support from mainstream Australia to Aboriginal people,” he said.


“It was also the start of the Australian Government taking charge of Aboriginal programs and taking control off the states – which did not have a high opinion of Aboriginal people, seeing them as an inconvenience and having deprived them of many financial, educational, social and employment opportunities.

“But once that public support happened on 27 May 1967, many positive outcomes eventuated. Right across society, things were changing and justice for Aboriginal people was part of that.”

Although Aird is “always positive that things are getting better all the time”, he thinks more still needs to be done and, from his anthropological perspective, education is the key.

“You have to understand past injustices to understand why people are still suffering today. As much as we’d like them not to be, consequences are ongoing.”

web To read the extended story, view this article online at contact-magazine.uq.edu.au or download the *Contact* app.

 **THE YES VOTE, 50 YEARS ON**

On 27 May 1967, a referendum was held in Australia with the question:

Do you approve the proposed law for the alteration of the Constitution so as to omit the words relating to the people of the Aboriginal Race in any State and so that Aboriginals are to be counted in reckoning the population?

In other words, should Aboriginal and Torres Strait Islander peoples be counted in the national census, and should they be administered under one Commonwealth law, rather than six different State laws?

Then & now

100 YEARS of engineering excellence

In its 100-year history, no one has had more impact on chemical engineering at UQ than the late Robert John 'Gus' Wiles AM.

For four decades, Wiles was considered the heart and soul of chemical engineering at UQ, and his legacy will help to ensure the University remains one of the world's most influential in the field for many years to come.

Head of School Professor Peter Halley said Wiles's dedication was unmatched and his approach to education was ahead of his time.

"Gus acknowledged the importance of a well-rounded education – one which included international education, vacation work opportunities and industry networking," Halley said.

"He encouraged his students to undertake semesters abroad at international universities and broaden their engineering knowledge and skills – something for which he often provided personal financial assistance."

The Robert 'Gus' Wiles Scholarship Endowment Fund was established in 2010 and has been generously supported by alumni and the community ever since.



"The philanthropic contributions of our younger graduates is quite remarkable. One of our 2015 graduates recently donated \$1000, which is extremely generous for a 22-year-old who has only just started their career," he said.

Through the Robert 'Gus' Wiles Scholarship, chemical engineering student Anh Ngo was able to study at the University of California, Berkeley, during the university's fall semester last year.

Ngo said the scholarship not only allowed her the opportunity to study at the top public university in the world, but also gave her a fresh perspective on life.

"I gained long-term personal and educational development. It tested my resilience, and I developed independent opinions," she said.

"It increased my awareness and adoption of alternative, multifaceted approaches to learning, and enriched my interest in global issues."

UQ celebrated 100 years of chemical engineering at a centenary gala dinner at Brisbane City Hall in November this year. The event, hosted by Halley and radio and television personality Bernie Hobbs, was one of the biggest

"Gus acknowledged the importance of a well-rounded education."

The fund provides scholarships of up to \$5000 to encourage and support meritorious chemical engineering students, who undertake an approved overseas exchange in years three or four of their undergraduate program.

Wiles was proud of, and humbled by, the support and left one final gift for the School after his death in 2014 – a bequest of \$50,000 to the fund. More than 250 alumni have now supported the fund and Halley said there had been a recent push to endow the scholarship.



School of Chemical Engineering Senior Research Assistants Marjan Javanmard and Sophia Rodrigues in the Stokes Laboratory (above); and UQ chemical engineering students in 1963 (left).

gatherings of chemical engineering professionals in Queensland's history.

A chemical engineering degree, then known as a Bachelor of Applied Science in Chemistry and Chemical Engineering, was first offered at UQ in 1916 – decades before any other Australian university.

One of UQ's original four professors and first president of the University's Professorial Board, Professor Bertram Dillon Steele, was influential in establishing the degree.

He envisaged a course that could serve all of Australia, including studies assisting in the development of industries new to the country.

The four-year degree was part of the Walter and Eliza Hall School of Applied Chemistry, which opened in 1917.

Of the few students who enrolled in the course in 1917, Ernest Stewart Edmiston, was the only one to complete all the requirements, graduating in 1921.

Besides the study of unit operations and processes (together with the appropriate science foundation of mathematics, chemistry and physics), the course included first-year geology with economic geology and physical metallurgy, as well as civil, mechanical and electrical engineering subjects.

The course also included areas of economics, law and psychology.

Today, the School sets a benchmark for educational change at a national and international level. It has a five-star rating in the QS World University Rankings by subject and is ranked as one of the top 50 of its kind globally.

The School boasts more than 600 undergraduate students (39 per cent of whom are female), more than 180 PhD students, and is a recognised national and international leader in chemical engineering with excellent fundamental and industry-applied research.

web To see photos from the gala dinner, view this article online at contact-magazine.uq.edu.au or download the *Contact* app.

A CENTURY OF LEADERSHIP

1910 Professor Bertram Dillon Steele is appointed Head of Chemistry at UQ.

'16 A course leading to a bachelor degree, including 'chemical engineering' in its title, is first offered at UQ.

1920 Ernest Stewart Edmiston is the first student to graduate from a Bachelor of Applied Science in Chemistry and Chemical Engineering degree at UQ.

1950 School of Applied Chemistry moves from George Street to St Lucia. The St Lucia building is named after Professor Steele.

'50 Valeria Blakey (nee Blagonravoff) becomes the first woman to graduate in chemical engineering at UQ.

'59 'Gus' Wiles graduates from UQ.

1960 Lecturer Jim Howarth is awarded a PhD, the first in chemical engineering at UQ.

'67 Wiles begins working as a demonstrator in chemical engineering.

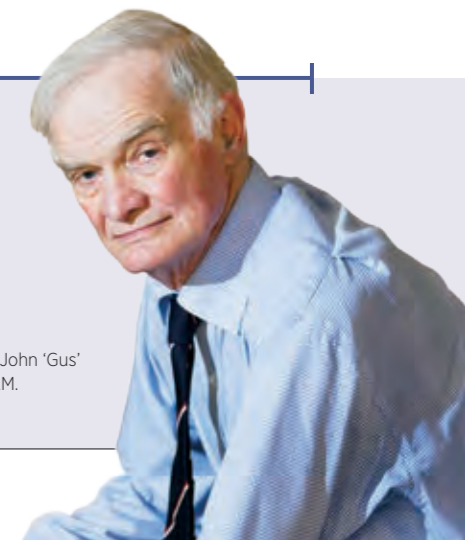
1970 Sir Russell Drysdale opens the new Chemical Engineering Building, now known as the Don Nicklin Building.

2000 Wiles retires as a Senior Lecturer at UQ.

'09 The UQ School of Chemical Engineering is established after the UQ School of Engineering (which incorporated individual disciplinary departments) becomes the Faculty of Engineering, Architecture and Information Technology.

2010 Wiles is advised in November that he has been made a Member of the Order of Australia (AO). He dies in December.

Robert John 'Gus' Wiles AM.



It was love at first sight for Steve 'Zed' Robertson AM, and his plans to study medicine were about to take a very different trajectory.

"UQ's Gliding Club had a glider on display and I went over because I saw a pretty girl standing near it," he remembered.

"The glider caught my eye too, so I ended up joining the club."

That chance encounter blossomed into a lifelong romance with flying, and a career that has taken Robertson (Bachelor of Science (Chemistry and Mathematics) '88) to the top of the Royal Australian Air Force (RAAF) and earned him membership of the Order of Australia in 2012.

The 49-year-old Air Vice-Marshal – whose nickname 'Zed' was adopted as his unique pilot call-sign – has helped steer some of the RAAF's most

important strategic decisions and combat operations, rocketing through the ranks.

A decade ago, Robertson thought he had gone as far as he could with the RAAF. He had a young family with his wife Libby and UQ was calling him back because that unfulfilled dream of studying medicine persisted.

However, fate intervened in his career again when he was head-hunted to lead the RAAF's massive \$6.5 billion transition to the F/A-18F Super Hornet, which was to replace the F-111 jets.

His RAAF career trajectory had just gone supersonic.

Robertson credits UQ with providing him with foundational skills for his career.

"I learned the skills to complete what you start, to research and study effectively and discern what's important.

"I found that my science-based skills – problem-solving techniques, the ability to work with other people, and analysing scientifically – are skills that I can apply across various aspects of my job."

In 2014, Robertson was identified to command the Air Task Group in Operation OKRA, the Australian Defence Force's contribution to the international effort to combat the Daesh (also known as ISIL) terrorist threat in Iraq and Syria.

Australia's contribution is being closely coordinated with the Iraqi government, Gulf nations and a broad coalition of international partners.

Early in the operation he found himself alongside many partner nations coordinating the coalition's air-combat effort.

"It was important we all stayed focused, making sure we understood why we were there," he said.

During an Australian-led strike, Iraqi civilians appeared on the operations room's surveillance screen.

Everyone in the room fell deathly quiet.

"We were horrified. A young family was running across the area we were about to bomb," Robertson said.

"Because of the training and protocols the Australian team had in place, we managed to divert the strike point so the family escaped unscathed.

"A solemn moment of reflection and a chill down the spine followed. The presence of civilians in a war zone is a reality that the best procedures and care cannot nullify. War is a violent and ugly endeavour."

It was a defining moment for Robertson, who reinforced that there is humanity amidst the horror, which is the quality that he wants to both drive and underpin his leadership of the men and women of Australia's Operational Air Force elements.

web To see more photos of Steve 'Zed' Robertson, view this article online at contact-magazine.uq.edu.au or download the *Contact* app.

"The presence of civilians in a war zone is a reality that the best procedures and care cannot nullify."

The A to **ZED** *guide to air combat*

When a youthful science student saw a girl standing next to a glider in the Great Court during O-Week, his career began to take flight.



CELEBRATING EXCELLENCE

UQ Alumni Awards 2017

From inspirational young achievers to leaders in their chosen fields, meet the outstanding recipients of The University of Queensland Alumni Awards 2017.

The University of Queensland's 2017 Alumni Awards recognise a diverse range of leaders who have created change by advancing knowledge, powering economies and advocating for human rights and dignity.

UQ Vice-Chancellor and President Professor Peter Høj paid tribute to the recipients at the annual Courting the Greats ceremony held in October in UQ's Great Court.

Professor Høj said the awards recognised alumni who had accomplished outstanding success and made exemplary contributions to their fields and communities within Australia and globally.

"This year's recipients range from an award-winning journalist to

humanitarians, visionary philanthropists and business leaders," he said.

This year there are five Vice-Chancellor's Alumni Excellence Awards and four Distinguished Young Alumni Awards, an International Alumnus of the Year, an Indigenous Community Impact Award and a Colleges' UQ Alumni Award.

"The recipients exemplify the immense change individuals can create by taking action and giving back through research, volunteering, public service or philanthropy," Professor Høj said.

"The 2017 Alumni Awards recipients are leaders and innovators in their fields and have shown the powerful ways people can create change through

applying their passion and dedication to a cause.

"We continue to equip our graduates with the critical-thinking skills and acumen that prepare them for a multitude of career opportunities and the ability to tackle the world's biggest problems."

The UQ Alumnus of the Year and UQ Graduate of the Year Awards – both created and supported by the Alumni Friends of The University of Queensland Inc. – were also presented at the Courting the Greats ceremony.

The UQ Sportswoman and Sportsman of the Year were celebrated for their excellence in sport and their contributions to University life.

Vice-Chancellor's Alumni Excellence Awards



To read the full profiles of all award recipients, and watch a video from the Courting the Greats ceremony, view this article online at contact-magazine.uq.edu.au or download the *Contact* app.



MALCOLM BROOMHEAD
Bachelor of Engineering (Civil) '75
Master of Business Administration '84
King's College '70-'73

Broomhead is a business leader and philanthropist who has driven change in the education and resource sectors through hard work and generosity.

"The highlight of my experience working as a CEO has been discovering the power of getting the right culture in an organisation – it is culture that excites, motivates and excels us."



SUSAN BUCKLEY
Bachelor of Economics '85
Master of Business Administration '10
Cromwell College '83-'85

Buckley is an industry leader and pioneer of women in finance.

"I think my upbringing on a farm probably sparked my interest in markets at a young age. I started wondering why the price of grain went up or down and noticing fluctuations in the prices of agricultural goods... I wanted to know why."



ANDREW CAMERON OAM
Master of Tropical Health '95

Cameron is a highly decorated nurse and humanitarian aid worker, who has provided emergency relief, health care and training in some of the world's most volatile conflicts and crises.

"Aid work makes you feel like you're doing something worthwhile for your fellow humans. I think it's what keeps me going."



PROFESSOR MELISSA LITTLE
Bachelor of Science (First Class Honours) '85
Doctor of Philosophy (Biochemistry) '90

Little is an internationally recognised researcher, whose work includes the breakthrough of growing 'mini kidneys' in a laboratory.

"Biological science is an extremely artistic endeavour – creativity and lateral thinking are just as important in scientists as mathematical acumen or biochemistry knowledge."



MARIAN WILKINSON
Bachelor of Arts '76

Wilkinson is a multi-award-winning investigative journalist, whose contributions have included some of Australia's most significant reportage.

"Stay encouraged, because what the world is telling us at the moment, with all the turmoil going on, is that people still value quality journalism."

Distinguished Young Alumni Awards



DR ANDREW BARNES
Bachelor of Economics '09
Bachelor of Business Management
(First Class Honours) '11
Doctor of Philosophy
(Business Management) '17

Barnes is an entrepreneur, Rhodes Scholar and the founder of two successful startups focused on educational tools and resources.

"Education is one of those areas where a small amount of change can create a really big impact, particularly when addressing our world's biggest social challenges."



MICHELLE GRANT
Bachelor of Engineering
(First Class Honours) '02
The Women's College within The
University of Queensland '99-'01

Grant is a food systems specialist and educator, who runs a world-leading research centre tackling the world's most profound global food system challenges.

"When we collaborate with diverse people to try to make a positive change in the world, no matter how small it is, it can be really rewarding."



**ADJUNCT PROFESSOR
CARL HARTMANN**
Bachelor of Arts '05
Bachelor of Business Management '05

Hartmann is a multi-award-winning Australian entrepreneur best known for his work as co-founder of Temando.

"Success is not a birthright, it is a privilege. Life is hard, the odds are against you and it's only with hard work, tenacity and sacrifice that we achieve success."



DR RETNAGOWRI RAJANDRAM
Bachelor of Science
(First Class Honours) '05
Doctor of Philosophy (Medical
Science) '09

Rajandram is a researcher and academic, who is pioneering collaborative approaches between surgeons and researchers to provide excellent outcomes for patients.

"As technology changes and evolves we need to adapt. We cannot risk getting stuck working in old ways. Research and cross-discipline collaboration can help."

International Alumnus of the Year



**SHANDANA AURANGZEB
DURRANI**
Master of Development Practice '07

Shandana is an advocate for social justice and girls' empowerment in her home country of Pakistan through her work in the development sector.

"I have experienced the power of education to enable women and their children to realise their full potential. It has made me a stronger woman, a better person and mother, and this is why I'm so passionate about working for UNICEF."

Indigenous Community Impact Award



**ASSOCIATE PROFESSOR
NOEL HAYMAN**
Diploma in Applied Science '77
Bachelor of Applied Science '79
Bachelor of Medicine '90
Bachelor of Surgery '90
Master of Public Health '97

Hayman is one of Australia's leading Indigenous health experts and advocates.

"I love what I do. I am honoured to have the opportunity to care for my people and to influence Indigenous health policy."

UQ Sport Clubs and Sports Awards

SPORTSWOMAN OF THE YEAR



JACINTA CARROLL
Master of Physiotherapy student

Carroll is a world number one water skier and the reigning champion of water ski jumping.

"I am so grateful to be respected and highlighted as one of the top athletes among such an amazing sporting community at UQ."

SPORTSMAN OF THE YEAR



DANE BIRD-SMITH
Bachelor of Health, Sport and Physical
Education (Honours) student

Bird-Smith is an Olympic medallist who won bronze representing Australia in the Rio de Janeiro 2016 Olympics in the men's 20km walk.

"Behind the scenes is where champions are made, and UQ has been providing athletes with an amazing support network so that we can make giant leaps on and off the track."

Colleges' UQ Alumni Award



MAXWELL GAYLARD
Bachelor of Arts (Honours) '68
Emmanuel College '64-'66

Gaylard is a diplomat, human rights advocate and humanitarian who has had a profound impact on communities around the world through his work with the United Nations and the Australian Department of Foreign Affairs and Trade.

"The humanitarian situation is the worst I think it's been in my lifetime. But today, we also have a wave of young people who are brighter, more enthusiastic and better educated than ever to rise up and meet the formidable challenges."

Awards created and supported by the Alumni Friends of The University of Queensland Inc.

UQ GRADUATE OF THE YEAR



KAELA ARMITAGE
Bachelor of Pharmacy
(First Class Honours) '16

Armitage graduated with a Bachelor of Pharmacy (First Class Honours) in 2016. She was also Valedictorian, a University medallist and former Co-Chair of the UQ Young Scholars Program.

"I've found the soft skills I have learnt throughout my time at UQ have proven to be just as valuable as the clinical knowledge."

UQ ALUMNUS OF THE YEAR



**ADJUNCT PROFESSOR
JOHN STORY AO**
Bachelor of Arts '69
Bachelor of Laws '69
Doctor of Laws *honoris causa* '17

Story is a lawyer and company director who has served as Chancellor and a Senator, and is an Adjunct Professor of Law at UQ.

"UQ taught us to think, proving a great springboard for any career. As alumni, we have been proud of our alma mater as it has grown in stature. It's been a privilege to have played a role in its development."

DOSE of country charm

A rural Queensland pharmacy, owned and run by UQ alumnus Lucy Walker, has cleaned up at the 2017 Guild Pharmacy Awards. *Contact* caught up with Walker to learn her secret to success.

Six years ago, Lucy Walker was the Brisbane bride of a country boy who took her to his rural home in Goondiwindi, having cultivated their chance meeting at the town's picnic races into a life-changing romance.

After working as a pharmacist in London and a clinical pharmacist at Brisbane's Princess Alexandra Hospital, Walker (Bachelor of Pharmacy '01) applied for a position in one of Goondiwindi's two pharmacies.

She got the job and liked it so much she bought the business.

Today she employs 14 staff, including UQ graduate Emma Newsome (Bachelor of Pharmacy '10), and earlier this year was recognised for her efforts at the annual Pharmacy Guild of Australia Pharmacy of the Year awards. The Chemmart Pharmacy was named Australian Pharmacy of the Year and also won the Community Engagement category.

While the awards are a wonderful recognition, Walker said she loved serving her diverse and disparate customers, who can travel hours from surrounding properties.

"In a small town you really get to know the community well – town-people, backpackers, cowboys or retired farmers," she said.

These are exciting times for the self-confessed 'workaholic', now an unleashed entrepreneur and keen business operator.

"You get to know what's missing across the community – what is and isn't needed. I have these great ideas and say to myself: 'OK, so how are we going to do this?'"

Opportunity called when her pharmacy became part of the Queensland Pharmacist Immunisation Pilot (QPIP), delivering influenza vaccines.

However, in a small town she needed to get the local GPs onside.

"I pointed out that people found it difficult to get an appointment to see a doctor, and that trial data showed that community pharmacies could improve immunisation rates," she said.

"The GPs came around to us administering the vaccinations, and we've given 500 shots so far this season, which has freed up the clinics and cut waiting times."

Walker continues her strategic approach to building local relationships, and the town's economy, by buying local and supporting community endeavours.

"We can be found at events around town, like Dental Health in the Park, Aged Care Expo, the Colour Run, cotton growers' picnics, farmers' talks, community garden days and all sorts of fundraising events," she said.

Innovation is another key focus for Walker. With fewer city-based specialists travelling to country towns, the pharmacy consultation room was upgraded for telemedicine so customers and specialists could chat over Skype.

Chatting over the front counter is a friendly country pastime, but Walker's staff also use it to keep in touch with customers' needs.

"In a small town ... you get to know what's missing across the community."

"Surveys tell us that on average we have two minutes of chatting time with customers, so we make that worthwhile by steering the conversation to their health and our monthly calendar of health issues, such as mental health and diabetes," Walker said.

"You have to keep being relevant and innovative," she said, recalling her recent Facebook naming competition for the pharmacy's new robot, which now orders and dispenses medicines and cleans the shelves.

"'Spencer', as in 'Spencer the Dispenser', won. We thought it was terrific and novel, and the winner took away the prize of an automatic vacuum cleaner.

"At a Sydney conference on innovation, though, a speaker talked about the automation revolution and how his robot was changing the way he did business.

"Nothing's new I guess – his robot's called Spencer too," she said, laughing.

video To watch a video about Lucy Walker, view this article online at contact-magazine.uq.edu.au or download the *Contact* app.



Pharmacist and UQ alumnus Emma Newsome with Goondiwindi Chemmart Pharmacy owner and fellow UQ alumnus Lucy Walker (main image); and Walker consulting with a customer (inset).

HOARD OF TREASURE

Amassed over 70 years and strewn across a room in a Catholic presbytery 160 kilometres west of Brisbane lay one of Australia's greatest literary collections. Half a century later it continues to make a substantial contribution to teaching and research at UQ.

There was a buzz in the air, matched with a sense of sadness, as a team of UQ staff pulled into the driveway of the Catholic presbytery in Oakey on 19 October 1967.

Their task was to collect a trove of literary and other treasures, gifted to UQ Library by the ailing Father Edward Leo Hayes.

What confronted them was chaos.

Former UQ librarian Marianne Ehrhardt recalled the scene during an interview in November 2007.

"The room was totally covered in books – on the furniture, on the floor, under the bed, all over the bed. I don't know where Fr Hayes slept," she said.

The size of the bequest was astonishing: 25,000 books, 30,000 manuscripts, more than 4000 geological specimens and 1500 anthropological artefacts.

It took a convoy of trucks two days to move the collection to UQ's St Lucia campus and many years to catalogue.

Among the manuscripts were letters and poems from well-known authors, including Dame Mary Gilmore, Oodgeroo Noonuccal, Steele Rudd, Henry Lawson, William Morris, Miles Franklin and Banjo Paterson.

The book collection included rare items, such as a first edition of *Terra Australis* by Matthew Flinders, a set of *Birds of Australia* by Gregory Mathews and an 1847 copy of explorer Ludwig



Image: Hayes Collection, UQFL2, Box 96, Folder 15, Item 680

Leichhardt's *Journal of an overland expedition in Australia, from Moreton Bay to Port Essington*, signed by the author.

Fr Hayes (pictured) developed his passion for books while a seminarian and became an inveterate collector. He was also an amateur geologist and ethnologist.

In the 1960s, Senior Lecturer and Reader in English at UQ, Cecil Hadgraft, borrowed some of his books to use in literature courses and initiated the relationship that saw Fr Hayes entrust his precious collection to the University.

At an acceptance ceremony, then-Vice-Chancellor Sir Fred Schonell announced it was "a great day for the University".

In recognition of his services to literature, UQ awarded Fr Hayes a Master of Arts *honoris causa* degree in 1967 and established two scholarships in his name, including The Venerable Archdeacon Edward Leo Hayes Adult Undergraduate Scholarship that continues to support mature-aged students from regional areas.

Fr Hayes died on 17 November 1967. His collection was acknowledged worldwide as one of the pre-eminent private Australian collections accumulated in the 20th century.

The majority of the Hayes Collection resides in UQ's Fryer Library, which this year celebrates 50 years since the Hayes bequest and the 90th anniversary of the library itself. Fryer librarian Simon Farley said that the collection continues to make a substantial contribution to teaching and research.

"This gift of artefacts, manuscripts and bibliographic treasures significantly boosted the diversity and depth of Fryer holdings," he said.

The Fryer Library and the RD Milns Antiquities Museum have curated displays and online exhibitions of a selection of items from the collection, including ancient coins. The UQ Anthropology Museum's exhibition *From Relics to Rights* also references Fr Hayes.

web To read the full story and to see more images, view this article online at contact-magazine.uq.edu.au or download the *Contact* app.

What's on

Ecstasy: Baroque and Beyond (UQ Art Museum, until 25 February 2018)

This exhibition explores how Baroque style – characterised by exaggeration, high drama, extravagance, frenzy, and excess – continues to inform contemporary art. For more information, visit artmuseum.uq.edu.au.

Symphonie Fantastique and Fauré's Requiem (Queensland Performing Arts Centre, 27 May 2018)

As part of the 2018 Vice-Chancellor's Concert Series, the UQ Symphony Orchestra and the UQ Chorale (under the direction of Dr Warwick Potter) will perform Berlioz's revolutionary *Symphonie Fantastique* and Fauré's *Requiem*. For more information, visit music.uq.edu.au/events.

LEAGUE OF TALENT BEHIND THE SCENES

There's no such thing as a typical day's work at the Brisbane Broncos, according to the club's Commercial Operations Assistant Laura Watterston.

"It's definitely not a nine-to-five job. There's so much going on away from the field that spectators don't see," she said.

"Game day is always exciting and it has been an eye-opening experience to see how much work goes on behind the scenes.

"It's basically coordinating an event for more than 30,000 people, but it doesn't just happen. We look after everything from signage and sponsorship plazas to what's happening on the big screen and live entertainment."

"Game day is always exciting and it has been an eye-opening experience to see how much work goes on behind the scenes."

Watterston (Bachelor of Communication/Bachelor of Arts '16) began a full-time role at the Broncos in January this year, after impressing the club's commercial operations team during an internship last NRL season while studying at UQ.

The Broncos and UQ announced a landmark partnership in April 2015, recognising a shared dedication to shaping future leaders and a commitment to excellence. The partnership has many levels, including opportunities for undergraduate student placements and access to elite athletes for higher degree by research student projects.

Watterston (pictured) was the club's first intern in commercial operations as part of the partnership.

"I majored in public relations at UQ and was always convinced I wanted a career in that space. But I really enjoy working within a large

sporting organisation and feel I am better suited to this work," she said.

"I believe that being involved in many parts of the organisation during my internship helped to both clarify what I wanted to do and prepare me for a full-time role.

"During my internship I was working with sponsors, helping run events and assisting with administration tasks leading up to the 12 home games during the season."

Broncos Match Experience Manager Eloise Kelly said it was important that new employees understood the pace and demands of a sports organisation, as well as the dynamics and culture of the club.

"During her internship, Laura got to know everyone and saw how the organisation ran. When the full-time position became available, we knew she was suited to the role and could hit the ground running," Kelly said.

"Laura is in a good position because she is able to see a snapshot of everything that is happening at the club in a range of areas.

"Having access to passionate and knowledgeable students is one of the major benefits of a partnership like this."

video To watch a video from behind the scenes at a Brisbane Broncos match, view this article online at contact-magazine.uq.edu.au or download the *Contact* app.





Professor Ian Frazer AC,
Co-Chair of *Not If, When* – the
Campaign to Create Change.

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**NOT IF,
WHEN.**

THE CAMPAIGN TO CREATE CHANGE