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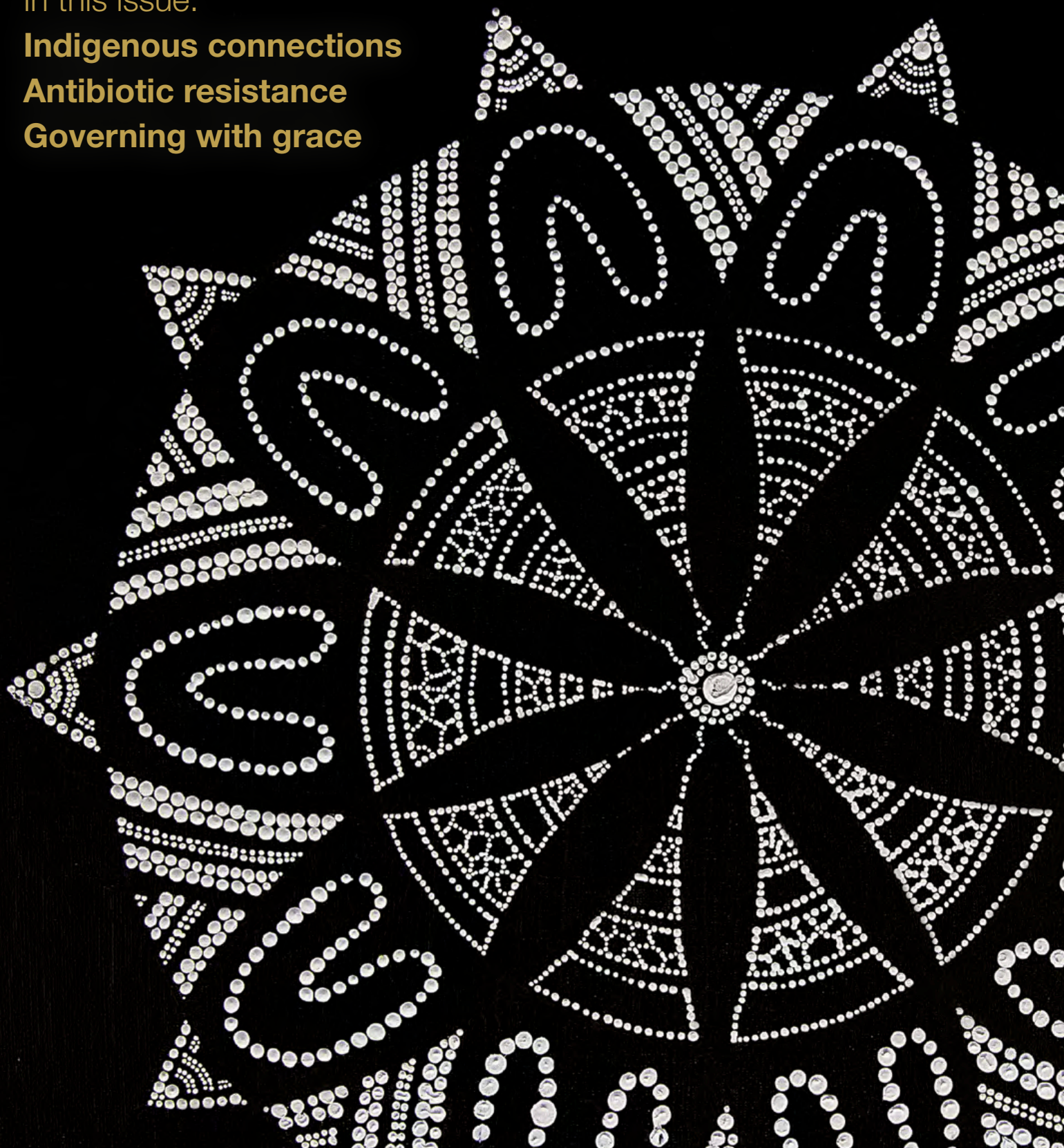
CONTRACT

In this issue:

Indigenous connections

Antibiotic resistance

Governing with grace



CONTACT

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COVER IMAGE:

Potential by Sid Domic, Outreach and Engagement Program Co-Ordinator, the Aboriginal and Torres Strait Islander Studies Unit, The University of Queensland, as commissioned for the UQ Poche Centre for Indigenous Health. *Potential* represents the potential in all of us. The plant doesn't reach its full potential until it flowers; a symbol of its expression and growth. In the image, the U shapes represent the UQ community (staff, students, Indigenous community, our partners, everyone). From the UQ community comes their individual growth, directed towards the centre circle, which represents a focal point of all this knowledge and energy. This creates the flower, which is symbolic of our potential as a community working together. *Potential* is also a reflection of a DNA cross-section, which makes us what we are.



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INDIGENOUS CONNECTIONS:

UQ is committed to helping “Close the Gap” for all Indigenous Australians through innovative research, teaching and learning.

+ REGULARS

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Director of Alumni and Community Relations Gina Wheatcroft discusses philanthropy.

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Researchers are examining how we can protect and sustain our coral reefs and oceans.

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Kate Howarth's *Settling Day* gives readers an insight into the effects that forced adoption policies had on many people.

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Contact remembers staff and students who fought in past conflicts.

+ FEATURES



Free iPad and Android apps

AVAILABLE NOW –

SEE PAGE 4 FOR DETAILS



Indigenous school students gain exposure to university by participating in the InspireU Program, which offers practical insights into career opportunities and studying disciplines such as Engineering, Health Sciences, Law and Science.



© Rolex Awards/Ambroise Tszenas

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SUPERBUG FIGHT

Rolex Young Laureate Hosam Zowawi is researching the spread of infectious diseases to fight back against antibiotic-resistant superbugs.



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HALO EFFECT

White Halo Ensemble, UQ's chamber music group, launched in 2014 and includes talented full-time teaching and research performance staff.



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SCHOLARLY SUPPORT

Contact speaks with students, donors, and an alumna about the joys of giving and receiving scholarships that support intellectual development.



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SPOTLIGHT ON TURKEY

With a rapidly growing economy and a youthful population, Turkey is a country to watch. *Contact* explores UQ's engagement with this interesting nation.

SHARE YOUR STORY

With more than 220,000 graduates, UQ has been an integral part of so many people's lives. Our alumni have shown dedication in contributing to society, the environment and economies in countries around the world.

As an alumnus, you are one of the University's greatest assets, and *Contact* wants to hear from you.

What is it that set your UQ experience apart? How has the University, and your time here, shaped the person you are today?

You might have continued to engage with the University, participating in reunions or other events, offering your time as a guest lecturer or speaker, or giving back through philanthropy. Maybe you have decided to return to pursue postgraduate studies, or have seen siblings, children and friends embrace their own UQ experiences.

You might still be based in South-East Queensland, or may have travelled globally, or to other parts of Australia.



Whatever your story, as an alumnus, we invite you to tell us more. How do you continue to be inspired by UQ, and what does the University's vision of achieving "knowledge leadership for a better world" mean to you?

Do you have any memories of your time on campus to share, or highlights from your life as an alumnus?

We invite you to get in touch, and your story might feature in an upcoming edition of *Contact* magazine.

To share your story, email us at contactmagazine@uq.edu.au, or write to us at:

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AIMING HIGH, WITH A GLOBAL STORY TO TELL

The line between backing yourself and sounding too boastful can be a fine one. How do we say enough to ensure that UQ's excellence is noticed in the highly competitive global marketplace, without being regarded as arrogant?

It is something I wonder about. While I am frequently dazzled by the impact of UQ's people and the accolades they accrue for the University, I find that many of my interstate friends, colleagues and acquaintances are surprised to hear how well UQ compares to other global universities.

It is part of my job to factually communicate UQ's contributions and potential. If the messages are not cutting through, I wear responsibility.

When making the case, I take pointers from alumni who I have found to be some of UQ's most credible advocates. Many of the best are not prominent people with access to journalists, speakers' rostrums and vast social media audiences — instead, they spread the word through relatives, friends, colleagues, employees, clients, friends-of-friends, and chance encounters with complete strangers.

UQ has so many strengths that I am challenged to keep the UQ story brief — but I must, because most of my friends don't have the time or inclination to digest a thesis. Mentioning that the world's first cervical cancer vaccine started at UQ generally resonates. Most people might

know about Gardasil®, but need reminding that UQ is its birthplace.

Saying that about two-thirds of the world's magnetic resonance imaging machines use UQ technology also cuts through.

Some people are surprised to hear that UQ ranks well within the top 100 of the world's 10,000-plus universities, and that this is the place where US President Barack Obama made his famous remarks about the Great Barrier Reef.

If I am talking to people who are into research, they are impressed that in 2013 UQ received more direct funding for research than any other Australian university. The same type of people would think it significant that UQ leads the Australian contingent in a table based on publications linked to the prestigious journal *Nature*. A subset of research wonks will think it is cool that the proportion of UQ publications in the most prestigious global journals, *Nature* and *Science*, is more than double the world average and leading by an even longer margin in Australia.

A bigger group of people (who don't spend their weekends reading academic journals) light up when I say Geoffrey Rush, Wotif.com founders Andrew Brice and Graeme Wood, and the double Grammy winner Tim Munro are all UQ graduates. Our graduates are indeed the best testament for a UQ education, and are increasingly meaningful to the prospects of current and future students.

So, alumni advocates — thank you, and please continue your magnificent work!

Some readers will recall that when your last *Contact* magazine was in production, Australia was debating government proposals to deregulate student fees. Since then, most Australian senators have rejected the proposals, twice. At the time of writing, neither major party has revealed a detailed alternative plan for investment in higher education, even though many politicians seem to have judged that Australians are not keen to pay more tax for it.

Universities in some regions, notably North America, have bedrock endowments that they top up with ambitious fundraising campaigns. At UQ, donors have transformed countless lives by supporting students and research, but we have never built a resilient endowment.

Now, we may be approaching a new era in strategic, collaborative investment that will extend opportunities for students and researchers, like never before.

Like any strong global university, we owe it to our community to aim high. Achieving our aspirations will not be easy, especially as other institutions in our neighbourhood continue to amass esteem.

But I have seen compelling evidence that alumni are incredibly effective envoys, who have the capacity to help take the opportunities emanating from UQ to a whole new level.

I thank you all for those efforts, and so will future generations of young people who get the opportunity to benefit from an exceptional UQ experience and advantage.

Professor Peter Høj
Vice-Chancellor and President

SUPPORTING STUDENTS

Director of Alumni and Community Relations Gina Wheatcroft discusses how support from alumni can make an incredible difference in students' lives.



The University of Queensland goes from strength to strength, consistently ranking well inside the top 100 universities in the world, providing groundbreaking technology internationally through research and development, and offering the number one MBA program in Australasia.

It's an incredible credit to the staff, academics, students and alumni of UQ, but this consistent trajectory would not be possible without the extraordinary support offered to the University by our donors.

In 2014, we completed UQ's first ever telephone fundraising campaign, with current students phoning a select group of alumni, engaging with them and requesting their support for the University's Annual Fund — a fantastic initiative that targets the greatest needs in student welfare, as well as research.

The Annual Fund provides students who are facing personal or financial hardship with practical assistance. For many students, the support can be the difference between dropping out of university or continuing their studies. The Annual Fund also assists researchers in finding solutions that have a global impact — work being undertaken by the likes of Dr Natalie Connors, whose research into vaccine production technologies is profiled on page 45, as well as Professor Ove Hoegh-Guldberg and Professor Justin Marshall, whose environmental research is highlighted on pages 22–23.

The benefits of philanthropy to the University couldn't be summarised in these comments — but they are, needless to say, extensive. The benefits go well beyond UQ: exceptional graduates forge remarkable careers that businesses, both large and small, benefit from. Research and development produces technology, the aim of which is almost always to improve lives in some way, whether it be through vaccinating against particular cancers, creating a parenting program that ensures our children can successfully navigate peer situations,

or conserving the Great Barrier Reef. We all benefit from outputs at UQ that are a direct result of philanthropy.

Last year brought with it the announcement of a \$10 million gift from Greg Poche AO and Kay van Norton Poche — a truly transformative gift that will be directed towards a Centre for Indigenous Health, which you can read more about on page 12.

A usual gift is comparably more modest, highlighting the importance of each donation, and in particular, alumni giving.

Alumni philanthropy is a great way for alumni to continue being involved with their alma mater — similar to staying in touch through volunteering, promoting UQ among

peers or participating at University events. Alumni philanthropy is practised throughout the world, at key institutions and at all levels.

Even if just one in five alumni gave \$100 each year, the University would have over \$4 million to invest in scholarships, student welfare and crucial research. You could be a part of this.

I encourage each and every one of our alumni to include UQ in your charitable giving each year, and become a part of something that is improving the lives and livelihoods of members of our community, the city, the state, the country and the world.

To see how your gift can make a difference, visit uq.edu.au/giving.



WHAT'S HAPPENING ON CAMPUS

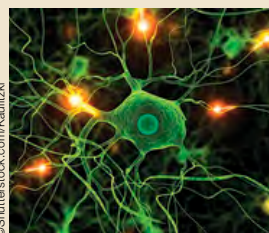
ALUMNI REUNIONS

When was the last time you saw your UQ classmates? Several reunions are underway in upcoming months. The Alumni and Community Relations team can help with planning reunions. Visit alumni.uq.edu.au/reunions.



GLOBAL LEADERSHIP SERIES

Just four Global Leadership Series events remain for 2015. For more information and to book tickets for upcoming events in September and October, visit alumni.uq.edu.au/global-leadership-series.



JULY Dealing with chronic pain

Join Professor Paul Hodges and an expert panel as they discuss the effects of chronic pain on individuals and communities, plus results from conservative therapies.

AUGUST Hemp: should it be legal?



To legalise, or not? Professor Wayne Hall, in conjunction with the Centre for Youth Substance Abuse Research, offers a thought-provoking assessment of the legalisation of marijuana, drawing on examples from the United States and The Netherlands.



International House GOLDEN ANNIVERSARY WEEKEND 29-30 August 2015

29-30
AUGUST
2015

Join us in celebrating 50 years of cultivating global leaders.

International House is proud to be celebrating its Golden Anniversary in 2015, which is a weekend of remembering, celebrating and looking to the future. Register now to be a part of remembering the last 50 years of friendship. We encourage you to bring your family and partner. Confirm your attendance by registering at internationalhouse.uq.edu.au or call +61 (0)7 3721 2485.

The activities to the right are planned for the weekend and may be subject to change.

SATURDAY 29 AUGUST

- **Registrations open and IH Great Debate**
When: 9:00am – 11:00am. Where: Ivor Cribb, IH
What: Light refreshments are served while registrations open, before we kick off the weekend with The IH Great Debate. Celebrate the intellectual wit of IHers as we discuss life at IH, then and now.
- **IH Soirée**
When: 11:00am – 2:30pm. Where: G-Lawn, IH
What: Live multicultural entertainment, and stalls filled with international cuisine and refreshments at G-Lawn's main stage. Tickets include all food and entertainment. Free for children under 12.
- **Golden Anniversary IH Ball**
When: 7:00pm - midnight. Where: Brisbane Convention and Exhibition Centre, South Bank
What: The black and gold themed main event of the weekend is a night of celebration and catching up with good friends. It includes entertainment, 3 course meal, 5 hour drink package etc. Seating arrangement by decade periods and/or nominated friends.

SUNDAY 30 AUGUST

- **The Brotherhood Brunch**
When: 10:30am – noon. Where: IH
What: Join us at IH for a relaxed morning after the night before of sharing your memories, photos and reconnecting over brunch. A great opportunity for all IHers to come together in a casual setting at their old home, IH.
- **IH and UQ St Lucia Tour**
When: Noon – 1pm. Where: IH and UQ
What: See how IH and UQ have changed over the years with tours leaving over the hour to visit your alma mater and IH.
- **IH Sport**
When: Noon – 2:00pm. Where: Dependant on numbers
What: Sport has played an important part in bonding IHers together over the last 50 years. Join us for a relaxed game of soccer and/or cricket at either IH or the local oval.

Further information, including accommodation partners, is available at www.internationalhouse.uq.edu.au.

STAY CONNECTED WITH YOUR UQ

Nick Crocker – UQ Arts / Law Graduate

Nick is an entrepreneur based in San Francisco who co-founded four companies before the age of 30. Two of these went on to be acquired by Twitter and MyFitnessPal.

Stay connected with friends and colleagues by joining UQ's Alumni LinkedIn group. You can build professional networks, and share knowledge, news and ideas.

Discover arts, education and social sciences updates through the UQ Humanities and Social Sciences' Alumni sub-group.

As we approach 50,000 Bachelor of Arts graduates, we would like to hear about your career success. Your experiences can inspire future students and the community.

YOUR UQ. YOUR ADVANTAGE.



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YOUNG ALUMNI ADVISORY BOARD

The Young Alumni Advisory Board (YAAB) is a select group of volunteer leaders who assist the University in delivering a variety of relevant services to recent graduates. Board members are appointed on a competitive basis that reflects their ability to inspire, influence and serve the greater alumni community.



YAAB members pictured front row, left to right: Oscar Hernández, Dr Tarni Cooper, Zoe Black, Dr Robert McLachlan, Yassmin Abdel-Magied, Julia Bruerton and Laura Stokes. Back row, left to right: Elizabeth George, Chad Hardy, Rohan Watt, Siena Perry, Nkosana Mafico, Michelle Chee, Tom Mackay, Leighton Crisp, Cameron Schofield, Tayla Tatzenko, Wayne Chan, Dr Andy Mukherji and Carly Stephan.

In this issue of *Contact*, we meet YAAB member **Laura Stokes (Bachelor of International Hotel and Tourism Management '10)**, who is the licensee for the popular **TEDxSouthBank**, a role she holds along with her day job as **Advancement Director for International House, a UQ college**.

Stokes is also completing an MBA at UQ, as well as a Global Consulting Practicum with Wharton Business School, in addition to being a member of the Young Alumni Advisory Board (YAAB).

It's no surprise that in the collection of awards she's amassed in her 27 years, Stokes has been named one of Queensland's Leading Women, and won the Foundation for Young Australians' Young and Extraordinary Award for her work in the not-for-profit sector.

Stokes is in good company in YAAB, working alongside some of the University's most extraordinary young exports, including an Australian of the Year finalist, tech start-up owners, young doctors, countless award winners, and numerous ambassadors or volunteers for a range of causes.

"YAAB activities provide an opportunity for recent and young alumni to forge strong,



Laura Stokes.

lasting relationships with peers from their alma mater," said Stokes.

"The activities are, first and foremost, about taking advantage of the broad and diverse networks open to alumni by attending a world-class institution like UQ.

"At UQ, you know you are surrounded by some of the country's best and brightest, and being involved with young alumni initiatives in particular

means you're able to forge strong networks that can continue for life."

Stokes said working on key projects, including establishing the YAAB Philanthropy Sub-Committee, and organising the inaugural YAAB fundraising event, have been highlights of her time on the board.

"Chairing the Philanthropy Sub-Committee and working with the team to promote its vision, values and purpose has been fantastic," she said.

"I also really enjoyed organising the Young Alumni Sunday Session that we held at a local microbrewery.

"The event raised over \$1000 for UQ scholarships, and we had a really strong attendance from current students and young alumni."

Of how her time at UQ has helped shape her ability and motivation to be involved with the YAAB and countless other initiatives, Stokes suggests her time living on campus at International House was instrumental, offering great life and career lessons to propel her forward.

"Being a member of the International House Student Club Executive gave me the opportunity to experience real-world work scenarios involving people management, conflict resolution, reporting and finances," she said.

"It was a soft introduction to a real career before I was 20."

To find out more about YAAB, visit alumni.uq.edu.au/yaab.

INDIGENOUS CONNECTIONS

In the 1990s, UQ offered Australia's first Indigenous Primary Health Care program. Today, strategic leadership, new facilities, personalised student support and innovative research strengths underpin efforts to "Close the Gap".

The University of Queensland has been home to many bright and brilliant thinkers who have enacted positive change globally. In unique ways across diverse industries, these students, alumni, teachers and researchers have supported the University's bold vision of delivering knowledge leadership for a better world.

Enacting change at a local level is equally as important as achieving global change, and fostering better outcomes for Indigenous Australians at the community level is integral. UQ's Indigenous strategy, as embedded in *The University of Queensland Strategic Plan 2014–17*, is also grounded in the settings for its campuses and institutes.

"South-East Queensland has 38 per cent of Queensland's Aboriginal and Torres Strait Islander population and the largest population of Aboriginal and Torres Strait Islander people in the country," shares Pro-Vice-Chancellor (Indigenous Education), Professor Cindy Shannon (Bachelor of Arts '86, Doctor of Social Science '04).

"With our unique position and coverage across the region, the University has an integral role in helping teachers, researchers, students and alumni 'Close the Gap' by promoting more sustainable local communities."

Shannon is a descendent of the Ngugi people from Moreton Island, and has had a pivotal role in guiding the University's Indigenous strategy since being appointed inaugural Pro-Vice-Chancellor (Indigenous Education) in 2011. In her opinion, UQ's position and coverage across South-East Queensland brings both extra scope for research collaboration, and an intrinsic social responsibility.

"We do have an additional responsibility to support Indigenous communities," said Shannon.

"We are a global university. An important part of this involves addressing local issues successfully. We must work with our own Indigenous communities, in addition to supporting Indigenous people across Queensland, nationally and internationally through our initiatives."

Pro-Vice-Chancellor (Indigenous Education), Professor Cindy Shannon

Shannon has extensive experience on Indigenous advisory councils and committees, and was recently appointed to the Australian Government's Council of the Australian Institute of Aboriginal and Torres Strait Islander Studies. She guided the development of Australia's first degree-level program targeting Aboriginal health workers in the 1990s, and contributed to the establishment of the Institute of Urban Indigenous Health (IUIH) in South-East Queensland in 2009.

UQ's 1990s Indigenous Primary Health Care program was both pioneering and successful, supporting the development of high-performing Indigenous doctors and practitioners who are trained in providing

If you are interested in contributing to UQ's Aboriginal and Torres Strait Islander teaching, learning and research efforts, please visit uq.edu.au/giving.

services and support across all areas of Indigenous health. Notable alumni include Dr Raymond Gadd, Director of Emergency Medicine, Gladstone Hospital; Dr Shannon Springer, Discipline Lead for Indigenous Health, Bond University; Dr Chelsea Bond, Inala Indigenous Health Service and Senior Lecturer in the Oodgeroo Unit at Queensland University of Technology; Tarita Fisher, Cherbourg Hospital and Health Service Manager; Associate Professor Noel Hayman, Clinical Director of the Inala Indigenous Health Service; Dallas Leon, CEO, Gidgee Healing; and Condy Canuto, Senior Lecturer, Aboriginal and Torres Strait Islander Studies Unit (ATSIS Unit) at UQ.

Associate Professor Jon Willis (PhD in Tropical and Public Health '97), who is now the Academic Director of the ATSIS Unit, worked as a Lecturer in Indigenous Health as part of the program from 1997 to 1999.

"It was a fabulous and grounded program, and evolved to have Indigenous health embedded in broader studies, to upskill more non-Indigenous students about Indigenous health issues," he said.

In 2015, UQ has a record number of Indigenous students enrolled in Medicine, with 24 students enrolled in programs through the School.

Indigenous students are showing stronger interest in enrolling at the University, with



Indigenous learning is supported and encouraged by staff in the ATSiS Unit. Here, Bachelor of Physiotherapy (Honours) students Victoria Francia and brother Carl Francia share a lighthearted moment on campus.

"We encourage Indigenous students to pursue their potential," he said.

"Why can't, or shouldn't, Indigenous students achieve their highest possible aspirations? Coming to UQ gives them a chance to do that."

**Academic Director, ATSiS Unit,
Associate Professor Jon Willis**

Scholarships and bursaries sponsored by alumni such as Dr Alan Van Tran (see page 14) further support Indigenous students with accessing opportunities they might otherwise never receive, due to social disadvantage.

Helping people realise their potential is a sentiment philanthropists Greg Poche AO and Kay van Norton Poche agree with. The couple — who have given more than \$100 million nationally to address major issues such as melanoma research and improving the lives of Indigenous Australians — have pledged \$10 million to establish a Poche Centre for Indigenous Health at UQ (see page 12).

As part of UQ's embedded Indigenous strategy, consultation is integral to achieving the best outcomes for students, researchers and teachers, as well as local communities.

One example of these consultations and partnerships involves a joint approach to student placements in Aboriginal and Torres Strait Islander health.

IUIH's Director of Workforce Development and Allied Health, Dr Alison Nelson, also has a Senior Lecturer appointment to the UQ ATSiS Unit. This role enables her to work with local community-controlled Aboriginal and Torres Strait Islander health services and The Aboriginal and Torres Strait Islander Independent Community School to facilitate and create new student placements, often in an inter-professional framework.

"IUIH and UQ, through the leadership of Professor Shannon and IUIH's CEO, Adrian Carson, have been incredibly innovative in funding an academic position, which provides well-coordinated student placements where students are supported to develop their knowledge and skills in this area. This move has contributed to significant growth in student placements, from 30 students in 2010 to 300 students in 2015," she said.

"These placements have demonstrated a particular need for allied health services, which has enabled the development of innovative programs in chronic disease rehabilitation and self-management and children's developmental support, with a 300 per cent increase in allied health services regionally."

Initiatives are underway to foster Indigenous pathways to tertiary study, including the InspireU Program and Solid Pathways Program. UQ also works with the Deadly Choices Program, which is an initiative of the IUIH that aims to empower Aboriginal and Torres Strait Islanders to make healthy choices (see page 13).

In terms of notable research, the Aboriginal Environments Research Centre is also making an impact: with researchers recognised for their work into urban homelessness; and projects on Indigenous culture, environments and architecture.

Such positive initiatives have far-reaching impact, and — when bolstered by the new, dedicated learning space opened for the ATSiS Unit and Poche Centre — reiterate the University's commitment to improving Indigenous outcomes.

Shannon explained, "We are adopting a strengths-based approach, and there is overwhelming support across the University to improve Indigenous education and increase our community impact through continuous improvement."

Yet, she is adamant more needs to be done to "Close the Gap", including generating new partnerships and improving programs.

"We definitely have further work to do to attract and retain more Indigenous students.

"I would like to see us broaden our engagement to areas like law, child protection and education, and facilitate closer relationships with schools and educating Indigenous teachers.

"With ongoing funding, collaboration and a commitment to reaching targets, we can enhance UQ's reputation and continue to generate knowledge leadership by promoting a fairer future for all Indigenous Australians."

app Download the **Contact** app to find out more about Indigenous connections at UQ, with stories featuring alumni of the 1990s Indigenous Primary Health Care program, videos, photo galleries, opinion pieces, and an exclusive Q&A with Pro-Vice-Chancellor (Indigenous Education), Professor Cindy Shannon.

an increase in Indigenous first preference demand this year. In Semester 2, 2014, Indigenous student retention and pass rates also improved, reflecting improved performance outcomes for the cohort overall.

This year, the ATSiS Unit facilities have been upgraded, with the team relocating to a modern learning space that is easily accessible for students at St Lucia campus.

The ATSiS Unit provides Indigenous students with invaluable support. Students can seek advice from a learning advisor and access tutorial assistance. Information is available about topics including scholarships, careers, childcare and accommodation arrangements, with disability, health, multi-faith and counselling advice also offered.

Alumna Kirrily Phillips (Bachelor of Oral Health '12), works as an Oral Health Therapist at the IUIH, and is continuing her studies as a Bachelor of Dental Science student at UQ. She personally experienced a high level of support during her undergraduate studies.

"I had great, one-on-one tutoring each semester that was provided by the ATSiS Unit," she reflected.

"The staff helped guide, support and encourage me to complete my degree."

As Willis surmised, encouraging Indigenous students to achieve their absolute best underpins the work of the ATSiS Unit.

POCHE CENTRE FOR INDIGENOUS HEALTH

Enhancing health outcomes for urban Indigenous people is the focus of the UQ Poche Centre for Indigenous Health, which launched in March following a \$10 million donation from Sydney couple Greg Poche AO and Kay van Norton Poche.

Improving the health and wellbeing of Indigenous Australians is one of our nation's biggest challenges, according to Greg Poche AO, who, with his wife, Kay, has funded a new Poche Centre for Indigenous Health at UQ.

The couple have previously funded Poche Centres at The University of Sydney, Flinders University in Adelaide and Alice Springs, The University of Western Australia and The University of Melbourne.

Mr Poche, who is the founder and former owner of logistics company Star Track Express, considers the 11-year health and life expectancy gap between Indigenous and non-Indigenous Australians to be unacceptable. So too does Pro-Vice-Chancellor (Indigenous Education) Professor Cindy Shannon, who said about 80 per cent of the life expectancy gap could be attributed to chronic disease.

"The visibility of Indigenous peoples and understanding of their needs in urban settings is often very poor," she reflected.

"An Australian Institute of Health and Welfare report last year confirmed that 79 per cent of Australia's Indigenous population now live in non-remote areas."



Guests attended a lunch hosted by Greg Poche AO and Kay van Norton Poche to celebrate a \$10 million gift to UQ to establish a Poche Centre for Indigenous Health. Pictured from left to right: Maxwell Mitropoulos, Shane Drahm, Professor Peter Høj, Kay van Norton Poche, Professor Cindy Shannon, Reg Richardson AM, Professor Bruce Abernethy, Sally Richardson, Associate Professor Jon Willis and Professor Nicholas Fisk.

and supporting staff to collaborate with community organisations and health providers.

enable more Indigenous students to study Health Sciences and increase the number of practitioners, as well as to facilitate more health students to be skilled in working with Indigenous patients, particularly in urban contexts. The research at the Centre is partly focused on urban Indigenous health because there can, at times, be a misperception Indigenous issues are 'always somewhere else, far away', he said.

"As Brisbane is the largest Indigenous community in Australia, we wanted a program of worker development and research focused on the issues of Indigenous people in our own backyard — the people who live in Woodridge, the people who live in Deception Bay and the people who live out on Stradbroke Island."

UQ's key collaborator in the UQ Poche Centre for Indigenous Health is the Institute for Urban Indigenous Health, with other collaborators including the Mater Health Services and the Queensland Aboriginal and Islander Health Council.

Queensland Treasurer, the Honourable Curtis Pitt, and Minister for Health and Minister for Ambulance Services, the Honourable Cameron Dick, attended a launch for the Centre in March.

Download the *Contact* app to watch a video from the Poche Centre launch, view a related photo gallery, and read stories featuring alumni from UQ's 1990s Indigenous Primary Health Care program.

"The UQ Poche Centre for Indigenous Health will train and grow a stronger workforce in Indigenous health.

We aim to increase the number of Indigenous Australian health discipline graduates and translate research into better health promotion and service delivery models."

Vice-Chancellor and President, Professor Peter Høj

The UQ Poche Centre aims to meet the critical need for translational research on improving urban Indigenous health outcomes across the life course, from maternal and child health, through adolescence to the challenges of chronic disease and ageing, with a significant focus on prevention and education.

At the same time, there is a focus on workforce development. This is an area of strength for the University, which offered Australia's first professional degree program for Indigenous health workers in the 1990s.

Vice-Chancellor and President Professor Peter Høj said the Centre is bringing together expertise across the University,

Faculty of Medicine and Biomedical Sciences Executive Dean, Professor Nicholas Fisk, elaborated by sharing: "Staff at the new centre are collaborating with primary health care and hospital providers to grow placement and training opportunities for students in Indigenous health care."

Outreach and engagement programs through the Centre are anticipated to attract and support more Aboriginal and Torres Strait Islander people into health careers, according to Academic Director of the ATSI Unit, Associate Professor Jon Willis.

"The Poche Centre allows us to expand on an existing program that we have to

UQ is a university of choice for Indigenous people aspiring to careers in health. Pathway programs including the InspireU Program, Deadly Pathways Program, Indigenous Youth Sports Program and UQ Health Leaders Program create greater opportunities and outcomes, and are delivered with support from the new Poche Centre.

InspireU Program

InspireU is a series of residential camps for Aboriginal and Torres Strait Islander students in Years 11 and 12 that provide opportunities to experience university life.

The camps focus on a variety of disciplines including Engineering, Health Sciences, Law and Science.

"Students stay on campus in one of our great colleges and take part in a range of activities designed to provide a practical insight into university study in their chosen field," explained Outreach, Engagement and Student Relations Manager, Shane Drahm.

"The camps are an opportunity for students to experience university life, participate in workshops and lectures on campus and explore different disciplines and career opportunities."

Young Achievers Program

The UQ Young Achievers Program supports the tertiary study and career aspirations of state secondary school students who might not otherwise have access to university. This includes mentoring, financial assistance and opportunities for personal growth and leadership development. The Program supports individuals from select schools across Queensland, including students who identify as Aboriginal and Torres Strait Islander.

UQ Health Leaders Program

The UQ Health Leaders Program, offered by the School of Population Health, provides a range of short courses. This provides an opportunity for collaboration, with the potential to encourage emerging Indigenous leaders who have completed the program to then engage with advanced leadership opportunities.

Solid Pathways Program

The Solid Pathways Program is a unique academic extension program for Aboriginal and Torres Strait Islander and Out-of-Home Care students in Years 4 to 12 who have been identified as performing in the top two NAPLAN bands. Solid Pathways aims to connect these students with similar peers, extend their learning and maintain their level of achievement as they transition through school to tertiary study.

UQ Deadly Pathways Program

UQ's Deadly Pathways Program is complementary in its health focus. It includes a range of educational pathways for Indigenous students into health careers. UQ supports the Arthur Beetson Foundation through its Murri Carnival — a smoke-free, alcohol-free, healthy food event that promotes education to 15 to 17 year olds; and is also collaborating with UQ College to provide tertiary preparation pathways into health for Indigenous students who undertake school-based traineeships in health. These pathways are also open to existing Aboriginal health service staff seeking to upgrade their skill levels and qualifications.

INDIGENOUS PATHWAYS

Deadly Choices and Indigenous sport

Former Queensland Reds player Shane Drahm and Ipswich Jets rugby league captain Keiron Lander are both advocates for Indigenous sport and healthy lifestyles. Drahm is the Outreach, Engagement and Student Relations Manager for UQ's ATSI Unit, and Lander is the Healthy Lifestyle Coordinator for

the Deadly Choices Program, which is administered by the UIIH.

"Deadly Choices is a chronic disease prevention and education program for urban Aboriginal and Torres Strait Islander people. The program was developed to empower young people to make healthy choices. It uses a strength-based approach by linking health messages to sports performance. Areas include leadership, chronic disease, nutrition, substance misuse, smoking cessation, sexual health, and health literacy and access," said Lander.

Lander and Drahm both consider education to be a Deadly Choice. This year, Lander is pursuing postgraduate studies at UQ as a student in the Master of Business Administration program.

Drahm said the merit of education being a Deadly Choice is supported by evidence that more highly educated people enjoy better health outcomes. The opportunity to participate in sport is also an enabling factor that supports Indigenous students who are considering enrolling at UQ.

"Young Indigenous people like sport, but they may not know about university," said Drahm.

"Through our Indigenous Sports Program, Indigenous young people can understand that university and sport can go together."

He continued: "The kind of planning that goes into being an elite sports person is exactly the same planning that goes into being a good scholar. There is no reason that a young Indigenous student who is a promising footballer can't also be a promising engineer."

app Download the **Contact** app to read opinion pieces by Shane Drahm and Keiron Lander about the importance of Indigenous education.



Healthy Lifestyle Coordinator for the UIIH's Deadly Choices Program, Keiron Lander (right), shows his skills on a campus oval, alongside Outreach, Engagement and Student Relations Manager Shane Drahm (left).

A JUST SOCIETY

Dr Alan Van Tran (Bachelor of Medicine/Bachelor of Surgery '83) and his family arrived in Australia by boat as refugees after the Vietnam War. He felt deeply about the social disadvantage experienced by Indigenous Australians in their own homeland.

Dr Tran was in military life in the army of South Vietnam until 1973, and had taught medicine in Saigon (now Ho Chi Minh City) at the Faculty of Medicine at Saigon University. He grew up in a small town, Hà Đông, outside Hanoi, and followed in the footsteps of an uncle by studying medicine.

"I always had a passion to care for other people," he said.

In his former life, Dr Tran saw disadvantage firsthand, working with patients with leprosy.

"In remote areas, people with leprosy were locked up," he reflected.

"This was a result of a decision of the communities that they were cast out to live somewhere separately, and you didn't know.

"Leprosy was a disease, but it was treatable. It was under the scanning of the health system, but most Vietnamese laypeople didn't know about this, so they were very scared of the disease."

Dr Tran shares this story for an important reason. After he arrived in Australia, retrained in medicine at UQ and transitioned from a residency at Greenslopes Hospital, on Brisbane's southside, to establish a medical clinic in Inala, he became aware of how social disadvantage was impacting the local Indigenous community.

He was concerned at how little was being done to redress existing inequities, particularly in light of the visibility of underlying issues, including poorer health outcomes and the prevalence of chronic disease.

"I was 43, and I had my wife and two children," he shared.

"We set up a medical clinic in Inala, and could see what the situation was like for local Indigenous people, and how bad it truly was."

Dr Tran still practises as a doctor at the Inala Clinic, and his children, Khoa and Uyen, have been inspired to pursue careers in medicine, after also studying at UQ.

His son, Dr Khoa Tran (Bachelor of Medicine/Bachelor of Surgery '92) is now



Mrs Minh Ha Tran and Dr Alan Van Tran meet bursary recipients Glenn Clifford and Melissa Carroll for the first time at the St Lucia campus.

an Associate Professor at Griffith University, Director of Respiratory Medicine and Staff Intensivist at Logan Hospital, as well as a Visiting Respiratory Physician at Princess Alexandra Hospital.

His daughter, Dr Uyen Tran (Bachelor of Medicine/Bachelor of Surgery '95, Master of Public Health '07), specialises in Paediatrics, with subspecialty training in Neurodevelopmental and Behavioural Paediatrics, as part of the Child Development Program at Lady Cilento Children's Hospital.

Mrs Tran, who practised law in Vietnam and studied counselling in Brisbane, has played an integral role in raising the couple's children.

The family has been in Australia for over a generation, with Dr Tran's clinic having opened its doors to patients in Inala for nearly three decades.

"We started trying to help Indigenous people in the community when we started the clinic, and they appreciate it," he said, elaborating that he had respected, and

followed, the traditional system of speaking with elders.

"At the clinic, we offer day-to-day care for acute problems, and provide support for chronic problems including alcoholism and drug problems, diabetes, hypertension, domestic violence and non-compliance with children having vaccinations.

"People appreciate my help, because I try to do my best."

With Dr Tran retraining and his children both studying medicine at UQ, the family decided to provide financial support to current students through a bursary in Indigenous health and education.

The Dr Alan Van Tran and Minh Ha Tran Indigenous Health Education Bursary is awarded to Australian Aboriginal and/or Torres Strait Islander students who are studying an undergraduate or postgraduate program in the Faculty of Medicine and Biomedical Sciences or Faculty of Health and Behavioural Sciences. The first recipients are Melissa Carroll and Glenn Clifford.

PARTNERS IN SUCCESS

The Institute for Urban Indigenous Health (IUIH) is UQ's Poche Centre partner.

Speaking at the launch of the UQ Poche Centre in March (see page 12), Pro-Vice-Chancellor (Indigenous Education), Professor Cindy Shannon, shared: "Why a focus on urban, regional Indigenous populations? The neglect of those groups, until recently, was extraordinary."

Shannon was instrumental in helping establish the IUIH in 2009. In her speech, she

"The outcomes achieved have been unprecedented in Australia."

**Pro-Vice-Chancellor (Indigenous Education)
Professor Cindy Shannon**

spoke of how this unmet need, combined with a growing population and opportunities arising as a result of the "Close the Gap" agenda, led to its inception.

Today, the Institute is the University's key collaborator in the UQ Poche Centre, and is facilitating improved access to comprehensive primary health care for Indigenous peoples in South-East Queensland, as well as developing a competent and appropriate workforce in Aboriginal and Torres Strait Islander health.

"The Institute now has more than 22,000 active clients. Last year, they had more than 90,000 patient visits and did more than

10,000 preventative health assessments, reflecting a 1300 per cent increase over four years," said Shannon.

Success enjoyed with the Deadly Choices Program and changes in health-seeking



behaviour encouraged in partnership with the Brisbane Broncos have contributed to this result.

Overall, over 600 UQ students have been placed in Aboriginal and Torres Strait Islander community-controlled health services or clinics across the IUIH's regional network.

As the IUIH's Director, Workforce Development and Allied Health, and Senior Lecturer of UQ's ATSI Unit, Dr Alison Nelson, shared: "The relationship between the Institute and the University has led to a 'win-win' approach."

For more information, visit iuih.org.au.

ALUMNUS GIVES BACK IN MT ISA

Dallas Leon (Bachelor of Applied Health Science '97) is an alumnus of the groundbreaking 1990s Indigenous Primary Health Care program.

Leon has worked in Aboriginal health for 17 years, starting his career as an Aboriginal and Torres Strait Islander Health Worker for Queensland Health after graduating from UQ. Leon enjoyed the focus on practical placements that informed Australia's first dedicated Indigenous Primary Health Care program.

As part of the program, he visited Woorabinda in Central Queensland with the other students in the cohort, collating data from the community, including clinical records, and preparing a report focused on environmental health. He later visited the Torres Strait

"There are lots of gaps for Indigenous people in Mount Isa. I can take pride in coming back to help with this service."

Gidgee Healing CEO and UQ alumnus, Dallas Leon

to participate in a final-year project about primary health care. During the final years of his studies, Leon received a Queensland Health Rural Health Scholarship.

Since graduating, he has gone on to finish postgraduate studies at Australian National University and Griffith University, and worked in London before resettling in his home town. At Gidgee Healing, he oversees a team of dedicated practitioners who deliver medical and primary health care services to people living in Mount Isa and the surrounding region.

app Download the Contact app to read the personal experience of Dr Chelsea Bond, an alumna of the same program at UQ.



Gidgee Healing CEO and UQ alumnus Dallas Leon.

"The funding has had an enormous impact and given me the opportunity to attend Indigenous health conferences, as well as provide the financial means to obtain vital educational resources," shared Carroll, speaking with *Contact* before meeting Dr Tran and his wife in person for the first time at St Lucia campus.

"Besides its monetary value, I am extremely grateful for the donors' generosity, as it provides Australian Indigenous students with an opportunity to feel proud of their achievements."

Clifford, who is a mature-aged student and father, said he never thought he would have the opportunity to study medicine before being accepted through the alternative entry program.

"Medicine is something that I have wanted to do all of my life," he said.

"Mr and Mrs Tran are both lovely people, and I am very appreciative."

Dr Tran said although he has experienced adversity, he believes he has also always been a "lucky person" in life.

"Our family has struggled before, but we have got there. I feel very privileged to be able to help, and we are very humbled that we are in a position to provide assistance."

He said health and education are issues that are close to his heart, with consultative action needed to address inequalities.

"It is my firm belief that if you want to change something, you need to focus on health and education, particularly for Aboriginal and Torres Strait Islander people.

"If you can have enough teachers and doctors, they can transfer their skills and knowledge to young people in the next generation, and be role models so they can make a contribution with their lives."

"Aboriginal and Torres Strait Islander people deserve our help and assistance to 'Close the Gap'."

"We are playing a small part, but everybody can help. This is the hardest challenge for our society, and if we do not make this effort, who will?"

To find out more about how you can contribute to the University's giving efforts, visit uq.edu.au/giving, or contact the Office of the Pro-Vice-Chancellor (Advancement) at pvca@uq.edu.au.

Unravelling ANTIBIOTIC RESISTANCE

ABOUT THE AUTHOR



Hosam Zowawi is a PhD Candidate in the Infection and Immunity theme at the UQ Centre for Clinical Research. In 2014, he was awarded the 2014 Rolex Award for Enterprise. Each Rolex Award for Enterprise is given for a new or ongoing

project anywhere in the world that deserves support for its capacity to improve lives, or protect the world's natural and cultural heritage. Zowawi is the second UQ recipient of the award, following in the footsteps of Professor Mark Kendall, co-inventor of the Nanopatch™, who is based at the Australian Institute for Bioengineering and Nanotechnology. Zowawi has also been announced as a Queensland Science and Innovation Champion, *TIME* Next Generation Leader and one of *The Courier-Mail's* "50 Best and Brightest" for 2014. Zowawi is interested in hospital-acquired infections, particularly those caused by antimicrobial-resistant organisms. As a clinical microbiologist, he recognised the need to develop more rapid diagnostic tools to aid initial medical management and implement infection control precautions. He completed a Masters degree in Clinical Science (Clinical Microbiology) with Honours and received the Griffith University Award for Academic Excellence 2010. In his Master's dissertation, he studied catheter-related infections (CRI) at the QIMR Berghofer Medical Research Institute, under the supervision of Dr David McMillan. Zowawi participated in the development of a novel quantitative multiplex real-time polymerase chain reaction (PCR) assay that can be used to target common bacteria causing CRIs.

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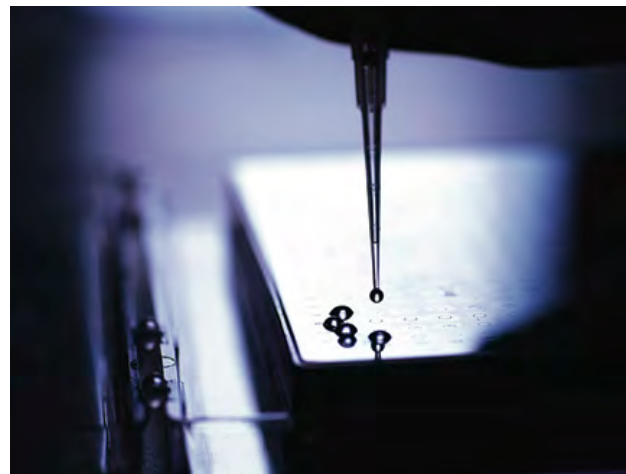
Antibiotic-resistant superbugs are the world's greatest threat to humans now, and in the future, says Saudi Arabian-born Rolex Young Laureate, Hosam Zowawi, who is researching the spread of infectious diseases in the Gulf States as part of a global campaign to fight back.

For many decades, modern medicine has enjoyed the privilege of antibiotics, which have saved millions of lives all over the world. The discovery of antibiotics was intended to end the threat of infectious diseases. While they have helped humanity to control many fatal infections of the past — such as sore throat and puerperal fever — unfortunately the privilege of antibiotics is coming to an end. This is mainly due to antimicrobial resistance.

Antimicrobial resistance is a global issue that is not only endangering humanity, but also animal health. Our sophisticated surgeries and anticancer therapies are at risk. We are confronting bacteria that can be resistant to multiple antibiotics, including last-line treatments, making them nearly impossible to treat.

An economical review of antimicrobial resistance estimated that in 2050, antimicrobial resistance would kill 10 million more people — more than how many are anticipated to die from cancer. In the United States alone, there are currently more than two million reported cases related to antimicrobial resistance, resulting in 23 thousand deaths, and \$20 billion in direct costs.

As a counter plan, the World Health Organization (WHO) set a strategic plan to combat antimicrobial resistance on a



global level. The pillars for this plan include initiating global surveillance on antimicrobial resistance, developing rapid diagnostic tools for early detection to allow early treatment of antibiotic-resistant bacteria, and conducting educational programs to limit the inappropriate use of antibiotics.

At the UQ Centre for Clinical Research, under the guidance of world-renowned Infectious Diseases expert, Professor David Paterson, and in partnership with other international organisations, we have initiated the first network of collaborating hospitals to monitor the emergence and spread of superbugs in the Gulf States. This research complements superbugs research by researchers at the Institute for Molecular Bioscience's Centre for Superbug Solutions.



In the Arabian Peninsula, international expatriates are contributing heavily to the economic boom, and making more money than 50 per cent of the total population. The region is also home to the two holy mosques of Mecca and Medina for Muslims around the world. These factors are contributing to heavy travel activities, and travel is known to impact the international spread of infectious diseases. Antibiotic-resistant bacteria favours free intercontinental rides. Thus, studying antibiotic resistance in the Gulf region exemplifies the global spread of the problem.

Planning the study and conducting the research were challenging. Coordinating a multinational study required many late nights and early morning phone calls, firing off unlimited emails, and flying hundreds of thousands of miles to attend meetings.

We started with a dream that only became a reality through perseverance, dedication and teamwork; access to readily available, and well-equipped, research facilities; and a healthy dose of good luck. Despite still being in the early stages of our work, our published data is considered by many local and international experts to be landmark research in the area of antibiotic resistance in the Gulf States.

Our data has raised awareness about the issue of antimicrobial resistance in the region. I recently returned from overseas after attending high-level committee planning sessions for a strategic plan to combat antimicrobial resistance in the Gulf States. It was evident our produced data has made such an impact.

Having a rapid point-of-care diagnostic test that can identify antibiotic-resistant bacteria in minutes for a very low cost is indeed still ambitious, at this stage. Yet, biotechnology innovation is at the frontier with the level of advancements achieved in this era.

We have started by exploring technologies, with an aim to advance monitoring the spread of antibiotic-resistant bacteria and hopefully produce results in a shorter turnaround time to help clinicians apply targeted therapy.

Last June, the UK Government, with Nesta Foundation, announced the next Longitude Prize will be devoted to rapid, cheap, point-of-care diagnostics for antibiotic-resistant bacteria. The White House also announced a similar award last September.

As clinical microbiologists, we recognised the need for rapid diagnosis long before these announcements, and have taken a few steps towards that direction. In fact, a few days before the announcement of the Longitude Prize, I was awarded the Rolex Award for Enterprise as a Young Laureate to support our work for rapid diagnosis research and development.

As suggested by WHO, education is a pillar in the combat strategy for antimicrobial resistance. In some parts of the world, including where I am originally from, antibiotics can be sold over the counter without prescriptions, despite the existing banning law. It is clear that public education is needed in this regard.

I have also been part of a team which has initiated an awareness campaign, with a zero-dollar budget, aimed solely at educating the public about the importance of using antibiotics wisely, and being aware of the threat superbugs pose.

The beauty of our campaign is that we use data generated from our epidemiological research in the Gulf that are published in high-tier journals, and translate this into everyday language for people. Our campaign has interested more health activists, who have volunteered to produce multimedia materials that help clarify the complicated science behind antimicrobial resistance.

We were grateful to see that the Saudi Food and Drug Authority launched a follow-up campaign last November to raise awareness about antibiotics. We feel our work is impacting, and may have triggered an organisational move towards raising antibiotic awareness.

Combating antimicrobial resistance should not be done at an individual level. It should be carried out as a global mission on multiple collaborative, innovative and social levels. We hope our slow and gentle moves are concrete in contributing to the important fight against superbugs.

More details about superbug research are available from uqccr.uq.edu.au and superbugs.imb.uq.edu.au. To contribute to the University's superbug research, visit uq.edu.au/giving or email the Pro-Vice-Chancellor (Advancement) at pvca@uq.edu.au.

MATTHEW'S INSPIRATION

Home is where the heart is for alumnus Matthew Ames (Bachelor of Engineering '93), who has survived tremendous odds to adjust to life as a quadruple amputee. The father-of-four speaks to *Contact* about attitude, and how studying engineering has helped in ways he never imagined.

Watching his two-year-old son, Ben, play with a kaleidoscope of colourful balloons and brighten up a plain hospital room is etched deep in Ames's memory. The hospital bed was not his, but his mother-in-law's, and she was celebrating her birthday after receiving a terminal cancer diagnosis.

"It was a pretty tough time for the family," Ames conceded, "but Ben knew how to have a good time. In that particular moment, it rubbed off on everyone else, and we enjoyed just living in the moment."

The genuine observation offers insight into Ames's own attitude. He is resoundingly resilient, having steered his own path with the help of loved ones and a dedicated team of specialists after a bout of "man flu" took a fateful turn. A simple bacterial infection (streptococcal A) went undiagnosed, cannibalising into toxic shock syndrome.

Within 24 hours of being admitted to the Mater Hospital in Brisbane, Ames, 39, was in an induced coma, as his limbs blackened from blood toxicity, his kidneys failed, and his blood pressure dipped dangerously low.

"My body was producing toxins that ended up killing my extremities," he explained. "I would have died from the tips up if doctors didn't get rid of the dead tissue."

Ames's wife, Diane, a civil engineer and UQ alumna, was given a heart-wrenching choice: let her husband die, or fight for a one per cent chance of survival by agreeing to the amputation of his arms and legs.

For Diane, it was a simple choice. She and their four children could not bear to see him go, even if it meant he would wake up profoundly disabled.

Counsellors had forewarned of a likely spiral into depression, yet Ames didn't wallow in self-pity, once Diane finally told him the news. Instead, he was optimistic and open-minded, adopting an attitude he attributes, in part, to ample opportunity for self-reflection.

"When you are lying there, in a hospital bed with no arms and no legs, you can't lift

your head and you have a breathing tube down your throat, and you've got a feeding tube down your nose, and you are on dialysis in an intensive-care bed, and you can't talk to anyone..." he drifted off.

"It is a precious thing, life. I didn't realise just how precious until I went through this experience."

"I think it was the first time in my life I actually truly stopped. I really valued that time to slow down, and to become aware."

Ames, who learnt to breathe, talk and drink again after the operation, had always defined himself by what he did. He was a

safety and environmental engineer — and a successful one at that — who had revelled in adventures such as hiking Machu Picchu in Peru and rafting through icy, turquoise rapids in New Zealand with Diane by his side, before they raised a family together.

Today, Ames has a renewed purpose.

"I want to grow old with my wife and kids," the Queensland state finalist in the 2013 Australian Father of the Year awards and 2013 Queensland Pride of Australia (Courage) award-winner shared.

"This experience has forced me to transition from defining myself by what I did, to who I am."

Ames said skills learnt studying Engineering have proved invaluable as he embraces assistive technology. For instance, he communicates using a touch screen he and his engineer father designed to be compatible with his metal rods and electric wheelchair.

"I had to work out how to get a stylus tip connected to the metal on my arm, because touch screens don't work with plastic materials — they conduct off your finger," he said.

"We sat down and worked out some designs, just so I could press 'answer' on the phone."

Ames is aiming to become more independent with prosthetic arms and limbs connected to his nervous system and metal pins in his limbs. This osseointegration has enabled him to enjoy a rich life, and he is the first person in the world to have the surgery done on all four limbs.

Ames maintains perspective, even as he continues to face new challenges and adapt to existing ones, including experiencing phantom pain where his limbs used to be.

"If you look at it from an individual level, what happened to me was catastrophic, but if you look at it from a community perspective, it's like — eh, it's not that big a deal," he maintained.

"It's connections to those things that are bigger than you and connections to those who are close to you to that can really make a difference."



Matthew is embraced by Diane and three of their children, Emily, 4, Ben, 9, and Will, 8, at the 2014 Bridge to Brisbane, on a special Father's Day.



UQ EXPERIENCE

Matthew Ames was mentored by academics including Professor Paul Lant and Professor Ian Cameron in the School of Chemical Engineering, and met Diane on the first day of university. As part of the first cohort of Environmental Engineering students, he graduated with strong employment prospects in the midst of the early 1990s recession.

"I wasn't pigeonholed," he said. "I got to do things that most people were not able to do at that age. At 25, I was sitting in Taiwan with a multinational CEO and corporate legal advisor, restructuring a takeover deal. The opportunities to get involved early were great."



Matthew Ames.

“Finding ways to accept, and not judge, is something that has really helped me to be at peace, both with myself and others.”

RESILIENCE: MATTHEW’S TIPS

The concept of resilience is derived from the Latin verb *resilire*, meaning to spring back, or rebound. For Matthew Ames, who has given lectures at UQ about developing resilience, “bouncing back” involves following simple steps that set a foundation for personal growth.

1. Acceptance.

Acceptance is not thinking everything is wonderful and good, but understanding what is around you, being aware of it, and not judging it.

Finding ways to accept, and not judge, is something that has really helped me to be at peace, both with myself and others.

2. Sense of purpose.

Goals should not be easy. When it gets hard, ask yourself the question, “Why does my goal exist and why do I want to do it?” Keep asking until it makes sense.

I am doing totally different things to what I used to do, but it is with the same purpose: to make the world a better place.

3. Opportunity.

Attitude makes a difference. I might look different, but it has nothing to do with my

sense of self. Over a couple of years, I’ve tried a social experiment with people looking at me. The consistent one I’ve settled on is, “Smile and say hello.”

What do you think happens? People smile back. It’s pretty good, and I get a whole heap of people smiling at me and saying hi. Who’s created that? Me.

There’s always an opportunity, even when things are really hard. Thinking back to when you learnt the most in your life, chances are it was from a really, really hard time, when you were facing something quite difficult. Instead, try thinking, “this will be a great learning opportunity”.

4. Relationships.

The single most important thing that will help you get through adversity is the quality of relationships you have with those who are close to you.

For me, I’ve been blessed by what I see as the humanity that stirs us within the world.

The sense of community, the support and the help that I’ve received is unfathomable. The fact that it exists in the quantity it does in the community is a wonderful thing.

5. Enjoyment.

With my family, I have enjoyed new experiences: bodyboarding, playing modified soccer, swimming with custom-designed flippers and paddles and participating in the 2014 Brisbane to Bridge. They have all helped form new memories infused with happiness, not just adversity.

With his wife Diane and sister Kate, Matthew has co-authored *Will to Live*, a book about his experience.

You can read Matthew’s blog at renovatingmatthew.com.



Pictured left to right: Professor Eric McFarland, Centre Director; Doctor Andrew N. Liveris AO, The Dow Chemical Company Chairman and CEO; The Honourable Ian Macfarlane MP, Minister for Industry and Science; and Professor Peter Høj, Vice-Chancellor and President, attended the opening of the Dow Centre for Sustainable Engineering Innovation.

UQ's Dow Centre for Sustainable Engineering Innovation is addressing the challenges of water and energy management in a carbon-constrained future.

INSPIRED ENGINEERING

A dynamic vision underpins the Centre, which is part of a \$10 million partnership between UQ and The Dow Chemical Company (Dow). The partnership has been founded on a commitment to achieving sustainable solutions to global issues, as Dow Chairman and CEO, Doctor Andrew N. Liveris AO (Bachelor of Chemical Engineering '75, First Class Honours), shares.

"The chief ambition of sustainable engineering is to deliver essential human necessities — clean water, affordable housing, abundant food, reliable energy," he said.

"In the forty years since I first walked onto the St Lucia campus as a student, these basic necessities have not changed. What has changed is the scale. With a growing global population comes a vastly increasing demand. To meet these needs in a sustainable way, we must use our science and our smarts."

Internal partners of the Dow Centre include the School of Chemical Engineering, the Global Change Institute and the Australian Institute for Bioengineering and Nanotechnology.

Centre Director, Professor Eric McFarland, said, "The Centre's central research activity is collaborative analysis related to the techno-economic and technical feasibility of innovative technology, linked to the sustainable production of chemicals, fuels, water, and food. It is unique in its focus on both economic and environmental sustainability, and attempts to

select projects that, if successful, will have measureable and significant global impact."

The Centre has developed a new process to co-produce chemicals using nuclear radiation that might improve the value proposition of nuclear power. Researchers have also participated in an industrial process for lower-cost carbon fibre production for automobile lightweighting and methane conversion technology.

Liveris, who has been recognised with an honorary doctorate in science from UQ, said the impact of the work being done could be far-reaching.

"The Dow Centre represents the transformation Australia needs to make — from extract and export to extract, enhance and export. There is too much opportunity at our fingertips for this country to resign itself to being the world's quarry, hotel, or farm.

"We must reach across industries and sectors.

We must all work together at the intersection between business, government, academia and civil society.

The Dow Centre sits at this crucial intersection."

Dow Chairman and CEO, Doctor Andrew N. Liveris AO

"Apart from a macroalgae project, we have worked on an idea to store electric energy in natural gas pipelines — it works, but analysis showed there is no need for this in the market," said McFarland.

"We also found that to smaller companies, the storage of compressed air energy in unconventional applications like gas cylinders might be interesting.

"We are offering an avenue to link researchers, engineers, investors, and sometimes even policymakers, ensuring those technologies with the potential to 'move the needle' — in terms of sustainable practices and metrics — have an easier transition into the commercial world."

"The world should look to Australia not only for its raw materials and raw beauty, but also for our ideas and our solutions.

"The stakes could not be higher and developments at the Dow Centre can play a major part."

Alumni are invited to share their advice about industries where innovative solutions to real-world solutions are needed. You can contact the Centre about any proposed collaborations by emailing dowcentre@uq.edu.au.

app Download the **Contact** app to view related photos.

Underwater MAJESTY

The magical world under the sea inspires researchers — supported by the generosity of donors — to discover how we can protect and sustain our coral reefs and oceans in an era of global change.

Professor Ove Hoegh-Guldberg

Director and ARC Laureate Fellow, Global Change Institute (GCI)



I have been fascinated by the ocean ever since I can remember. An introduction to coral reefs at the age of 10 began a lifelong obsession with the world's most complex ecosystem and the problems that it faces in a rapidly changing world. I saw the first samples of bleached coral early in

my career during the 1980s, when the first mass bleaching events were happening in the Caribbean. Nobody quite knew why this was occurring, so I chose to make finding and understanding the cause of mass coral bleaching and mortality the focus of my doctorate.

At the time, the concept of global warming was relatively new, so when my modeling projected coral reef destruction by 2050 (as opposed to over 100 years

after that), it generated significant negative attention from colleagues and researchers around the world.

Today, it is increasingly evident how far we have come in terms of understanding how critical systems within the ocean are changing dramatically in ways unprecedented over tens of millions of years.

My early work focused on identifying the molecular mechanisms associated with coral reef stress and understanding their relationship to warming oceans.

More recently, I have been involved in exploring the combination of ocean warming and acidification on a broader range of organisms and ecosystems.

As a researcher, I have published more than 250 journal articles and authored 18 book chapters on climate change. According to Thomson Reuters, I am the most cited Australian researcher on climate change, and the third most cited in the world.

My work, and that of my team, has attracted significant international support. In 1999, I was honoured with the Eureka Science Award, and last year I received the Climate Change Award from His Serene Highness Prince Albert II of Monaco. I was

interviewed by Sir David Attenborough for an upcoming BBC television series, and the US Secretary of State, John Kerry, invited me to present at the Our Ocean Conference in Washington DC in June last year.

These are all a giddy set of circumstances at recollection, and remarkable yet unnecessary honours for what has been a complete labour of love.

The GCI has been incredibly important in maintaining an unwavering pursuit of answers.

Our Institute seeks to provide fresh perspectives, not only on climate change, but also about key questions around renewable energy, food security and sustainable water, which all loom large as some of the greatest challenges humanity has ever faced.

It is wonderful to work with such inspired and motivated people. The GCI, largely funded by vital philanthropy, really is making a difference to our future.



Photo courtesy of Catlin Seaview Survey.

Professor Justin Marshall

ARC Australian Laureate Fellow, Queensland Brain Institute

Affiliated Professor, School of Biomedical Sciences

I am a neuroscientist working primarily in the ocean, rather than the laboratory. Questions such as why reef fish are colourful, how they see their own world (rather than how we see it), and why a marine crustacean has the most complex visual system on earth, fill my research life.

Mainly curiosity-driven, bio-inspired outcomes in optics, neural imaging and information flow also fascinate me, and these lines of work take me everywhere, from the Great Barrier Reef to the deep ocean.

I have been fortunate enough to maintain a constant stream of research-based funding, through a string of Australian Research Council (ARC) grants, including, in 2014, a Laureate Fellowship.

This has also been bolstered with industry-supported ARC funding for projects such as Prawns in Space and Deep Down

Under, enabling my research to span imaging from satellites in space to unlocking sensory system secrets in the deep sea — unusual for a member of the Queensland Brain Institute!

Philanthropic funding growing from Deep Down Under enabled us to use research submersibles in Australia off the Great Barrier Reef for the first time in 2014. This was a journey of discovery, from surface waters to 300 metres deep, and we were lucky to work with Sir David Attenborough and his team, revealing new secrets from the reef that will soon be shared with anyone who is interested, including scientists.

Philanthropic contributions and the media are vital ways of engaging public interest and participation in science, but the other key to my success has been a growing network of international colleagues and research partnerships.

My laboratory comprises members from nine different countries, and I have worked with top scientists from the United States, United Kingdom, Sweden, Taiwan, Israel and New Zealand for over 20 years.

Outside input, financial and intellectual, as well as true participation of the public in

science, enables us to maintain a series of communication channels on a global level and across multiple projects.

CoralWatch is a citizen-science project I set in motion over 10 years ago to inform and engage the public in reef preservation and stewardship, enabling anyone to contribute data to long-term monitoring of reefs in over 80 countries.

As our oceans, and the fascinating visual systems and brains they contain, continue to be impacted by climate change and population demands, nothing is more important to me than attracting international attention to ensure that the natural wonders I now see and work on are also there for my children to wonder at, live with, learn from and preserve.



To find out more, visit these websites:

Global Change Institute: gci.uq.edu.au

Queensland Brain Institute: qbi.uq.edu.au

GOVERNING WITH GRACE

A deep belief in public duty and the legal system have inspired career choices made by former Chief Justice, His Excellency the Honourable Paul de Jersey AC (Bachelor of Arts/Bachelor of Laws Honours '71), who is the sixth UQ alumnus to assume the post of Queensland Governor.

As a child, de Jersey discovered country life in Queensland, living outside Lowood in the Lockyer Valley; in Coolabunia, outside Kingaroy; and in Maryborough and Longreach. He dreamt of a career practising law even before he was a teenager, with his parents, both school teachers, encouraging him to think inquisitively.

"From my pre-teen years, I always wanted to be a barrister," he reminisced, speaking with *Contact* from the Governor's residence, which casts a striking impression with its stark white façade steeped in history, high on a hill in Paddington.

"This was driven by curiosity about the challenge of helping people resolve disputes that were beyond their own capacities, both with other people and with the State."

After matriculating from the Church of England Grammar School (Churchie), de Jersey took his next natural step: enrolling in a Bachelor of Arts/Bachelor of Laws.

It was here that he would form lifelong friendships, be guided under the mentorship of Chief Justice Sir Charles Wanstall, KBE, QC, and meet the love of his life, Kaye, while she worked in the Law Library.

"My really abiding memory is of an unhurried regime, where intellectual talents could be fostered and developed," reflected de Jersey.

While studying, de Jersey also served part-time in the Queensland University Regiment, before being commissioned as a Lieutenant in 1969.

"My time in the regiment was really a life-defining experience. It emphasised the importance of service, which is really a critical theme now during the Centenary of Anzac.

"I also realised the importance of self-discipline and organisational skills, which I think young people these days are particularly recognising are important."

For the de Jersey family, the University has inspired many generational memories. In addition to Paul and Kaye, who is a Bachelor of Arts alumna ('72), the couple's three children, Carolyn, Alison and David, are all also UQ alumni.

In 2014, de Jersey was announced the 26th Governor of Queensland, following in

the footsteps of a series of UQ graduates who have held the role, including the Honourable Penelope Wensley AC (2008–14), the Honourable Quentin Bryce AC CVO (2003–08), the Honourable Major General Peter Arnison AC VCO (1997–03), the Honourable Leneen Forde AC (1992–97) and the Honourable Sir Walter Campbell AC QC (1985–92).

Accepting the job involved a major life change, with de Jersey transitioning from a 43-year-long career "where the common daily thread was conflict" into a "world of 'consensus and mutual support'".

It was a move accepted graciously, but deliberately, by a man with a quiet yet steely self-belief that has informed his judgement since childhood.

Q&As

You were made a judge at 36. What were the highlights during this time in your career?

"There were many challenging and notable cases. I particularly enjoyed sitting in regional centres, and I believe that country people can usefully remind city people about what life is really about. I learnt that then, and I've remained of that view. I was privileged to work with many distinguished judges, eventually leading them, of course, as Chief Justice."

Do you have any advice for students and alumni about achieving success in the legal profession?

"The main thing is not to be complacent, and to assume you have capacities you may not have. Be apprehensive about things, and be enquiring. Push yourself, and do not assume things are as you may think. Always do your best. Perhaps be courteous to the Law Librarian if you are inclined to ask for her hand in marriage?" *(laughs)*

During the G20, you undertook a number of official engagements. Can you share more about the experience?

"I had quite a diverse exposure during the G20. My involvement was really part of promoting Queensland, apart from the national interest. My efforts, I saw, as really complementary to those of the Ministry. I met a number of world leaders on their

arrivals here, I hosted a bilateral meeting, and I attended President Obama's address at UQ and met him. We (de Jersey and his wife, Kaye) met many leaders at the Prime Minister's Reception and the Treasurer's dinner. I also hosted Prime Minister Modi's unveiling of the great statue of Mahatma Gandhi at Roma Street Parklands."

What was it like meeting dignitaries such as US President Barack Obama, and Indian Prime Minister Narendra Modi?

"It was an amazing experience to meet all of the dignitaries. Absolutely extraordinary — I never thought it would happen."

You have been involved with the Mental Health Tribunal and a patron for many charities. Is mental health an issue you are passionate about, along with other causes?

"I'm concerned about all aspects of life. I have to be, I should be, and I am. Mental health is obviously a startling problem in our community. It explains a lot of criminal offending, which has to be dealt with in a particular way. It means many fellow citizens are denied the prospect of reaching their full potential, and I think it is an issue we have to address actively, and we are, through various means. I would like to make a point about the importance of volunteering, which is critical to the maintenance of our social fabric and civic society."

What is your personal philosophy and approach as Governor?

"I think the current perception of the role of Governor is broader than the mere ceremonial. I'm ever so pleased that this is so, because not only does it make it so much more interesting from my point of view, but it makes it much more relevant for the people of Queensland and the state.

"I hope that through my personal involvement with people, I'll add a particular flavour. I do sense — and it is for others to judge — that so far, this Governorship is working well."

app Download the *Contact* app to read an extended interview with Paul de Jersey, discover his career highlights and find out who has inspired him in his professional life.



His Excellency the
Honourable Paul de Jersey AC,
Governor of Queensland.

DISCOVERY HIGHLIGHTS

Talented researchers are making a difference by finding solutions to global issues. To find out more about how you can contribute to the University's research efforts, visit uq.edu.au/giving.



IS BEHAVIOUR IN THE FAMILY?

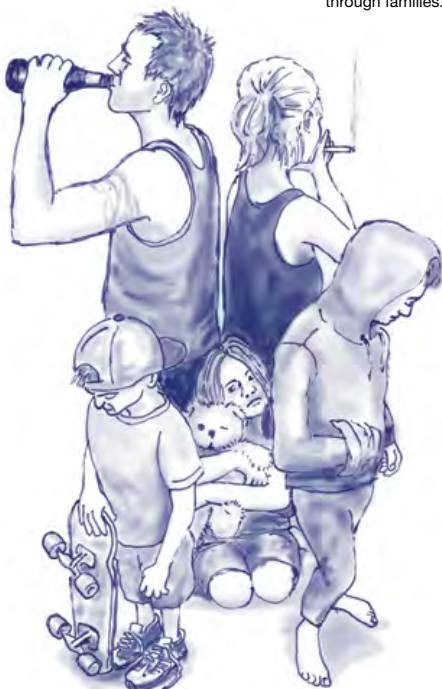
Anti-social behaviours, including activities such as smoking, alcohol misuse and violence, are damaging to health and wellbeing. Researchers from the School of Public Health and School of Social Science, led by Professor Jake Najman, are conducting a study to examine anti-social behaviour across three generations, to determine whether and to what extent poor behaviour of grandparents can be transmitted to grandchildren.

"There's a belief in society that criminal behaviour is transmitted across generations, despite there being very little evidence to support this," said Najman.

"Marriage instability, poverty and poor parenting have been linked to the development of anti-social behaviour and, by looking at three generations, this study allows us to better examine the impact of these and other critical factors."

Najman said the study findings might see anti-social families targeted for early intervention programs that may help reduce the incidence and impact of poor behaviours.

UQ research aims to answer the age-old question of whether anti-social behaviour is passed down through families.



FRUIT FOR HEALTHY WOMEN

Women who eat fewer than two serves of fruit a day face a greater risk of developing depression.

Professor Gita Mishra from the School of Public Health said the findings of a six-year study of more than 6000 Australian women revealed a clear inverse link between fruit consumption and developing depressive symptoms.



Participants in the Australian Longitudinal Study on Women's Health have revealed two or more pieces of fruit a day can prevent depression in women.

"We found women who ate at least two servings of fruit a day were less likely to suffer from depression than women who ate fewer servings, even after taking into account other factors, such as smoking, alcohol, body mass index, physical activity, marital status and education," she said.

According to Mishra, the findings highlighted that a diet including two or more pieces of fruit a day could prevent developing depression in middle age.

"The rate of depression in women is growing rapidly. By 2030, it is expected to be one of the world's top three diseases, making it a priority area for public health interventions."

NERVE INJURY BREAKTHROUGH



Scientists have discovered the molecular mechanisms that allow severed nerves in roundworms to fuse back together. Pictured left to right: Dr Brent Neumann and Associate Professor Massimo Hilliard.

A small, transparent roundworm with the remarkable ability to self-heal may hold the secret to treating nerve injuries in humans.

Project leader Associate Professor Massimo Hilliard, from the Queensland Brain Institute, and collaborator Professor Ding Xue, from University of Colorado Boulder, believe the findings provide hope for treating nerve injuries.

"This will now open new avenues to try to exploit this knowledge in other systems closer to human physiology, and hopefully move further towards solving nerve injuries," said Hilliard.

Hilliard said neurosurgery could be combined with molecular biology in the future to deliver clinical outcomes, and possibly treat conditions such as spinal cord or nerve injuries.

"A combined approach using molecular biology might create an environment that is much more conducive to regeneration, and we may be able to deliver molecules that act as a glue to enable healing," said Hilliard.

Lead author Dr Brent Neumann said the *C. elegans* roundworm was ideal for studying regeneration, due to its transparency, simplistic structure, and known genetics.

FIRE TRACKERS

In an Australian first, a research project about bushfires that focuses on better protecting lives and property is underway, in collaboration with the Queensland Fire and Emergency Services and the Bureau of Meteorology (BoM).

Geographical Sciences Honours student Nicholas McCarthy will lead a pilot project to understand and model the intense columns of heat above bushfires, known as convective plumes.

Research into convective plumes is set to improve bushfire forecasting and management.

The project will utilise UQ's mobile Doppler weather radar, unmanned aerial vehicles, weather balloons and the BoM fixed radar network.

"The end goal of the work is to better understand the processes that are involved with the formation of the most severe of bushfires in Australia," said McCarthy.

Researchers will track bushfires around the east coast of Australia to observe related wind and temperature structures.

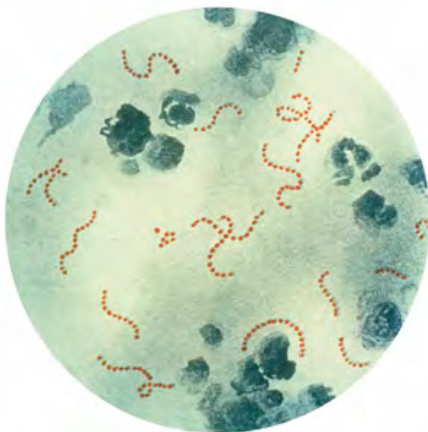


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STREP DISCOVERY

An international team including UQ scientists has made a breakthrough in understanding how group A *Streptococcus* (strep) bacteria resist the human immune system. This research is an important step in creating a safe vaccine against diseases such as strep throat, necrotising fasciitis (flesh-eating disease) and streptococcal toxic shock syndrome.

A School of Chemistry and Molecular Biosciences researcher and co-lead author of the study, Dr Jason Cole, said the team discovered how group A carbohydrate, which makes up most of the cell wall of the strep bacteria, plays a critical role in helping the bacteria to resist the immune response.



Photomicrograph of *Streptococcus pyogenes* bacteria. Image courtesy of the Centers for Disease Control and Prevention.

"The group A carbohydrate may trigger diseases such as rheumatic heart disease, which has hindered the development of a safe carbohydrate-based vaccine against strep," he said.

The team has produced a modified form of the group A carbohydrate and hopes to produce a safe vaccine that doesn't trigger such diseases.

Researchers are now conducting pre-clinical testing of the modified vaccine to see if it is safe for human trials.



I-BALL FOR ALL

The Interactive Ball (I-Ball) is set to improve social ball game participation on the field and court for people with a visual disability.

The I-Ball is a robotic soccer ball that contains motion sensors, high-efficiency speakers and a small UQ-developed controller that can be programmed to emit sound to suit the player.

The ball, which was created by researchers from the Faculty of Engineering, Architecture, and Information Technology, will help people who have a visual disability participate in ball sports, and makes game play both fun and inclusive.

Dr Surya Singh said the I-Ball was more advanced than existing electronic soccer balls designed for people who are blind or have low vision. It varies the sound based on motion and the environment, with the tone speeding up or slowing down depending on movement.

"Traditionally, balls designed for people who are blind or have low vision have been very simple," he said.

"This ball can make a variety of sounds, and can be programed to play songs."

Singh, with colleagues Dr Paul Pounds and Dr Hanna Kurniawati, is collaborating with staff from Vision Australia, who have provided expertise about the social, physical and developmental aspects of vision with sport.

BEERS TO THAT

Scientists have been tasked with outlining the unique molecular structure of beer.

The scientists are, for the first time, revealing the full profile of the molecular components that give beer its flavour and much-prized foaming head.

Dr Glen Fox, from the Queensland Alliance for Agriculture and Food Innovation, is leading a project working with staff from the Australian Institute for Bioengineering and Nanotechnology and the School of Chemistry and Molecular Biosciences to gain the most detailed picture yet of all the carbohydrate, protein and yeast molecules in a single "tallie", or glass of beer.

"We have a set of platform technologies that allows us to have a panoramic view of all the components in beer, especially components that interact together in making foam, rather than only being able to study a few single components at a time," said Fox.

The quality and the quantity of protein in beer determines its foam quality. The research has so far identified more than 200 proteins in beer.

The team hopes to identify whether certain proteins should be present at different stages of the process, which would allow brewers to troubleshoot for quality control and help manage wastage and fermentability.

Scientists are discovering more about how previously hidden molecules present in beer and foam interact.



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Creative COLLABORATIONS

White Halo take centre stage performing at Customs House, Brisbane.

With a new single, *Epic Diva*, *White Halo Ensemble* are delivering a symphony for the senses for chamber music listeners.

The richly soothing melodies crafted by four UQ musicians leave a lasting impression on listeners. A standing ovation when the colleagues

performed at the 2014 Bangalow Chamber Music Festival, broadcast on ABC Classic FM, was an early indication for their success.

Together, the acclaimed colleagues are *White Halo Ensemble*: a chamber music group launched in 2014 comprising of Associate Professor Adam Chalabi (violin), Professor Patricia Pollett (viola), Patrick Murphy (cello) and Dr Liam Viney (piano).

The ensemble takes its name from the halo effect that forms behind supersonic jets as they break the sound barrier. The group, which is UQ's ensemble-in-residence, has adopted the name with intent to "break through" and inspire new standards of excellence in chamber music.

Each musician has diverse experience, with their performance backgrounds

complemented by a track record of performance-based and performance-led research, and outstanding teaching.

"UQ is the only university in Australia to have a performance ensemble comprising full-time teaching and research performance staff."

Head of School, Music, Professor Margaret Barrett

As an ensemble, they are establishing the University as a national hub for chamber

music leadership, by innovating new linkages between research, teaching and practice.

"As a result of being supported and embedded within the University, *White Halo* is able to interact with students and other staff in ways that are unusual for a chamber music group — not just working with a composer on a new work, but allowing students to see all three parts of the process — composition, collaboration between composer and performers, and the performance," continued Barrett.

Violist Pollett, who is regarded as one of Australia's leading string players, has combined academia with her work as a performer for some time, as a master class teacher for the Australian National Academy of Music and New York University, and tutor for the Australian Youth Orchestra.

Along with Barrett, Pollett played an integral role in identifying a creative outlet for the quartet at its inception.

"We went looking for three musicians — a pianist, a cellist and a violinist — and it has taken five or six years to create the group. It is a fabulous team, and I'm really delighted," said Pollett.

Pianist Viney is a Piano Performance Fellow, and directs keyboard studies at the University. He has performed in festivals, live radio broadcasts and major series across several countries, and studied at Yale University with acclaimed concert pianist Boris Berman.

Cellist Murphy is a Cello Performance Fellow in the School of Music, in addition to being a member of the Southern Cross Soloists, and a resident at the Queensland Performing Arts Centre and the Australian World Orchestra. Recent recordings to which he has contributed, including Stravinsky's *Rite of Spring* and Mahler's *Symphony No. 1* with Zubin Mehta, have met with critical acclaim.

Violinist Chalabi moved to Brisbane to join *White Halo*, and accepted an appointment as Associate Professor of Violin at UQ. After beginning violin studies at the age of four, he has realised his childhood dream, performing for the Suedwestdeutsches Kammerorchester Pforzheim in Germany; Symphonieorchester Vorarlberg in Austria; Camerata Bern, Orchestre de la Suisse Romande and Zurich Chamber Orchestra in Switzerland; and Orchestra Victoria and Tasmanian Symphony Orchestra in Australia.

He is the first violinist in the Tinalley String Quartet, and was formerly Head of Strings for the Australian Academy of Music.

White Halo is able to interact with students and other staff in ways that are unusual for a chamber music group, allowing students to see all three parts of the process – composition, collaboration between composer and performers, and the performance.

Chalabi contends there is a synergy among faculty staff who have performed at such high levels, especially when sharing their advice and applying teaching theory to practice.

"Students have the opportunity to see us performing on stage, and they have unanimously told us they value seeing performance staff performing," he reflected.

"You can say clever things and discuss great teaching techniques, but if students see you reasonably implementing what you speak about on stage, this is proof that what you have taught them works."

As well as being an exemplar for chamber music practice, the talented musicians participate in innovative performance and research activities for the School's Creative Collaboratorium.

The quartet is seeking to highlight the importance of chamber music to arts culture and music education, both in Australia and internationally.

White Halo's mission includes commissioning new chamber music from a diverse range of composers, including both established and emerging composers from Australia and overseas. Composers including Andrew Ford, Matthew Hindson, Gordon Hamilton and James Ledger have already been commissioned to contribute to the group's creative forays.

Future plans include regional, national and international tours, presenting innovative chamber music performance research, and leading master classes in chamber music practice.

A debut CD is due for release soon.

Upcoming *White Halo Ensemble* performance dates are available at uq.edu.au/music/events-and-concerts.

app Download the *Contact* app to listen to *Epic Diva*, an explosive track commissioned from Matthew Hindson by *White Halo*.

Academic expertise, open collaboration and creativity underpin the soothing melodies crafted by *White Halo Ensemble*.



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CENTENARY OF SERVICE

UQ remembers staff and students who fought in past conflicts.

Between 2014 and 2018, UQ is running a large program of activities to mark the war service of its staff and students.

Head of the School of Historical and Philosophical Inquiry, Associate Professor Martin Crotty, said that the University has, to this point, observed the centenary through a range of commemoration activities.

These activities include the Australian Historical Association annual conference, themed "Conflict in History", which was held at UQ

in July 2014, and a public event at the Queensland Museum — a joint venture between UQ, the French Embassy

and the Institut Français — entitled *Somewhere in France, Somewhere in Australia*.

In a project undertaken by Dr Jonathan Richards and overseen

by Crotty, the University is re-examining its historic UQ Roll of Honour — a plaque that memorialises UQ students who died during World War II. The Roll of Honour is located in the Forgan Smith Building at St Lucia campus. There is a high degree of enthusiasm for the project, and the University's primary aim is to ensure the Roll of Honour is maintained as accurately as possible.

Bill Park (Associate Accountancy '42, Bachelor of Commerce, '47, Master of

"We would be delighted to hear more from the community about WWII veterans who are listed on UQ's Roll of Honour."

Head of School, School of Historical and Philosophical Inquiry, Associate Professor Martin Crotty

Philosophy, '09) who has since conducted postgraduate-level research about his fellow classmates in 1941 and their involvement in World War II, will



World War II Womens Army Corps, circa 1943 at the St Lucia campus. Photography courtesy of UQ Archives.

be assisting Richards. The researchers will be checking lists of students against the Australian War Memorial's Roll of Honour and the World

War Two Nominal Roll. With historical records often unreliable, examining the accuracy of UQ's Roll of Honour is expected to pose some challenges.

To discover more about UQ's war veterans and to help ensure the accuracy of the University's Roll of Honour, *Contact* invites its readers to get in touch if they know of any alumni and staff who died in defence service during WWII.

If you have information that may help piece together UQ's involvement in the war, please phone +61 (0)7 3366 7886 or email contactmagazine@uq.edu.au.

MATCH MADE IN RUGBY HEAVEN

Are you heading to the UK for the 2015 Rugby World Cup in September? Do you love the sporting rivalry between Australia and England?

Just a few days before the two rivals clash at the Rugby World Cup, you can catch some first-class action when the 2014 Premiership-winning UQ Rugby Football Club goes head-to-head with the legendary Loughborough Students Rugby Union Football Club (LSRUFC) in the 2015 University Challenge.

More than 60 former LSRUFC players have gone on to represent England, Ireland, Scotland or Wales in international rugby, with 17 of these players also representing the British and Irish Lions.

Loughborough University students have won the British

Universities and Colleges Sport (BUCS) Championship for over 30 consecutive years. The University's overall sporting prowess is renowned, and at the 2014 Commonwealth Games, past and present students, as well as Loughborough-based athletes, won a total of 35 medals — theoretically placing the University 11th on the medal table, had it been a country.

Our own Red Heavies team are not to be underestimated, having won Queensland Premier Rugby's Hospital Cup Premiership three times in the last five seasons. UQ has won the Hospital Challenge Cup 21 times since its inaugural year in



The Red Heavies pack a scrum against inter-varsity rivals Bond University in the Queensland Premier Rugby Competition.

1946 — the most of any team in the competition.

The match will be played at Loughborough University's world-class rugby facilities on 30 September at 7pm.

For more information about attending the match between these two formidable rugby clubs, please email uqalumni@uq.edu.au.

BIG PHILANTHROPY



Photo courtesy of Catlin Seaview Survey.



Global Change Institute (GCI) researchers are creating a baseline record of the world's coral reefs through the Catlin Seaview Survey, students and staff involved with the Young Achievers Program, and the GCI atrium.

Andrew Brice AM and Graeme Wood AM are renowned not only for their business acumen, having founded accommodation booking website Wotif.com, but also as early pioneers of large-scale university philanthropy in Australia, having invested around \$18 million in a public ancillary fund designed to support UQ in 2008.

Considered to be the largest alumni donation to a higher education institution in Australia at the time, the gift helped to establish UQef, which, in turn, has funded world-leading research and helped students and Australian youths reach their potential through the provision of scholarships and mentoring programs.

Since then, Australian universities have received mega gifts from philanthropists who have followed in the footsteps of Wood and Brice, donating to universities to address major issues that transcend generations. This trend reflects a "big picture" mentality of achieving outcomes through learning, teaching and research.

Across Australian states and territories, some of our most innovative and dynamic thinkers who have achieved success after

university are embodying the idea of giving back. This is a sentiment that is widely recognised internationally, particularly in the United States.

In 2013, mining magnate Andrew Forrest and his wife Nicola made a \$65 million donation to five universities in Western Australia, while commodity trader Graham Tuckwell and his wife Louise made a similar donation of \$50 million to Australian National University.

Engineering services entrepreneur John Grill has donated \$20 million to The University of Sydney, while top commercial

lawyer Allan Myers and his wife Maria have supported The University of Melbourne with a \$10 million gift.

Greg Poche AO and his wife Kay van Norton Poche have given over \$100 million nationally to establish Poche Centres for Indigenous Health at six leading Australian universities, including a centre launched at UQ in March (see page 12).

Wood, Andrew Brice and Jennifer Brice have continued to give to the University, with Wood donating a further \$15 million to fund the Global Change Institute (see page 22), which aims to address the impacts of climate

"We want to enact positive change, but we don't want to be part of a select few in pioneering big philanthropy in Australia. Through collective action, we can achieve substantial social change."

Graeme Wood AM



“I think today, more people are donating to universities in an effort to advance human capital — giving opportunities to kids who are just like they were, and investing in research that addresses serious intergenerational issues. The more people who earn a university degree, the better off society will be.”

Andrew Brice AM



Jennifer Brice and Andrew Brice AM.

change, technological innovation and population growth through programs focused on clean energy, food systems, healthy oceans and sustainable water.

The Brices, who are both graduates of UQ — Andrew having completed a Bachelor of Commerce in 1965 while Jennifer finished a Bachelor of Arts in 1996 — are equally passionate about leading the cause to support education in Australia, with their family’s stated purpose to “advance human capital”.

“I think today, more and more people are donating to universities in an effort to advance human capital: giving opportunities to kids who are just like they were and investing in research that addresses serious, intergenerational issues,” said Mr Brice.

“The more people who earn a university degree, the better off universities and society will be.”

“At US universities, the idea of giving back is so entrenched within the institution; however, in Australia, it’s not something most students consider.

“That’s something Andrew, Graeme and I are trying to teach and promote as well,” added Mrs Brice.

Through UQef, Wood’s abiding interest in youth is evident in the support of researchers at the Centre for Youth Substance Abuse Research, which is delivering early intervention initiatives and drug and alcohol services for Australian youths.

A similar interest in tackling disadvantage has seen financial support for tertiary education offered to youths through the Young Achievers Program (see page 34). This is an initiative close to the hearts of the Brices, who continue to donate a considerable amount of personal time to the program.

Tackling disadvantage in its varied forms has underpinned the entrepreneurs’ diverse philanthropic efforts. For Mr and Mrs Brice, personal experience has been integral in shaping their approach to philanthropy.

“I thought we were extremely fortunate in that we have four happy, healthy children, who have all gone on to become university graduates,” she said.

“That stroke of fortune was a major motivating factor in helping other children who may want to go to university, but might not necessarily be able to clearly see a path to do so.”

The Australian Government acknowledges education as a “foundation capability” in reducing the likelihood people will experience deep and persistent disadvantage. Authors of a recent report concluded: “It improves a person’s employment prospects and earning capacity, and the evidence points to a relationship between education and better health and raised civic and social engagement.”¹

However, awareness of education as a variable affecting disadvantage is just part of piecing together the puzzle.

“We want to enact positive change, but we don’t want to be part of a select few in pioneering big philanthropy in Australia. Through collective action, we can achieve substantial social change,” said Wood.

Visit these links to find out more:

Global Change Institute: gci.uq.edu.au

Centre for Youth Substance Abuse Research: <http://cysar.health.uq.edu.au>

Young Achievers Program: uq.edu.au/youngachievers

¹ Australian Government: Productivity Commission, *Deep and Persistent Disadvantage in Australia*, July 2013, Productivity Commission Staff Working Paper, p. 2.

THE YOUNG ONES



UQ graduates and Young Achievers Program participants, from left to right: Emily Brown, Andrew Luck, Tim Seng, Alisha Vogler and Sarah Oyet.

The first cohort of the UQ Young Achievers Program are closer to their dreams, graduating to join our ranks of esteemed alumni.

The Young Achievers Program is an exciting initiative that supports the tertiary study and career aspirations of senior school students who may otherwise not have access to university after school.

Mentoring, financial assistance and opportunities for personal growth and leadership development provide a valuable support framework, enabling students to realise their potential.

Sarah Oyet (Bachelor of Health Sciences, '14) who arrived in Australia in 2003 as a refugee from South Sudan, feels extremely fortunate to have been selected for the program. Having completed her undergraduate studies, Oyet now plans to study postgraduate medical imaging at UQ, with the goal of eventually becoming a medical doctor.

"I've always been interested in the human body, and studying health sciences has brought me closer to realising that I would like to study medicine," said Oyet.

"Getting into the program made me start thinking about university and UQ, and the opportunities it had to offer."

Sarah Oyet

The Young Achievers Program provides an opportunity for students to work as mentors with new Young Achievers through Years 11 and 12 and during the school-to-university transition process. Mentors advise students about university options, pathways and application procedures, as well as study and career planning, and encourage participants to have self-confidence and set personal and educational goals.

Program participant Tim Seng (Bachelor of Commerce, '14) has shown reciprocity in becoming a mentor and sharing his experience with younger students.

"It has been a great feeling giving back by being a Young Achiever mentor, because I have been able to share my story to help younger students explore university life.

"The program has changed my whole university experience. I feel it has boosted my confidence and I've made a wonderful group of friends," said Seng.

Students chosen for the program benefit not only from mentor support, but also financial assistance, including \$1000 annually towards the educational costs of Year 11 and 12, and \$6000 annually once they enrol at UQ.

The Young Achievers Program was established in 2009 through an endowment from Wotif.com co-founder Andrew Brice AM, with more than 560 students participating to date.

To support the Young Achievers Program, email the Pro-Vice-Chancellor (Advancement) at pvca@uq.edu.

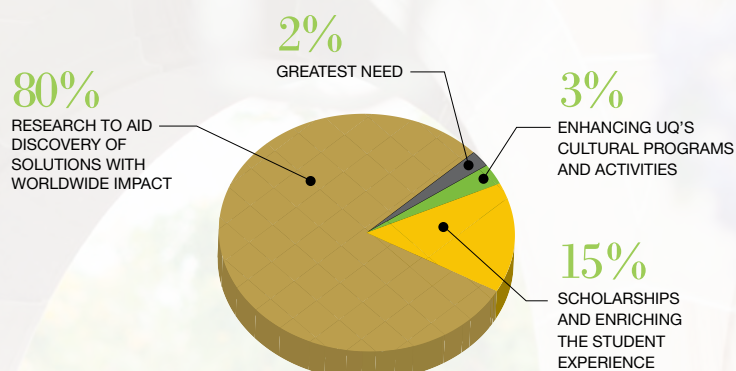
THANK YOU FOR ALL THAT YOU DO FOR UQ

We would like to extend a heartfelt thank you to the alumni, staff, industry partners and the broader community for your continued support.

In 2014, the generosity of many individuals and organisations enabled us to raise over \$44 million, a significant increase on the \$25 million raised in 2013.

At the end of 2014, the University's endowment stood at a record \$136.5 million.

THE IMPACT OF YOUR DONATIONS



UQ ENDOWMENT INVESTMENT PORTFOLIO

The University has a total of \$136.5m in a long-term investment portfolio that is managed by external specialist fund managers.

The portfolio consists of trusts, bequest funds and philanthropic donations that have been received over UQ's long history and is referred to as UQ's Endowment. The portfolio is invested and annual earnings are distributed to the purposes specified by the donors.

The fund managers are required to operate within designated asset allocation benchmarks and each has responsibilities for investments in:

- cash and fixed interest;
- listed property;
- Australian shares;
- overseas shares;
- tactical asset allocation; and
- private equity.

The investment strategy of the portfolio is to achieve a long-term return of CPI plus an additional 6%. The portfolio produced a return of 8.48% in 2014.

The table below indicates the return of the portfolio during 2014 and over the past 5 years.

Investment portfolio performance

	Return of portfolio	Average CPI plus 6%
Return over past year (%)	8.48	-0.29
Return over past five years (%)	8.55	0.41

PERSONAL TEACHING AND LEARNING



Connections and collegiality are integral to meaningful learning, shares alumna Professor Doune Macdonald, who is considering exciting new pedagogies and tested methodologies in overseeing a new Institute for Teaching and Learning Innovation (ITaLI).

Since ITaLI was recently launched and I was tasked with shaping the Institute's vision and culture, I've been reflecting on my own experiences at UQ as a student, a teacher and as a Head of School. Collegiality and opportunities to learn in ways that have meaning for me stand out as two of the strongest drivers of success.

I'm very keen to see the traditional student experience threaded through the web of exciting new pedagogies and modalities. Building connections and a sense of belonging will make this possible.

Significant shifts in higher education, such as the growing popularity of "flipped classrooms" and massive, open, online courses (MOOCs), have prompted UQ to reconfigure its teaching and learning centres into ITaLI's one-stop-shop model. For example, in a little over 18 months, more than 268,000 students worldwide have enrolled in UQ's MOOCs — five times the University's annual enrolment. This is a clear indication of how widely the UQ brand is recognised around the world as looking to be a hallmark of quality.

With contemporary teaching methods based on broad learning analytics, UQ is at the forefront of offering individualised education for diverse cohorts. I believe that personalising educational innovation support for teaching staff is the starting point.

strongly in ITaLI's methodology. Partnership projects are underway in all six faculties to renew curricula with contemporary pedagogies and assessment.

Peer mentoring schemes and embedding student employability skills in learning

The push for personalisation in many aspects of life is changing expectations for tertiary education.

ITaLI's brief is to provide leadership, engagement and advocacy so that the University can continue to raise the bar for educational innovation and teaching excellence. Our teaching academics need support to fulfil these aims in ways that suit their disciplines, workloads, and own career goals. That is why ITaLI is all about helping them to understand how and why incorporating innovative practices creates the connectivity that students need to stay motivated and engaged in learning.

A strong sense of teamwork has contributed to my own learning and teaching success, and collegiality features

programs are in the mix, along with a quality assurance dashboard and an international review of best practices in notable universities. A help desk style service is also on ITaLI's to-do list. We're offering both intellectual and practical support to help tackle some new and enduring teaching challenges. We're working with fellows from various schools to support their projects, and to assist them to evaluate and publish their findings.

Seven teaching fellows from different faculties are funded to work with ITaLI on their projects. These ventures range from enhancing research-based practices in the



app Download the **Contact** app to view videos relating to UQx MOOCs.

Bachelor of Science program, to developing intercultural competence in management education, and promoting problem-setting skills using mobile technologies for creative arts and humanities teachers. I encourage alumni who are involved with tertiary teaching and learning, especially those based overseas, to apply for ITaLI's three-month visiting fellowships and share their global perspectives. International staff and students contribute to UQ's rich tapestry, and to the University's high status in global rankings.

For many students, a MOOC experience will influence their decision about where in the world they will enrol for their undergraduate or postgraduate studies. Ironically, it's the extensive global reach of UQ MOOCs that's helping to build the bank of data ITaLI is drawing on to personalise learning for our increasingly diverse student body.

Learning analytics — the analysis of the mass of information on student performance and feedback generated by MOOCs, as well as from other digital footprints — is helping us construct new models of student learning patterns, and to appreciate, almost in real time, the characteristics of successful and less successful approaches to presenting material.

One of our MOOCs, *The science of everyday thinking* (THINK101x), initially attracted 113,000 enrolments from 249 countries and territories. Naturally, we

wanted to understand what influenced this level of interest, and corresponding engagement and completion rates. We're also analysing existing systems and surveys, such as Blackboard and student evaluations, to understand what enhances learning experiences.

The look, feel and direction of the University's next big ideas for teaching and learning will change in the future, but the sense of belonging and collegiality that our alumni have enjoyed and contributed to over the past century is something that ITaLI will strive to maintain.

While MOOCs and other interactive options might challenge contemporary concepts of tertiary education, the campus experience remains central to academic life. Such learning options are certainly a rich catalyst for invigorating how we teach and learn.

Professor Macdonald would like to thank Professor Roly Sussex, Professor Peter Tregloan and Marcel Lavrencic for their input into this article.

For more information about ITaLI, visit itali.uq.edu.au.

To learn more about MOOCs currently offered at UQ, and to enrol, visit uqx.uq.edu.au.

ABOUT THE AUTHOR



Professor Doune Macdonald is the Pro-Vice-Chancellor (Teaching and Learning) and Director of the Institute for Teaching and Learning Innovation (ITaLI). With her background in education — beginning with her first degree,

a Bachelor of Human Movement Studies (Education) at UQ, followed by a relevant PhD at Deakin University — the experienced educator feels comfortable taking up her new post with the Institute, which opened in 2014. Prior to this position, Macdonald was Head of the School of Human Movement Studies (from 2004 to 2013), which afforded her valuable insights into teaching, research and engagement across several biophysical and social cultural disciplines. In 1998, she won a Prime Ministerial Award for Teaching Excellence and has since held several national and internal grants for teaching and learning innovation. As a leading educator, she sits on the Board of the Brisbane Grammar School and her administrative experience has given her the opportunity to chair state, national and international committees. Macdonald currently holds two Australian Research Council Discovery Project Funding Agreements, through which she addresses aspects of social, educational and technological change in relation to teaching and school curricula provision.

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OPPORTUNITY ARISING

The importance and impact of scholarships are, in many ways, immeasurable. A performance indicator can't determine how a bright student feels when their application for a scholarship succeeds, and the benefits when they graduate are considerable.

STUDENT



Bachelor of Nursing student Stuart Adcock is the Ipswich RSLA Sub Branch Scholarship in Nursing recipient.

The 2014 recipient of the Ipswich RSLA Sub Branch Scholarship in Nursing, Stuart Adcock, knows firsthand the difference a scholarship can make in the life of a student. Finances often play a major role in students' abilities to complete and achieve success in their studies.

"The financial aspect is crucial. I had been stressing over, and concerned about, the cost of requirements for my upcoming semester, and deciding which books I could do without," he said.

"With this scholarship, I have been able to purchase the books, as well as a laptop and hospital uniforms for practical internships."

In the future, Adcock is keen to help others in similar circumstances who aspire towards a career in nursing. He is also grateful for opportunities he has received.

"I plan to pursue a long and rewarding career in nursing, and hope that one day I will be able to repay the generosity of receiving this scholarship through my work as a nurse," he said.

Adcock suggests scholarship holders' capacity to reduce hours they spend in casual jobs is also a major benefit of receiving support; ensuring students can make the most of their study time. He attributes his scholarship to helping motivate him to succeed in his chosen field.

In his opinion, the benefits of scholarships are straightforward.

"If UQ didn't have scholarships, a lot of great students wouldn't be here. Scholarship support helps to keep UQ accessible to the best students, regardless of their financial circumstances."

ALUMNA



Alumna Karen Chester, former Archibald Scholarship recipient.

Archibald Scholarship recipient Karen Chester (Bachelor of Economics '84, Honours), who is now a Commissioner at the Productivity Commission, remembers the soaring costs of text books while attending university. This was at a time well before the price-reducing impacts of tariff cuts and internet use.

"I had to work hard to support my university costs, union fees and very expensive textbooks," she said.

Chester was awarded the Archibald Scholarship in her third year of studies. The award recognises exceptional results in the study of Economics at UQ, with stringent qualification criteria including enrolment in the Honours program, and a GPA of 6.50 or greater in the undergraduate degree.

"I was (unknowingly) nominated by the Head of the Economics faculty at the time,

and later learnt the prize is awarded to the student with the highest grades in micro-economics and macro-economics," she reflected.

Chester used the funding to pay various university expenses, but suggests the benefits of the award went well beyond immediate financial assistance.

"The scholarship afforded me the confidence to continue with my honours year in Economics, but it was also an important distinguishing feature on my CV when I entered the graduate employment market, at a time when youth unemployment was over 20 per cent," she said.

"Despite this, I was offered the graduate position I hoped to get with the Department of Prime Minister and Cabinet. It was my first few years there that really set me on a wonderful career path trajectory."

Chester suggests there are critical benefits with university scholarships.

"First, they create a strong incentive for hard work. Second, they afford recognition for excellence and allow distinction beyond the headline metric of a GPA."

DONORS

As the former recipient of a Commonwealth Scholarship and a university donor, Keith Bennett (Bachelor of Engineering '66, St John's College 62–65) understands the difference scholarships can make in students' lives.

"As a result of receiving benefits from my own scholarship, I am a different person than I otherwise might have been. I've had an enjoyable career that has brought financial rewards," he said.

With his wife Annette (Women's College '63), Bennett established the Civil Engineering Residential Scholarship in 2012. The scholarship provides financial assistance to students in the engineering program who also live on campus.

The scholarship reduces a student's residential fees by \$5000 each year, but the benefits extend well beyond the figures. Extra financial support can enable recipients to focus more on their studies and the university

experience, with a reduced need to rely on part-time work to supplement their income.

"Aside from the financial benefit, I want students to have an opportunity to achieve academically, culturally and spiritually as citizens and leaders in their communities and careers," said Bennett.

Calvin Zhang, the current Civil Engineering Residential Scholarship holder, agrees the financial benefit of the scholarship is just one aspect that is rewarding for him as a student.

"This scholarship is an invaluable vote of confidence," said Zhang.



Civil Engineering Residential Scholarship holder, Calvin Zhang.

"It has been integral in making the past two years a rewarding experience for me, and has motivated me to make the most of my time and focus on learning as much as I can."

Calvin believes his scholarship will provide a solid foundation for a career in civil engineering, and hopes to be a part of major projects that enhance city landscapes.

Both Keith and Annette are firm believers in the life skills garnered from college residency. They want to promote and preserve the college experience at university among current students.

"Annette and I have benefited enormously from attending The University of Queensland and having our respective college experiences," said Bennett.

"We want as many students as possible to enjoy the same experiences we had, and our scholarship ensures at least one person will benefit from attending college each year."

The recipients and donors featured have shared their stories about a sample of UQ funds supported by countless alumni, businesses and community members. To find out more about how you can contribute to the University's giving efforts, visit uq.edu.au/giving, or contact the Office of the Pro-Vice-Chancellor (Advancement) at pvca@uq.edu.au.



Keith Bennett and his wife Annette are donors who support the Civil Engineering Residential Scholarship.



SPOTLIGHT ON UQ IN TURKEY

Turkey, the country that joins Asia and Europe, is a nation experiencing immense growth, with opportunities for UQ to nurture partnerships that are mutually beneficial.

This year, Turkey is hosting a momentous gathering of visitors and participating in significant collaborations alongside UQ.

Turkey will welcome the world's leaders when it hosts the 2015 G20 events. The country is also seeing a large number of visitors arrive to commemorate the Anzac Centenary, which marks 100 years since the historic landing on Gallipoli took place on April 25, 1915.

With the firm advancement of Turkey's economy and its subsequent broadened global reach, the University continues

to strengthen its engagement with the unique destination. In Australia, students are afforded the chance to enrol in Turkish language courses. The University additionally offers students the opportunity to participate in exchanges with two Turkish universities through UQ Abroad: Boğaziçi University and Koç University, both in Istanbul.

New academic and research collaborations continue to be supported by the University, which is developing strong partnerships with Turkish universities, corporate partners and government bodies.

Through collaborative ventures — including a number of archaeology projects with Hacettepe University in Ankara involving historically rich research sites across the country — UQ is exchanging knowledge and fostering strong connections with Turkey.

app Download the **Contact** app to view an interactive map about UQ's engagement with Turkey. A Turkish translation is also available.

UNCOVERING TURKEY'S PAST

For archaeologists, Turkey is a rewarding land where relics of a fascinating history abound.

As Associate Professor Andrew Fairbairn from the School of Social Science shared, Turkey has more archaeological sites than Greece and Egypt combined.

Each year, Fairbairn takes between four and 10 students, including undergraduates, Honours and Research Higher Degree students, to Turkish archaeological sites.

Fairbairn spends up to 12 weeks each year working in and discovering more about Turkey, and has seen a steady increase in student involvement since he commenced at UQ in 2006.



A research team led by Associate Professor Andrew Fairbairn and Professor Douglas Baird gathers at Boncuklu Höyük, the site of a 10,500-year-old village near the city of Konya in Turkey.

"My research interest in Turkey focuses on understanding the development of the farming economy and how it influenced social and economic development from the Neolithic to Iron Age, approximately 10,500

to 20,000 years ago," he said.

To better understand these historical developments, Fairbairn analyses plant remains, which he collects during annual excavations on Turkish sites.

DELIVERING EXPERTISE IN MINING

During the past decade, Turkey has emerged as a strong performer in the global economy. National policies, demographics — including having a comparatively “young” population — and industries such as mining are playing a critical role in its continuing growth.

UQ’s Sustainable Minerals Institute (UQ-SMI) is poised to play a significant part in this process through a partnership in an International Mining Centre (IMC) with Turkey’s Hacettepe University.

The idea for the IMC emerged from discussions in 2014 between UQ-SMI’s Professor Dee Bradshaw, Hacettepe’s Professor Hakan Benzer and Turkish PhD scholar Barış Yıldırım. The Centre involves collaboration between SMI and UQ’s Faculty of Engineering, Architecture and Information Technology. At the same time, the Soma coal mine accident in May that year, which took the lives of more than 300 miners, highlighted the need for improved safety.

The discussions led to a proposal for a centre based on a model developed by UQ-SMI. It was supported by the Turkish mining industry, and officially approved by the

Turkish government in November 2014.

The IMC will be based at Hacettepe, and Benzer has been appointed as its Director.

“Hacettepe University is recognised for its technical expertise worldwide and UQ-SMI represents the world’s largest concentration of university researchers working on mining and sustainability issues. The IMC gives us both an opportunity to consolidate our efforts,” said Bradshaw.

“The aim of the IMC is to provide a platform to ensure the safe, secure and sustainable future of mining in Turkey, through a collaboration between government, universities and business.”

Professor Alban Lynch, the founding director of UQ’s Julius Kruttschnitt Mineral Research Centre, established collaboration between Hacettepe University and UQ in 1998, and there has been a continuous exchange of staff and students since then.

In 2009, Hacettepe University joined the Australian Minerals Industry Research Association (AMIRA) P9 project — one of the world’s longest running research projects, which began in 1962. In 2012, Hacettepe was one of five universities in the UQ-SMI

Global Comminution Initiative.

PhD Candidate Barış Yıldırım chose UQ for undertaking research in mining because of the long-standing engagement between the University and his home country.

“I don’t think I would be able to study such a challenging subject at any other university,” said Yıldırım.

“It is a different PhD journey than most. I am thankful to UQ for the opportunities I’ve received — site studies in Canada and Chile, and experiments in Brazil, Australia and Turkey. The diversification of the research, and engaging with different cultures and world experts, strengthens the value of the PhD.”

Yıldırım believes that the Turkish mining industry will derive lasting benefits from the collaboration in Australia.

“The engagement with UQ and SMI through the IMC will support the Turkish mining industry and increase the level of professionalism. It will improve safety, increase social responsibility, train leaders, apply new technologies and develop linkages. If we can save lives and improve efficiency, this will be the ultimate contribution that professionals can make,” he said.



PhD candidate Barış G. Yıldırım discusses his research with the mine manager Tümay Uludağ at the world’s biggest boron mine in central Anatolia, Turkey.



Yıldırım and supervising colleagues, Professor Malcolm Powell and Dr Deming Wang, at the Julius Kruttschnitt Mineral Research Centre.

The dedicated researcher’s fondness for Turkey extends beyond his research interests.

“Turkey has a very complex landscape, with an engaging beauty, even in the central plateau — which is my winter home — and the people are wonderful, with a complex culture, fine food and overwhelming hospitality,” he said.

Fairbairn’s primary focus is on the excavation of Boncuklu Höyük, the site of a 10,500-year-old village near the city of Konya, which he leads with Professor Douglas Baird from the University of Liverpool.

“My work is contributing to providing a new understanding of this challenging and unique region’s role in the development of ancient civilisations,” Fairbairn said.

PhD candidate Xavier Carah seized the opportunity to visit Turkey.

“For millennia, Turkey has been at the centre of empire and civilization — a truly

fascinating country to visit and experience,” said Carah.

Fairbairn’s team also liaises with the Turkish Ministry of Culture and Tourism, as well as the British Institute at Ankara, which sponsors the Boncuklu Project.

His research incorporates collaborative projects between the Japanese Institute of Anatolian Archaeology and Ankara University across several important sites.

A number of students also attend Fairbairn’s field school each year at Kaman-Kalehöyük, south-east of Ankara, where they assist with sample processing and analysis.

Fairbairn and his students’ efforts in Turkey are long-term endeavours, which have fostered strong connections with local communities.

Fairbairn said these connections are particularly strong in Konya, where Boncuklu is based.

“The excavation provides continuing research fieldwork experiences for students and staff, and fieldwork experience is essential for archaeologists’ training.” He added, “I am taking part in developing an exchange program with Hacettepe University in Ankara, and the projects are forming a basis for collaboration.”

Back at the St Lucia campus, Fairbairn runs a course entitled “The Archaeology of Turkey” to prepare undergraduate Archaeology students for conducting research in Turkey. Having worked in Turkey each year for 15 years now, Fairbairn’s enthusiasm for the country remains strong. “The simple fact is that Turkey, as a place, got under my skin, and the archaeological questions there are really engaging,” he said.

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DEALING WITH DIABLO

Matthew Versluys

Bachelor of Engineering/Bachelor of Science – '96

Care to share an office with Diablo, the Lord of Terror; Nova, a ghost from StarCraft; or Prince Arthas, former Lich King? UQ alumnus Matthew Versluys has a role offering thrills by the minute.



For alumnus Matthew Versluys, delivering blockbusters such as *World of Warcraft (WoW)*, *Diablo* and *StarCraft* to millions of fans is part of the action-packed reality of his everyday.

It took years for Versluys's parents to take his job — where he manages more than 130 computer engineering staff and delivers one of the most popular forms of entertainment to fans around the world — seriously.

"My parents wanted me to go into medicine. I made a compromise with them to do an Electrical Engineering and Computer Science dual degree," said Versluys.

"When I graduated, they wanted me to join a major, respectable company. Instead of doing that, I chose a role with a very small game development company in Brisbane."

It was in this role that Versluys fell into networking, an area he hadn't had exposure to previously. His proficiency in it would have him noticed by important industry contacts.

"I quickly became known as the multiplayer, networking guy," he said.

At the time, a game in the company's portfolio was being published by one of the industry's biggest players, Activision. Versluys soon made the move to Activision's headquarters in California, before finding his way to Blizzard Entertainment.

"Working at Blizzard was definitely aspirational for me, because I've played these games my entire life, and now I've worked exclusively on networking and servers at Blizzard for almost 15 years," he said.

Versluys is a Technical Director of the company, and is responsible for Battle.net,

the infrastructure used to host people playing the biggest names in gaming, such as *WoW* and *Diablo III*.

"At any given time, there are over a million people using the service. Every time a game is released, we have many millions of people show up on Battle.net, and having our service survive these huge events is always a major accomplishment," he said.

Versluys credits the simulation components of his degree as providing him with valuable career skills. He said the environment he enjoyed at university has given him a great foundation for working in the gaming industry.

"At UQ, I learnt how to learn, which is crucial in this industry. You have to be learning all the time, because everything changes at an extremely rapid rate," he said.

Versluys said competency in fundamental skills required in the industry is also essential.

"The hardest thing to find in graduates looking to enter the industry is a thorough understanding and competency in fundamentals, like how caches work, how processors are built, microarchitecture, and low-level languages such as C++ (a general-purpose programming language). These skills are invaluable in ensuring performance, particularly with premium content."

After receiving service awards for his fifth (a sword) and 10th (a shield) work anniversaries, and currently just a few weeks shy of his 15th (a ring) anniversary, Versluys is looking forward to what the next five years at Blizzard holds — and the crown staff receive after 20 years of service.

"I love it here. We're making premium entertainment and we're doing it for millions and millions of people. That's not something you can do in many industries," he shared.

Left: Nova, a ghost from *StarCraft*; and top, middle to right: Diablo, Lord of Terror; and Prince Arthas, former Lich King, *World of Warcraft*.



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The UQ Business School MBA program is ranked Number 1 in Australia and Asia Pacific by the Economist and Number 1 in Australia by AFR BOSS Magazine for many good reasons. Our MBA students engage in new business thinking in inspiring learning environments far beyond the classroom, such as an immersion trip to India to work with a micro-charity in the slums of Delhi. They can work on real life consultancy projects in exclusive partnership programs with the Wharton School of the University of Pennsylvania and Fudan University School of Management, or tackle community challenges through our renowned Social Economic Engagement Program. Learn more about our MBA program and business that matters to you and the world at business.uq.edu.au/mba



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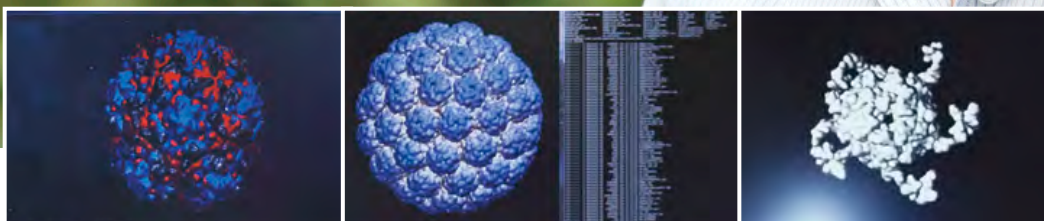
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Dr Natalie Connors

Bachelor of Science (First Class Honours) – '05
Doctor of Philosophy – '12

VACCINE SOLUTIONS



“It feels great to create something that may solve a huge number of issues for people.”

Dr Natalie Connors

Developing vaccine technology that changes the lives of millions of people inspires researcher Dr Natalie Connors.

Connors is developing vaccine production technologies that may result in cheaper, more readily available vaccination programs throughout the world.

“My work involves developing a vaccine platform, using a virus-like particle (VLP), that can be manipulated and used to suit any virus or bacteria, in order to create or improve a vaccine.

“I am targeting influenza and rotavirus, but the technology can be used for anything that has a known antigen, and VLPs have already been used for vaccines such as Gardasil®,” she explained.

Traditionally, vaccines are produced by inactivating or mutating a virus or bacteria to create a weaker version, which is then presented to a human immune system. There are limitations with this approach.

“Current vaccine production processes are time-consuming and costly, and can be unsafe too, as you are growing live bacteria to make a vaccine,” said Connors.

In contrast, the new technology takes a VLP — a simple mouse virus — and attaches components of another virus or bacterium to its shell, where it naturally self-assembles into an exact replica of the live virus.

The crucial difference is that the VLP lacks the infectious genome that would make it a real and harmful virus.

“Essentially it is just a protein, but it convincingly presents itself to the human body as the highly infectious disease it is imitating,” said Connors.

A benefit of the technology is safety: by removing the infectious component of a virus from the vaccine, the virus cannot be contracted or transmitted into the environment. The process also reduces production times drastically.

“When a new strain of influenza is discovered, we can’t wait up to six months for that vaccine to be readily available. Our VLP vaccine platform can reduce production times to a couple of weeks.”

There is also a financial incentive.

“Current technologies price vaccines beyond one dollar per dose,” said Connors, “yet a VLP vaccine could cost less than one cent per dose, and the obvious beneficiaries of this would be people in developing countries.”

With additional funding, Connors could see potential in taking the research further, and integrating the technology with the Nanopatch™, which was developed by Professor Mark Kendall.

In February, vaccine technology company Vaxxas, a start-up of UQ’s main commercialisation company, UniQuest, attracted \$25 million in funding led by Australian venture capital firm OneVentures to further the Nanopatch™.

Connors’ research is complementary, with support for vaccine research from investors reflecting the tremendous impact the technology might have in people’s lives.

“Any program that combines cutting-edge technology in vaccine delivery, such as the Nanopatch™, with cutting-edge technology in vaccines, such as VLPs, can only be a good thing, particularly for people in developing countries,” she said.

RECOMMENDED READING

Established in 1948, UQP is a dynamic publishing house known for its innovative philosophy and commitment to producing high-quality books of cultural significance. It has launched the careers of many celebrated Australian writers, including David Malouf, Peter Carey, Kate Grenville, Doris Pilkington and Nick Earls.

UQP's scholarly books are internationally recognised, presenting contemporary issues such as peace and conflict, creative industries and Australia's own regional concerns through a major Pacific Studies collection. Other publishing activities include fiction, non-fiction, poetry, Indigenous writing and the promotion of literacy and a love of reading through its children's and young adult titles.

UQP is also dedicated to co-releasing front-list titles as eBooks and digitally printing selected out-of-print titles.

To purchase any of these books or sign up to UQP's monthly e-newsletter, visit uqp.com.au.

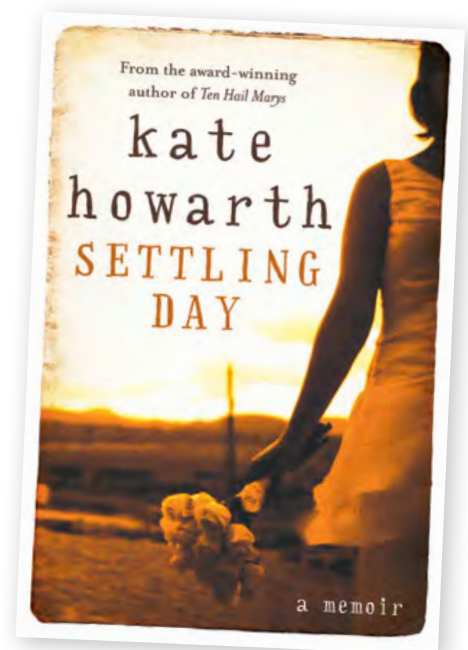
Settling Day

Kate Howarth

Reviewed by Megan Bull — Graduate Certificate in Arts (Writing, Editing and Publishing) student

Deemed unfit, 17-year-old Kate Howarth must leave her infant son in the custody of his father. In response to an overwhelming sense of powerlessness, she becomes fuelled by her determination to meet the '70s perceived standard of a worthy mother and reunite with her son. Howarth builds an incredible career with a recruitment agency, which, through her resilience and work ethic, she leads as one of Australia's most successful.

This evocative narrative offers a startling insight into the injustices women experience, both at home and in the workplace, and even from those enlisted to aid them. Socially conscious, the narrative encounters the devastating effects that Australia's forced adoption policies had on many young women and their children. Serving as a powerful sequel to Howarth's acclaimed *Ten Hail Marys* (2010), *Settling Day* is a compelling story, harrowing in its narration, confronting in its context and empowering to read.



Ransacking Paris

Patti Miller

Reviewed by Kerri Harris — Master of Arts (Writing, Editing and Publishing) student

Sometime around 2004, Patti Miller fulfils a lifelong dream and leaves Australia's Blue Mountains and her two grown-up sons to spend a year in Paris with her husband Anthony. As she zigs and zags across Paris, Miller introduces us to her favourite French memoirists, one by one, from Montaigne to Rousseau, and de Beauvoir to Stendhal. She imagines chatting with them over coffee,

gathering their views on everything from motherhood to love to writing.

The title of this memoir comes from 16th century French philosopher Michel de Montaigne, who wrote, "Bees ransack flowers here and there: but then they make their own honey which is entirely theirs". Miller travels to Paris to ransack, to steal, to fully understand herself and the world, and to write the story of her late friend, Dina. She

spends the year immersed in French language and culture, and takes us on a sensory, philosophical and deeply contemplative journey.

Good memoirs have the ability to allow readers to know themselves, and Miller pulls this off exceptionally well. *Ransacking Paris* is a sensitive and sublime memoir — nectar for the soul.



The Ash Burner

Kári Gíslason

Reviewed by Catherine Moller — Master of Arts (Writing, Editing and Publishing) student

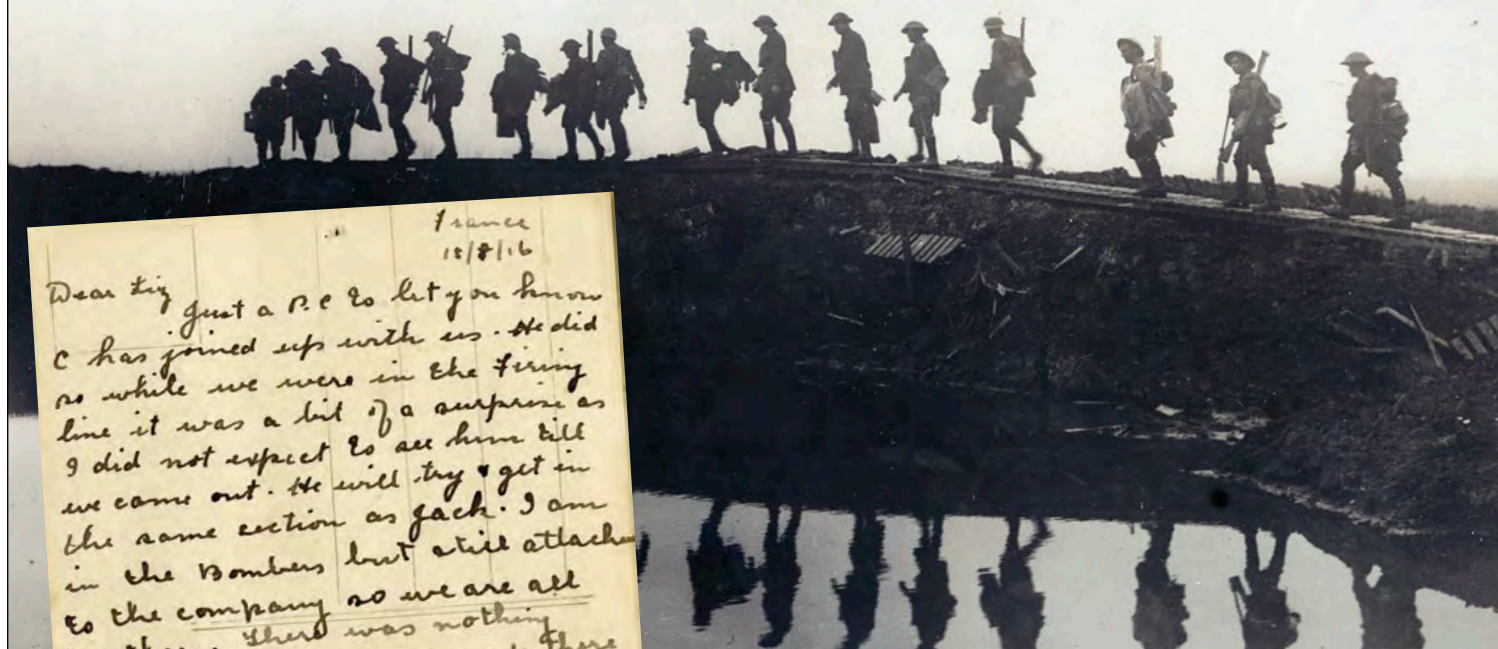
This is Gíslason's first novel, and it traces similar themes of fatherhood, loss and place revealed in his critically acclaimed memoir, *The Promise of Iceland*. At 13, Ted is haunted by a mother he barely remembers. While his father chooses to define his life in silence, Ted finds himself falling into a friendship

with two sophisticated and complex teenagers, Anthony and Claire. The pair encourage Ted to embrace art, poetry, and the sense of belonging he has longed for. As the trio matures and travels to university, Ted must learn to navigate the uncertain waters of love, friendship and loss, until he uncovers a long-kept secret that

changes the context of his life.

Gíslason's prose is dreamy and ethereal, exploring the boundaries between reality and memory. He charts a rich internal landscape for his characters, examining the essential disconnect between one's own inner life and the ultimately unknowable inner lives of loved ones.

ANZAC CENTENARY



A photograph of the supports going up at nightfall from "Selected photographs from the papers of Alfred Mills" and a letter written by Jack Dennis Fryer's brother, Will Fryer, on 18 August 1916.

One hundred years after the Anzacs descended on Gallipoli, *Contact* reflects on the events of 1915 and remembers students and staff who served.

In March 1915, the University established a War Committee to assist authorities, help with recruiting, deliver lectures, write articles and pamphlets, and produce reports on available resources.

Emeritus Professor Malcolm Thomis, in his book *A Place of Light and Learning: The University of Queensland's first 75 years* (1985), wrote that UQ never closed its doors during the war, and attempted to follow the British Prime Minister Herbert Henry Asquith's advice on continuing business as usual, "despite a sadly depleted staff and student body".

In September 1914, the Senate had released a small number of staff on full pay for military work. Marking the second anniversary of the declaration of war in August 1916, an impassioned speech was delivered at Senate on the defence of liberty and justice. Regrettably, approximately 31 students and two staff members did not return from the war, although numbers are not certain.

Although John Denis (Jack) Fryer did return, he subsequently died in 1923.

Fryer's life was commemorated with the establishment of a library. In 2015, the Fryer Library will digitise the John Denis Fryer Papers — a collection of Jack's personal wartime correspondence.

After being fortunate to arrive home safely, Professor Thomas Parnell returned £437 to the University from his military activities.

He asked that this money be given to returned soldiers in need of financial assistance to pursue their studies.

Bryan wrote, "No one could doubt the University's patriotism. In addition to the services of its members and to the practical help given to [the] war industry and research in its laboratories and workshops, it did not fail to issue statements appropriate to the times and the period."

Throughout the Anzac Centenary, the University remembers Australians involved in conflict and peace operations, and students and staff who have given their lives in service.



John Denis (Jack) Fryer.

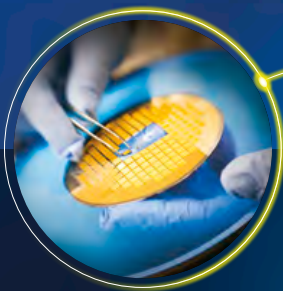
Just three years after UQ opened its doors to students, the First World War (WWI) broke out. On 25 April 1915, Australian soldiers commenced their first major action in the war when, alongside allies from a number of other countries, they landed on the Gallipoli Peninsula at what was later to become known as Anzac Cove.

In the lead-up to WWI, the University was expanding: there were 32 academic staff, and student numbers had reached 231.

Respected librarian Dr Harrison Bryan AO wrote about the small community in *The University of Queensland 1910–1960: An Essay Towards History* (1966), sharing that 154 staff and students participated in active service and 22 engaged in munitions or other work.

LEADING THE WORLD WITH RESEARCH BREAKTHROUGHS

Ranked well inside the world's top 100, The University of Queensland (UQ) is one of Australia's leading teaching and research institutions. UQ has won more national teaching awards than any other Australian university and, in 2013, was the number one university in Australia for the generation of external research income*. For more than a century, we have educated and worked with outstanding people to deliver knowledge leadership for a better world. Our successes are embodied in a global network of more than 220,000 graduates and the countless people worldwide who have benefited from UQ innovations. These are just some of the reasons why UQ is, and will continue to be, a meeting place for current and future leaders.



VACCINES WITHOUT NEEDLES

Research is currently being undertaken at UQ into the Nanopatch™, a revolutionary needle-free method of delivering vaccines. The Nanopatch™ is a small, pain-free patch being developed through a UQ spin-out company, Vaxxas, and has the potential to help save millions of lives.



USING MRI TO FIGHT CANCER

With the majority of the world's MRI scanners using technology engineered at UQ, the next step is to integrate radiation therapy with MRI scanners to target and treat cancer.



DIVE THE REEFS FROM YOUR DESKTOP

UQ is working to visually document life within reef systems across the globe. Images are made available for the world to explore on Google Street View and the Catlin Global Reef Record database.



WORLD'S FIRST CERVICAL CANCER VACCINE

Research conducted by Professor Ian Frazer AC and the late Dr Jian Zhou led to the development of the world's first vaccine against cervical cancer, benefiting tens of millions of women worldwide.



HELPING OVER SEVEN MILLION CHILDREN

Triple P – Positive Parenting Program is backed by more than 30 years of ongoing research at UQ. The program has helped more than seven million children and their families in approximately 25 countries.

UQ's excellence in research has been translated into positive economic, environmental, health and social benefits. With the support of UQ's main commercialisation company, UniQuest, many UQ innovations are now available to the community.

To learn more about these research breakthroughs, visit uq.edu.au/research

* Per data reported for the 2013 Higher Education Research Data Collection (HERDC).



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OF QUEENSLAND
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