



THE UNIVERSITY
OF QUEENSLAND
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THE UNIVERSITY OF QUEENSLAND MEDICINE MAGAZINE

UQmedicine

2023



Creating bonds
in the bush

Pushing
through poverty

• Nail matrix
melanomas

• The Queensland
Commitment



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COVER IMAGE
Joellen Cullen, Daniel Ochayi
and Karson Schroeder at Gyranda
during the Rural Community
Immersion Program

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MESSAGE from the Executive Dean

As the COVID-19 pandemic becomes less prominent globally, a new and growing challenge in health care is becoming more evident – a health professional workforce crisis. A discrepancy between the demand and supply of health professionals, particularly nurses and doctors, has been present for many years. This deficit is growing under the dual pressures of increasing demand and static or reducing supply. It is time for health and education systems to work with all levels of government to address this challenge through aligned health professional training and support. This is particularly relevant to our regional, rural and remote areas.

In this edition of *UQmedicine*, we feature a series of articles presenting the lives of those who have embarked on a medical career from a rural context. Jessica Mills began her journey to an MD-PhD program from a variety of locations through Central Queensland and the Darling Downs with her much loved chickens. Lauren, Rowan and Jasmine Pienaar have all joined the medical profession from their Maryborough home – where they had not envisaged such a pathway through their childhood.

Professor Darrell Crawford has acknowledged the importance of supporting those from rural areas to join UQ through the establishment of the Crawford Family Scholarship, which acknowledges his journey from Baralaba in Central Queensland. Finally, we tell some stories of those who have completed our Rural Immersion Program where, over 4 days, they gained insights into the needs of rural communities. All these stories are an excellent reflection of UQ's Queensland Commitment and the need to reach out and support able students from rural environments to join us at UQ and to give back to their local communities.

In the remainder of *UQmedicine* we feature our wonderful researchers, their passion and impact. We begin with a feature on Professor Jason Roberts, pharmacist by training, who has dedicated his research career to refining the optimal approach to using antibiotics in the intensive care setting. His work with researchers such as Emeritus Professor Jeffrey Lipman, Dr Patrick Harris and Professor David Paterson, all from UQCCR, has made a meaningful difference to the outcomes of some of our sickest patients. We also present vignettes of some of our extremely talented early-career researchers working in telehealth, mental health, cancer, aged care and infectious diseases.

Finally, we present the important changes to the promotion process for our all-important Academic Title Holders (ATHs). We now have a clear and manageable process to reward all of our ATHs for their teaching, research and clinical eminence and impact.

UQmedicine features the wonderful people who make up our brilliant and impactful family, who will ultimately improve the lives of the communities we serve.

Professor Geoff McColl
Executive Dean, Faculty of Medicine



Our Vision

Knowledge leadership for a better world

Our Mission

Our core purpose is to deliver for the public good through excellence in education, research and engagement with our communities and partners: local, national and global

Our Values

Excellence, Creativity, Truth, Integrity, Courage, Respect and Inclusivity

Features



Creating bonds in the bush



A step back in time



Nail matrix melanomas



Maryborough on the map for medicine



UQCCR 15-year anniversary



Overcoming adversity



The Queensland Commitment

Creating bonds in the bush

In the vast landscapes of Central Queensland, Wide Bay Burnett, Darling Downs and South West regions, 98 Year 1 medical students traded their textbooks and laptops for wide-brimmed hats and sturdy boots as they embarked on a transformative learning adventure. The Rural Community Immersion Program connected them to the land and with resilient locals who call rural and remote Queensland home.

The program showcased the unique charms and challenges of rural living to students. Over 4 days, locals opened their homes and businesses, presenting a ‘behind the scenes’ look at 8 communities to students.

Braden Everett-Rehbein, first-year medical student, found the immersion program an eye-opening experience.

“It really felt like we were part of the community, just from a single weekend,” Braden recalls.

“The sheer volume of people who, as soon as they met us, said, ‘We need a doctor down here’ surprised me.

“It’s something you can read about in research papers and look at the statistics for, but it’s another thing to actually feel that from residents and to extend that sentiment to communities all around rural areas in Australia.

“It really grounded a lot of the more theoretical studies that we do.”

Research shows that early introduction to rural medicine with repeat exposure to rural placements positively influences a student’s intention to enter the rural workforce.

Students didn’t just observe during their time in the bush, but actively engaged with the communities they visited.

They inspired young locals by running Teddy Bear Hospitals (the flagship program for the Ashintosh Foundation) in primary schools and childcare centres, toured medical facilities, and participated in medical talking circles, which provided opportunities to get answers to their questions straight from the source.

Brayden Merton, first-year regional medical student, explained that although he is from a rural background, the Immersion Program strengthened his desire to become a rural doctor.

“Going into the bush hasn’t so much changed my perception of rural health, but it’s definitely made my perception stronger and reaffirmed the fact that I want to practise rurally,” Brayden explains.

“I was born and raised rurally, and we need more rural doctors.

“Just to have the community feel and see all the clinical medicine out there is amazing.

“The GPs, all of the hospital doctors – I just knew from that experience that I wanted to continue that and give back rurally.”

The program also included a cultural awareness journey presented by Aboriginal and Torres Strait Islander peoples.

Activities varied from smoking ceremonies, cultural tours, Indigenous arts and crafts sessions, and Indigenous Community Health Centre visits.

For many, the cultural immersion was the highlight of the program.

Savannah Malan reflected on her visit to Cherbourg, an Aboriginal settlement near Murgon.

“We went through the history of what it was like living there,” Savannah recalls.

“I found it interesting, hearing stories firsthand. I think everyone should go there and learn the history.”

For some, like Caillem Murray Boyle, this was their first exposure to such remote communities.

“On our first day, we went to Toomelah, one of the remote Indigenous communities,” Caillem says.

“That was a really impactful event – I’ve never experienced anything like that before.”

The Rural Community Immersion Program, part of the new Doctor of Medicine curriculum, gives Year 1 students an opportunity to learn outside of the classroom and integrate into rural and remote communities.

Mayne Academy of Rural and Remote Medicine Head, Professor Bruce Chater OAM, explains how the immersion is a rewarding experience that provides students with an authentic insight into rural life.

“It’s really important for all students to have opportunities where they can experience the diversity of what it’s like to work in a rural practice and see firsthand all the wonderful attributes of living in smaller communities,” Professor Chater explains.

As these Year 1 medical students return to their textbooks and laptops, they do so with a newfound appreciation for the diverse and vital world of rural healthcare and have deeper connections that transcend their clinical studies.



Jemima Hutton, Auntie Elaine Edwards, Mikayla Mowat and Tessa van Swinderen at Toomelah mission.

A STEP BACK IN TIME

The study of the brain sits at the meeting point of medicine, biology and philosophy. Dr Rodrigo Suarez's research at the School of Biomedical Sciences (SBMS) incorporates all of these disciplines, asking how our brains came to be, why we think the way we do and what it even means to be human.



Dr Rodrigo Suarez

Believe it or not, Dr Rodrigo Suarez's decision to move to Australia from Chile was made some 180 million years ago.

As one might expect from an expert in the evolution of the mammalian brain, Dr Suarez can trace his attraction to Australia back to the ancient supercontinent of Gondwana.

"The main reason I came was the huge diversity of mammals, particularly

marsupials and monotremes like the platypus and echidna," Dr Suarez says.

"We have a lot of similar species in South America. All these marsupials come from the time when the 2 continents were joined together.

"A number of Australian and South American species developed from that landmass, as well as similar forests and natural environments."

Much like the brains he studies, the development of Dr Suarez's career has not always been straightforward.

Many an academic has had a project derailed by factors outside their control, but few have watched their hard work quite literally go up in smoke.

"In the middle of my PhD thesis, my whole lab burnt in a fire," Dr Suarez recalls.

"There was an instrument that exploded in the middle of the night. There were no casualties, but we lost a lot of the samples and the data.

"I had to redraft the experiments and change the topic of my thesis."

Dr Suarez's PhD was the beginning of a career dedicated to studying the brain through the lens of the natural world and vice versa.



"I was drawn to neuroscience through a desire to understand nature and animal diversity," he explains.

"Through my work, I use neuroscience as a discipline to better understand evolutionary processes.

"One of my guiding lessons comes from Clemente Estable, one of the fathers of neuroscience, who remarked that for whatever question we may have about human function, there will be one species in nature that is best suited to study its mechanisms.

"For example, if you want to study hearing you should look at species that are specialised in hearing, such as bats.

"Or if you want to focus on vision, then highly visual species might be better than nocturnal rodents.

"To understand human biology we can't just focus on a handful of laboratory species.

"It's better to embrace animal diversity, to explore what new things we can discover by taking advantage of what's out there."

In his relationships and leisure time, Dr Suarez's passion for understanding the world around him is ever-present.

His partner, Dr Laura Fenlon, also studies brain development at SBMS. Where some might find the crossover overwhelming, Dr Suarez sees only positives.

"We talk about brain evolution as well as silly things such as memes," he explains.

"It's rare to have a partner who understands not only your job, but also the stressors and timings.

"We both have times when we're busy marking exams or applying for grants. It's cool to have each other.

"Because we work in a very similar field, we are constantly throwing ideas to each other. It's a really stimulating environment and I appreciate that."

Dr Suarez is also a keen diver, obtaining his scuba qualification as a young man in anticipation of moving to Australia.

"This winter, on the east of Moreton Island, I saw humpback whales underwater for the first time, it was a mother and calf," he recalls.

Continuing to be inspired by and learn from the natural world, Dr Suarez has great ambition for the future of his research.

"One of the things I feel most excited about has to do with theoretical biology," Dr Suarez explains.

"That is an understanding of what living systems do that non-living systems can't.

"It's the definitions of life and life systems in biology, as well as the nature of conservation and change throughout time from individuals to lineages.

"I think that questions about subjective experience and consciousness lie at the centre of what makes us human.

"That's what draws a lot of people into neuroscience; we're trying to understand ourselves."

Doing the right thing for those left by war

As a former paramedic, Dr Stacey Pizzino has witnessed disasters, mass casualties and vulnerable communities, but it is not these memories that have etched the deepest imprints on her life. Rather, it is the devastation caused by armed conflicts and the humanitarian complexities that follow war.

Dr Pizzino recently completed her PhD with the UQ School of Public Health, where she collated and analysed the world's largest study of casualties caused by landmines and other explosive remnants of war. She also examined the cause of mortality and injury among this group.

Dr Pizzino explored data from more than 100,000 casualties in 17 countries, including Afghanistan, Lao People's Democratic Republic, Angola and Ukraine. One of the key findings from her research shows that around 4 in 10 people injured by weapons die from their injuries.

"Explosive devices, like landmines, grenades, missiles and mortar shells, are always left on the ground after war, and they entrench communities in poverty," Dr Pizzino explains.

"They cause horrific injuries to survivors, place financial burdens on families and reduce access to agricultural land, which leads to food insecurity and limits livelihood.

"Weapons can also remain live in the environment long after war is over, which puts children born in the future at risk of dying from explosives dropped during conflict today."

Sadly, the number of armed conflicts occurring in populated areas around the world is growing, which prevents reconstruction efforts and displaced communities from returning home.

"My research helps to strengthen the evidence on this and shows that explosive weapons continue to harm innocent communities long after the fighting stops," Dr Pizzino explains.

"We need to increase global understanding of the reverberating effects of conflict and disasters, and how they affect the health of impacted communities.

"I also want my research to improve global disaster responses. For example, climate change poses a real threat to communities with contamination. Extreme weather events, like floods and landslides, can transport hazards from previously cleared land and recontaminate areas."

In June this year, Dr Pizzino travelled to the United Nations (UN) to share her research and highlight the plight of devastated communities.

"I chaired a UN session on the rights of war survivors," Dr Pizzino reveals.

"I explained that survivors of war often experience catastrophic injuries that leave them with lifelong disabilities, and that countries must provide rehabilitation across their lifespan, especially for children.

"Through research evidence we can catalyse solutions to complex, global health issues.

"And, via impactful settings, like the UN, countries can work together to improve the daily lives of war survivors.

"Without these efforts, history only repeats itself."

In the early 2000s, Dr Pizzino backpacked through Laos and Cambodia for months.

"I was 18 years old, and it was the first time I had seen minefields and communities battling with post-war contamination," Dr Pizzino recalls.

Dr Stacey Pizzino chaired a UN session on the rights of war survivors at the UN-NDM26 Plenary.

"The experience motivated me to study a Master of International Public Health at UQ when I returned to Australia.

"This degree brought me back to Laos to do fieldwork, and helped me connect my understanding of injuries, gained from working as a paramedic, with war-ravaged countries.

"It also helped me identify a knowledge gap in the epidemiology of injury from explosive weapons for my PhD work," she reveals.

UQ has also helped Dr Pizzino achieve other research and leadership goals.

"My PhD supervisors, Dr Jo Durham and Dr Michael Waller, were always genuinely supportive, uplifting and compassionate, while sharing their incredibly high level of expertise with me," Dr Pizzino explains.

"This helped me enormously as I balanced my PhD alongside raising a toddler and contributing to other research work.

"I also participated in the UQ LeadHers and Graduate School Career Development mentoring programs, which helped build my confidence, develop leadership skills, and implement strategies for networking and translating my research findings into policy work.

"My research has reaffirmed to me the inequities within our world and the need for sustainable solutions to progress humanity.

"This is why I am passionate about developing the evidence base for policy response, program planning and advocacy for communities affected by disasters and humanitarian crises.

"A culmination of life experiences has left a lasting impression on me and brought me right where I am today."

[Find out more about the UQ Master of Public Health, \[tinyurl.com/MastPublicHealth\]\(https://tinyurl.com/MastPublicHealth\).](https://tinyurl.com/MastPublicHealth)



Discovering the truth about *nail matrix melanomas*

Most teachers would think themselves lucky if students paid attention to every minor detail in class, but in Adam Delroy's case, it saved his life.



Adam Delroy had an unusual mark on his thumbnail.

Mr Delroy was working as a Year 8 science teacher at Moreton Bay College, when 13-year-old student Nikita Rosendahl had the notion that an unusual mark on Mr Delroy's thumbnail could be cancer.

It reminded her of a nail melanoma image that she had seen on a patient education poster while sitting in a doctor's waiting room.

Nikita immediately shared her observation with the 25-year-old Mr Delroy.

"I walked up to him after class and said, 'I think that line on your nail is a melanoma'," Nikita explains.

"In hindsight, I may have had too much confidence and no training in 'breaking bad news' because I was very blunt."

Mr Delroy initially dismissed the idea, but later decided to see a doctor.

"I was sceptical and amazed that Nikita had some idea about what was wrong with my thumb," Mr Delroy recalls.

"I had seen numerous doctors beforehand, but none could tell me the cause of my nail discolouration."

The experience prompted Mr Delroy to see a doctor and they referred him to a specialist melanoma centre. However, the centre's preferred plastic surgeon had just been in a bike accident, so they sent him on to skin cancer expert, Professor Cliff Rosendahl – Nikita's dad!

Professor Rosendahl recalls being pleased and proud, but not surprised, when he heard about Nikita's actions.

"I was also unsurprised that previous doctors were unable to diagnose Mr Delroy, because most would never encounter a nail melanoma," Professor Rosendahl explains.

"Nail melanomas make up around one per cent of the 17,000 melanomas diagnosed in Australia each year."

Professor Rosendahl promptly examined the dark brown vertical streaks on Mr Delroy's nail matrix, which is a plate below the hard nail surface, and told him that it looked consistent with a melanoma.

He then performed a nail matrix biopsy with a local anaesthetic and removed a sample of nail matrix where the tumour was potentially located, before sending it to a medical laboratory for testing.

The lab confirmed that Mr Delroy had a nail matrix melanoma, known as a subungual melanoma.

Mr Delroy had 2 choices – amputate his thumb or have plastic surgery to remove the melanoma, which would also involve a skin graft taken from the forearm. Mr Delroy chose the latter and the operation was a success.

Fast forward one decade and Mr Delroy is now completing a PhD in education at QUT and helps teach the Bachelor of Health, Sport and Physical Education at the UQ School of Human and Nutrition Sciences.

"Being diagnosed with a melanoma so young has encouraged me to make the most of life," Mr Delroy says.

"I try to do things because I can and always seek to pay it forward."

"I was blessed by Nikita and hope I can offer the generous gift that she offered me to others."



Nikita is now studying an intercalated MD/PhD at UQ and wants to work as a clinician-scientist.

"I'm passionate about cancer research and have loved science and health since I was a kid," Nikita explains.

"I don't think this experience inspired my career choice because I always knew that I would work in science and medicine, but I do view it as evidence that I would pursue the field that I am currently studying."

It is also proof that life's twists and turns are unpredictable.

A fortnight after Mr Delroy's operation, Dr Rosendahl diagnosed a 30-year-old woman with a pigmented lesion on her big toenail.


The woman came to see him after hearing from a friend about Dr Rosendahl's life-changing work with a teacher. Her friend turned out to be Mr Delroy's sister, but that's another story!

"The ratio of nail-matrix melanoma to skin melanoma is around one in 100 and the likelihood of finding 2 in one year is remote, but 2 in 2 weeks is unprecedented in general practice, as far as I know," Professor Rosendahl says.

"No one knows what causes nail melanomas, but we know it is not the sun because ultra-violet radiation cannot reach the nail matrix."

"Around 50% of cases are associated with previous trauma. Nail melanomas also occur with the same frequency in all patients, regardless of skin-type."

Nikita Rosendahl with her father, Professor Cliff Rosendahl. Nikita is now studying intercalated MD/PhD at UQ and wants to work as a clinician-scientist.

 Interested in learning about skin cancer research? Find out more about the UQ Master of Medicine (Skin Cancer), tinyurl.com/MastMedSkin.

Putting **Maryborough** on the map for **medicine**

On the rare occasions that siblings Lauren, Rowan and Jasmine Pienaar are back at the family home in Maryborough, dinner-table conversations about school and sport have now been replaced with talks of specialties and study.

That is because all 3 have chosen to pursue a career in medicine through UQ.

Rowan says that no-one in the family grew up thinking they'd become a doctor.

"We were all motivated kids who enjoyed problem solving, but for me, the idea of studying medicine only came in Year 10 and 11 when I found myself enjoying the complexities of my physics, maths and chemistry subjects," Rowan recalls.

"After sitting the UMAT exam in the hope of provisional entry to medicine, my older sister Lauren decided to follow the same path.

"By the time both Lauren and I were studying medicine, Jasmine decided to join in the fun, gaining provisional entry to medicine as well."

The decision meant that all three had to move to Brisbane to undertake study, although thanks to the Rural Clinical School, Lauren and Rowan were able to complete some of their medical degree back in the Wide Bay region through the Hervey Bay Regional Clinical Unit.

In 2024, youngest sister Jasmine will start her fourth year in Hervey Bay.

The pull to come 'home' to Wide Bay has been felt by all siblings at some stage after leaving home.

The Pienaar family lived in Brisbane for several years, and after multiple moves within the city limits, relocated to Maryborough when Rowan was 10.

Rowan believes being raised in a regional setting and coming from a middle-class background helped shaped the way he conducts himself as a doctor.

"I started Year 5 with Maryborough West Primary School and went on to study at Aldridge State High School," Rowan explains.

"We are the first in our family to attend university, and work in the medical field.

"I don't meet many other doctors who went to public schools or who've come from a similar background to me."

Feeling that sense of belonging and backing from community has been an important factor in the decision-making process for all 3 siblings.

"We've all been drawn to the smaller learning environments like in Hervey Bay because of the community support, the opportunity to make friends and the closeness to home."

Parents Jenny and Tim Pienaar are very proud of their children and still feel a sense of shock and surprise that they have created a family of doctors.

"If someone in Maryborough asks us how the kids are, they are often shocked in a good way to hear they are all doing medicine," Jenny explains.

Jenny says that whatever path the kids land on won't impact the relationship they have with one another.

"They all get along really well and are supportive of each other, even if they are hundreds of kilometres away," Jenny explains.

"I hope that other kids in regional towns see that pipedreams can come true."

Right now, Lauren is practising as a junior doctor in Cairns but has been accepted back to the Hervey Bay Hospital in 2024.

Rowan is completing his internship at the Princess Alexandra Hospital in Brisbane, and Jasmine is completing her third year of medicine with UQ in Brisbane.

 [Learn more about the Regional Medical Pathway, tinyurl.com/RegMedPathway.](https://tinyurl.com/RegMedPathway)

Maryborough

K'gari (Fraser Island)



Siblings Lauren, Rowan, and Jasmine Pienaar.



After a delay of 3 years due to COVID-19, the Bachelor of Medicine, Bachelor of Surgery (MBBS) Class of 1990 30-year reunion was held at Customs House.



The Bachelor of Medicine, Bachelor of Surgery (MBBS) Class of 1992 30-year reunion at Victoria Park.



The Prizes and Scholarships awards evening celebrates the achievements of Faculty of Medicine students with 48 prizes and scholarships awarded.



Dr David Perel with 2022 scholarship recipient Alicia Harasty.



Health Matters Lecture Series
Dr Robyn Littlewood, Chief Executive, Health and Wellbeing Queensland; Associate Professor Clair Sullivan, Director, Queensland Digital Health Centre; and Dr Sjaan Gomersall, Associate Director, Health and Wellbeing Centre for Research Innovation, discussed Australia's biggest healthcare burden – chronic disease.



Brisbane Open House launch event at UQ
Professor Graeme Nimmo RFD; Governor of Queensland, Her Excellency the Honourable Dr Jeannette Young AC PSM; and Marks-Hirschfeld Museum of Medical History Curator Charla Strelan.



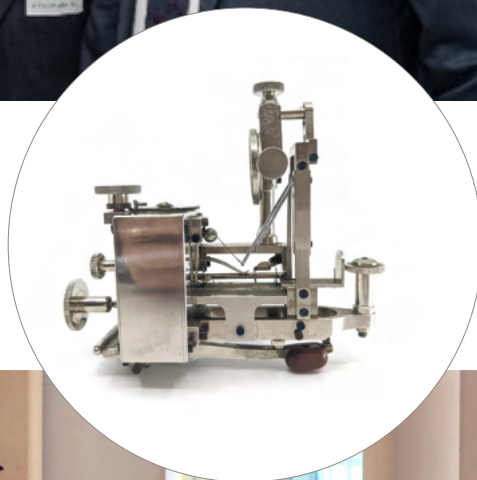
UQ Giving Day Rockhampton

SILVER-Q Rockhampton
UQ and CQU students attended this multi-disciplinary program, which allows medical and nursing students the chance to work together.



2023 Alan Cooper Epiderm Lecture
This year marked a special occasion with an announcement from UQ's Vice-Chancellor, Professor Deborah Terry AO, about the philanthropic donation from Trevor St Baker AO and Judith St Baker to endow the UQ Chair in Dermatology.

Marks-Hirschfeld Museum of Medical History
Jacquet-type sphygmograph c. 1910 made by BB Cassel of Frankfurt. The device is strapped to the wrist and records the pulse rate.



Professor Andrew Barbour led Mrs Dorothy Howse and her fellow oesophageal cancer research fundraisers on a tour of UQ's Frazer Institute.



Bella Hudson (centre) joined volunteers Stephen Tonge (left) and Gertrude Behan (right) on a tour of the Marks-Hirschfeld Museum of Medical History.



Visitors from the Ovarian Cancer Research Foundation toured UQCCR.



Rural Training Hubs CQ Dorrie Day 2023



Rural Immersion Program. Medical students visited Gyranda...



...and Goondiwindi during their trip.



Rockhampton Rural Clinical Unit students took the Teddy Bear Hospital, the flagship program for the Ashintosh Foundation, into the community for NAIDOC Week celebrations.



Medical students Johanna Cole, Kimberly Bowman and Oluseyi Kolawole were all smiles during Hervey Bay's Introductory week.



UQ Centre for Clinical Research: pioneering *breakthroughs* *in healthcare* for 15 years

For over a decade, UQCCR has united state-of-the-art facilities with leading health professionals, clinicians and scientists with the goal of improving quality of life for patients. The Centre is at the forefront of international research into life-altering conditions such as endometrial cancer, dementia, motor neurone disease and sepsis. Director Professor Jason Roberts says they have no intention of slowing down.

“Back in 2004, I received my very first grant from the Royal Brisbane and Women’s Hospital Research Foundation to support part of my PhD,” Professor Roberts explains.

“It seemed huge to me at the time but was actually quite small in today’s terms, just \$10,000.”

During his studies, Professor Roberts’ PhD was moved to the new UQCCR and he ended up being one of the first students to graduate from the Centre.

“The building was very good-looking,” he recalls. “It was modern and had a high concentration of researchers who were exceptional in their fields. Even then in the early days, it had all the hallmarks of something that would be successful.”



Director,
Professor Jason Roberts



“These points all remain part of the Centre’s appeal.”

UQCCR’s mission is to improve health through excellence in research, clinical partnerships, mentorship and service.

It’s this community of experts and their willingness to nurture promising researchers that Professor Roberts identifies as making the Centre special.

“We have top-tier facilities, such as for bioanalysis, and a clinical trial support unit. We employ experts with complementary spheres of knowledge, so we have people with laboratory expertise all the way to scientists trying to develop interventions that work at the bedside,” Professor Roberts explains.

“But first and foremost, it’s because we have people who are genuinely interested in the development of others around them.

“I’ve benefited from the mentorship of those more experienced than me and allowed me to learn from them.

“It’s made me better at what I do and I know that’s something UQCCR continues to do with our early-career researchers today.”

The studies the Centre produced in its early days are still impacting research today. Professor Roberts traces a direct link from his first funding award to a global trial that will be released in early 2024.

“The research I did during my PhD led to further studies into antibiotic dosing in sepsis, which in turn led to a trial we’re just finishing now that has enrolled 7200 patients across 103 ICUs all around the world,” Professor Roberts states.

“It will be the definitive trial on how to best administer a type of antibiotic to sepsis patients and is 10 times the size of the next largest study.

“Now, as Director of the Centre, I often say to the group who awarded my first funding that all of it came from that initial grant.

“That’s how important PhD students’ research can be and is why it’s so important to invest in researchers early on in their careers.”

In its 15-year history, the Centre has been at the forefront of many such studies on global health issues.

In the MERINO Trial, researchers from around the world collaborated with UQCCR to prove that the common antibiotic meropenem should preferentially be used against a particular antibiotic-resistant strain of superbugs for bloodstream infections.

“It’s a wonderful study, and very well led by Professor David Paterson, Dr Patrick Harris and the MERINO Team,” Professor Roberts states.

“With a simple antibiotic we were able to drastically increase the rate of survival and change global best practice.

“It is estimated that over 3 million lives will be saved annually because they will now receive the best drugs for their infection.

“The one thing we know for certain is that change is continual. While UQCCR has had a great first 15 years, we know there is much to do in the future and are excited to rise to that challenge.

“In the next few years, we will see the new Queensland Cancer Centre open next to us, and will be part of the exciting development of the Herston Quarter, a \$1.1 billion project being managed by Australian Unity.

“As a clinician, you move through the healthcare journey with patients and identify areas for improvement with the way they are managed or the treatments they’re receiving.

“There’s a sense of moral obligation to do something about that, and at UQCCR we are able to help make those changes.”



Eugene and Jess.

Overcoming adversity: pushing through *poverty and uncertainty*

Second-year medical student Jessica Mills oozes tenacity, perseverance, and above all, gratitude.

Jess is pursuing a combined MD-PhD program and is a recipient of the Medical Endowment Scholarship. Jess explains that the scholarship not only enables her to focus her efforts on both studies and research, but also gives her a sense of belonging in the medical community.

The following is an excerpt of Jess's speech to donors, staff and students at the Faculty's annual Prizes and Scholarships event.

My entry into medicine was not so traditional. I started my adventure in tertiary education as a very lost 17-year-old. Being the first person in my immediate family to try uni, I didn't have a lot to work with. I detoured through law, fell in love with biomedical research, and then arrived at the conclusion that this medicine idea might be the one. I struggled to overcome GAMSAT with tremendous support from my now life-partner, Eugene, and my beautiful cat, Olivia. If I asked my 17-year-old self if this was where I planned to be in 2023, I probably would have laughed. Being here today is a world away from where I started.

As I develop my skills as a future doctor, I've come to love the experience of connecting with patients as people whom I can help – it's more than I would ever have wanted in a career.

Growing up in rural Queensland was a unique and rewarding experience for me.

My family and I lived in a variety of places throughout the Darling Downs and Central Queensland, allowing me to witness the beauty of the Australian bush and gain exposure to various aspects of farming and agriculture, despite not owning a farm ourselves. I cherish the memories of my upbringing in rural Queensland, and the many adventures and lessons it provided. Among my favourite memories are my feathery best friends, my chickens. I cannot wait to be able to move out to a regional practice or hospital so I can start my flock of birds again.

Being immersed in nature and surrounded by a tight-knit community gave me a strong sense of belonging and appreciation for life. Despite this, I grew up in a one-parent family, living most of my childhood below the poverty line.

Poverty is an insidious and pervasive force that strips individuals and communities of their dignity, potential and basic human needs, perpetuating a cycle of disadvantage and inequality. Further, it makes keeping yourself safe from adversities like domestic violence and mental health extremely difficult.

In Australia we have the basic support, but we don't have the tools to thrive. Growing up in poverty can be incredibly challenging, and can test the resilience and perseverance of young people before they even enter adulthood. It deeply saddens me that so many talented people might miss out on opportunities to become empowered, learn, and grow into community leaders. I am so proud to be a representative for girls from diverse backgrounds, so that they can see there is a way through the adversity to achieve their dreams.

My upbringing made it clear to me that education is power, and having access to education could help me not only transcend poverty, but also support my family in living a peaceful life.

Being where I am today demonstrates that hard work and the compassion of all the people who have mentored and supported me have paid off. I love being a medical student, although at times it is difficult to move forward with grace and enthusiasm when it's a struggle to keep life afloat. My experiences, although challenging, provide insight into some of the most difficult times in our human experience.

Every day I seek support from my friends, family and the amazing UQ Medical School staff so that I can grow to be a stronger person and one day be a great doctor. Education has been a powerful tool for me, opening doors and providing opportunities that would have otherwise been out of reach. It has helped me grow as an individual, and given me the ability to make a meaningful contribution to society.

I am deeply grateful for the incredible opportunity that the Medical Endowment Scholarship has provided me. As I move forward in my medical studies and research, I hope to honour the generosity of the scholarship donors by contributing to the betterment of society. Whether it be through my work with patients, my contributions to medical research, or my involvement in community outreach programs, I strive to pay it forward and make a positive impact.



Support students like Jess

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Meet the future Early-Career Researchers are here to change the game

For those embarking on a career in research, the road from undergraduate degree to emeritus professor is a long one. But, while they may be relatively fresh in their fields, these UQ researchers are already having an impact.



Dr Adrienne Young

Advanced Accredited Practising Dietitian and Senior Research Fellow at the Centre for Health Services Research

I worked as a hospital dietitian for several years and could see that the way nutrition care was being provided did not support better health.

In my research, I'm finding ways to improve care outcomes for older people through food and nutrition. My team was awarded a Medical Research Future Fund grant to establish the Australian Frailty Network, aiming to provide a national response to frailty. Through this project I was able to travel to Canada, to meet with international frailty experts and observe their work.

I am also leading a national study to develop quality indicators for hospitals to measure and benchmark the quality of their nutrition care. The goal is to share and improve best practice. I hope my research will enhance the quality of hospital nutrition and food services, so that patients have the best possible outcomes.



Dr Jaimon Kelly

Research Fellow at the Centre for Online Health

I always wanted to pursue a clinical profession and never considered myself a researcher. But, while studying dietetics, I realised my patients' questions were often due to gaps in existing research. I realised I could become the source of knowledge and help answer these pressing questions.

Now I specialise in digital nutrition, telehealth and chronic disease management. I led Dietitians Australia's telehealth-delivered nutrition care position statement, and my work informed national telehealth guidelines for allied health clinical services in Victoria.

My research has also been recognised internationally and was used as the evidence base for telehealth guidelines on nutrition management and chronic disease by the Centre for Disease Control.

I hope my research leaves a legacy on my profession and enables a digital health care system that is truly equitable, accessible and easy to navigate.



Dr Enda Byrne

Senior Research Fellow at the Child Health Research Centre

My area of research is known as genetic epidemiology. It seeks to understand how genetic factors contribute to health and disease, and interplay with environmental factors. My research allows me to combine my interests in genetics and psychology to investigate the role of genetic risk factors in common mental health problems.

My group uses data from longitudinal studies to investigate how genetics and environment influence mental health throughout development. Many mental health disorders begin in childhood and adolescence and so we want to research mental health in young people when some of these problems may be preventable.

Recently our work has shown that adolescents who report symptoms of depression or anxiety, and who are at high genetic risk for depression, are 7 times more likely to suffer from depression in adulthood than those at low genetic risk.

I hope that a better understanding of the nature of mental health problems can lead to the development of new therapies and for better targeting of existing therapies. Then people will get relief from their symptoms more quickly.



Dr Emma Sweeney

Postdoctoral Researcher at the UQ Centre for Clinical Research

I initially planned to study forensic sciences at university but took a foundational course in microbiology and fell in love. I was fascinated by the idea that there is a whole 'invisible' world of microbes that can be both good and bad.

My research focuses on developing tools to detect and characterise microorganisms, from sexually transmitted bacteria to viral infections in immunosuppressed children. An area of particular interest for me is antimicrobial resistance, where I've worked on enhancing treatments and developing better diagnostics. I completed a prestigious Researcher Exchange and Development within Industry (REDI) fellowship with industry partner Speedx, and was recently successful in securing a UQ Research Partnerships and Translation Excellence Award.

I'd like to develop rapid diagnostics to diagnose infections at the bedside instead of the lab, and tools to detect active infections. Many current diagnostics detect a specific microbe, but not whether the organism has already been killed by medication or the immune system. Tailored diagnostics to detect active infections can provide information on whether an infection has been resolved, or when patients require additional treatments.

These types of tools could help tackle a range of other diseases such as tuberculosis, sepsis, sexually-transmitted infections and even COVID-19.



Dr Arutha Kulasinghe

Senior Research Fellow at the Frazer Institute

During my grandfather's surgery for colorectal cancer, the surgeon came out with a silver bowl to show us the size of his tumour. It was the size of a football. From that pivotal moment onwards, the seed was planted in my mind that I wanted to understand how tumours grew and find new ways to treat them.

My research area uses digital spatial profiling, or a 'Google Maps' approach, to measure hundreds of biomarkers on a tumour simultaneously. We're able to walk across a tumour, cell by cell, to understand how these cells communicate. This gives us deep insight into whether therapies will be able to recognise and kill the tumour.

Our work has led to a new understanding of potential ways in which to identify patients likely to benefit from current generations of immunotherapy in lung cancer, head and neck cancer, and skin cancer.

We hope to build intricate cell atlases of patients' tumours that are responsive and resistant to current immunotherapies, so that we can map the biology that dictates therapy responses. This work should lead to the personalisation of medicine, meaning we are able to identify which therapy is most likely to benefit an individual.

The Queensland COMMITMENT

Breaking down barriers for rural
and remote medical students



Raising their young family in Baralaba, rural Central Queensland, Gloria and Gordon Crawford knew that if their children wanted to pursue higher education, they would face many obstacles and likely need to relocate many hundreds of kilometres away from home.

Despite this, they were determined not to let their children miss out on opportunities because of where they came from.

Gloria and Gordon ensured that each of their children had the support they needed to access university study and follow their chosen paths.

Now that subsequent generations of the Crawford family count themselves among UQ alumni, they understand the sacrifices their parents made and that, for some, such an achievement would not have been possible.



Back: John Crawford, Darrell Crawford, David Crawford.
Front: Cathy Crawford, Gordon Crawford, Penny Crawford.

Students from regional and remote areas remain significantly under-represented in higher education, despite policy efforts to encourage participation.

To help change this and to honour their parents' efforts, the Crawford family generously donated \$50,000 to create *The Crawford Family Scholarship*, which will support medical students from regional and remote Queensland who are facing financial hardship.

One of the siblings, Professor Darrell Crawford, studied his Bachelor and Doctor of Medicine at UQ, going on to earn an international reputation in liver disease and hold positions as the Head of School and Associate Dean of the Faculty of Medicine.

Professor Darrell Crawford is currently the Associate Dean (Strategic Development) at UQ's Faculty of Medicine.

"I am proud to have studied at UQ, but there are many students across the state for whom that isn't an option," Professor Crawford explains.

"No-one should struggle to afford education just because of where they were born, but we know that students from rural and remote Queensland face additional challenges.

"My family and I hope this scholarship will support the medical workforce of the future and strengthen the pathways to UQ for students from regional and remote areas."

The scholarship has been established under the Queensland Commitment scholarship match, meaning it will benefit from a matched donation of \$50,000 from UQ.

The total gift of \$100,000 will establish *The Crawford Family Scholarship Endowment UQ*.

This gift will continue to award medical scholarships for students from regional and remote Australia for generations to come. A true legacy gift!



Changes to *UQ Academic Titles* for Health Professionals

Academic Title Holders (ATHs)

ATHs play a vital role in the University's mission to deliver excellence in education and research. We are committed to delivering a promotion program that recognises academic achievements in the context of busy clinical roles in a demanding, contemporary healthcare environment. In support of that commitment, the University has recently made changes to the Academic Titles for Health Professionals Policy and Procedures.

ONE:

There are now more relevant criteria for promotion, with a clear linear progression through academic levels A to D to align with the previously introduced Level E ATH standards.

TWO:

The ATH pathway has been extended to cover UQ clinical academic health professional appointees, including conjoint or seconded staff who hold a fractional appointment up to 0.3 FTE.

Enhancements to level D and E procedures are designed to ensure consistent decision-making by the relevant Promotion Committees, via changes to the composition of the Committee, an increase in the length of the term of committee membership to 2 years, and an increase in the sources of feedback to the Committee for each applicant.

Advice for promotion

The most prestigious and widely recognised rankings of world universities consistently place UQ in, or close to, the top 50 globally, thus our standard of promotion is high.


Applicants should take this into account and assess themselves against the relevant academic criteria. This especially applies to Associate Professor and Professor candidates.

Seeking advice from peers and supervisors is recommended, as is careful consideration of the timing of the application to ensure your academic achievements best align with the criteria for promotion.

This involves identifying and addressing weaknesses that may adversely impact your application.

Relevant organisational unit Heads can provide advice to prospective applicants.

Professor Darrell Crawford
Associate Dean (Strategic Development)
Faculty of Medicine

 Further information regarding application and promotion processes is available via the Faculty's Academic Title Holder website: medicine.uq.edu.au/academic-title-holders

Help build our future medical workforce by donating to *Rural Health Scholarships* today.

Give now



Show your support

Every year, UQ receives many requests for financial assistance from medical students studying in rural and remote locations. Your donation towards *Rural Health Scholarships* will help ensure support is available to students undertaking placements at our Regional Clinical Units in Bundaberg, Hervey, Bay, Rockhampton and Toowoomba.

As well as providing financial assistance, these scholarships will encourage and support medical students to continue training in their chosen region, in turn building Queensland's rural medical workforce and leading to improved patient outcomes and medical breakthroughs now and into the future.

Give now

Build the future medical workforce in your community by supporting *Rural Health Scholarships* today at donations.uq.edu.au/dean-of-medicines-emerging-priorities

Find out more

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