

UQmedicine

Summer Edition 2022/2023



BOOSTING *childhood health*

Life change
for life changer •

Leading
the way •

Where maths
meets medicine



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MESSAGE from the Executive Dean

Welcome to the summer 2022/2023 edition of *UQmedicine*, which focuses on child and adolescent health. The factors that promote health and wellness in children and adolescents begin before conception, continue during pregnancy and are consolidated in the years after birth. These factors are of course partially biological, but are also psychosocial, educational and physical. This results in us considering our research, education and advocacy in the context of a life-course framework. This edition features those working to improve the lives and outcomes of children and adolescents.

Professor Craig Munns has recently joined the Faculty of Medicine as the Head of Mayne Academy of Paediatrics and Child Health and Director of Child Health Research Centre. As a paediatrician and health care leader, Craig brings a broad lens to child and adolescent health as well as the vision and passion to make meaningful change. His personal story is also inspiring and one that I am sure you will enjoy.

Associate Professor Kristen Gibbons is an outstanding example of the new skills required to solve the complex problems of paediatric health care. Her background as a mathematician is perfectly aligned to the needs of designing and implementing clinical trials in children with sepsis.

Associate Professor Jasneek Chawla is fascinated by sleep – yet another component of the conditions required for a healthy child. Jasneek is a respiratory and sleep paediatrician at the Queensland Children's Hospital who is examining sleep in the context of those with disability, particularly Down syndrome.

UQmedicine also features Emeritus Professor Ian Frazer AC and his reflections at a time of transition from full-time work. Emeritus Professor Frazer's ground-breaking development of the HPV vaccine has transformed health globally. Among Ian's many skills is the mentoring of senior and junior staff, something that I know will be a feature in this next phase of life.

The opportunity to utilise clinical data to improve the outcomes of patients is a passion of Associate Professor Clair Sullivan. An endocrinologist by training, Clair has taken her interest in using data about patients with diabetes to the broader field of health informatics and digital health.

Associate Professor Carl Stephan is completing fascinating and important work on craniofacial and skeletal identification in forensic science from his home in UQ's Gross Anatomy Facility (GAF). At the same time, he oversees the learning of hundreds of students utilising the GAF.

Speaking of students, in this edition of *UQmedicine* we also feature two of our students – Kerri-Anne Gill and Jess Traves – who are making their mark on the world, and the amazing work of the late Dr Ellice Dart who transcribed resources for people who are visually impaired.

The Faculty of Medicine's influence is built on our people, and I think this edition of *UQmedicine* provides some more amazing examples of how our people are a force for change. I commend them to you.

Geoff

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

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LIFE CHANGE FOR LIFE CHANGER



WHERE MATHS MEETS MEDICINE



REACHING FOR THE STARS



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THE SLEEP WHISPERER



RESHAPING FORENSICS



THE RURAL MEDICINE EXPERIENCE

Life change for life changer



After saving millions of lives around the world from cervical cancer, HPV vaccine co-inventor Emeritus Professor Ian Frazer AC has taken the first step towards retirement.

He was instrumental in developing the world's first and only cancer vaccine against *human papillomavirus* (HPV) – a virus proven to be the leading cause of cervical cancer. Since the HPV vaccine (Gardasil) was released in 2006, the incidence of cervical cancer and mortality in Australia has halved, and the country is on track to be the first to eliminate the cancer by 2035.

But, as this internationally renowned immunologist and cancer researcher, who has stepped down from his UQ academic appointment, quietly begins a two-year transition to retirement, it's hard to believe that medical research is a world away from his childhood dreams growing up in Scotland.

"My interests at that time were physics and astronomy. I built rockets and radio sets; medical research didn't really enter into the picture," Emeritus Professor Frazer reflects.

You might say it was written in his stars having academic parents – his father a doctor and biochemist and his mother a scientist.



"I was given a Merit Chemistry set when I was eight years old and a book on biochemistry as a Christmas present when I was aged 11, so I think my dad had some ideas about what I should do," he says.

"I did go to Edinburgh University on a scholarship to study astrophysics but soon realised that my job prospects were minimal in that discipline at the time, so I enrolled in medicine.

"By the start of my third year I was hooked on immunology, largely due to some good mentorship from friends of my dad."

While the keen skier has previously admitted that he could have quite happily become a ski instructor at the time,

Emeritus Professor Frazer fortunately pursued a medical career. He started as a doctor in the area of renal medicine before drifting towards medical research.

It put him on the path to meeting molecular virologist, the late Dr Jian Zhou, while they were both on sabbatical at Cambridge University in 1989. After convincing Dr Zhou to move to Brisbane, together they made a discovery at UQ in 1991 that would underpin the Gardasil vaccine.

"We didn't set out to make a vaccine, but we wanted to understand this unusual virus that could cause cancer, and persist and evade the body's defences against infection, but couldn't be grown in the lab," he explains.

"We set out to make the virus synthetically and when we succeeded, we agreed that we might have discovered something useful.

"I remember telling my wife, after Jian and I first saw the virus-like particles that became the basis of the vaccine, that we might just have discovered something significant!"

It would be years of further development at UQ and then clinical trials before the HPV vaccine was released in Australia in 2006 – initially for young women, and then expanded to young men. Today, more than 100 countries around the world have introduced the vaccine – potentially saving 300,000 lives each year.

Emeritus Professor Frazer's co-discovery pushed him into the world spotlight and led to numerous accolades including being named Australian of the Year in 2006, receiving the Prime Minister's Prize for Science, named as a National Living Treasure, and named a Companion of the Order of Australia (AC) in 2012.

"The last 20-odd years have been a whirlwind," he says.

"I've been balancing science, politics, and family life while in the public eye – especially the year I was Australian of the Year.

"It's meant that I never seemed to get a break and when I did, we would deliberately plan holidays where I wouldn't be recognised."

While the co-discovery may have come at the expense of his anonymity, it has also acknowledged Australia's high-quality research and moved it to the forefront – a legacy he will leave for researchers and future scientists.

While he's preparing for retirement in the future, Emeritus Professor Frazer is still committed to supervising his HDR students and his current research.

As work isn't just a place for researchers, but also where they make a difference in the lives to many people, The University of Queensland is recognising Emeritus Professor Frazer's outstanding contribution by renaming the UQ Diamantina Institute to the Frazer Institute, in his honour.

When you've spent your career in the field of medical research, how do you step away from it?

You don't – as fast as you drop one responsibility, a few new ones appear. I guess that's my fault – I'm now fascinated by the process of development and commercialisation of research in the way that I was once fascinated by the underlying basic science.

What are you most looking forward to in the future?

Time with the grandchildren, and time on the ski-slopes.

What do you think your wife and family are most looking forward to in the future?

My retirement! At the moment I'm still supervising PhD students, running a lab, managing two biotech companies, and assisting the government in managing research funding.

We would list co-inventing Gardasil as your greatest achievement, but what would you say are your greatest achievements and/or proudest moments?

Mentoring all the 42 students I've assisted with training, and particularly the ones that have gone on to pursue a career in biomedical science. As well as being dad to my children – who are now all doctors and with families.

Have you had 'pinch me' moments?

Public recognition becomes addictive – the Balzan Prize award ceremony in Rome and the Honda Prize in Japan, where we were in each case treated like royalty. The Golden Plate award in Washington where I met former US Presidents, Sir Edmund Hillary and Desmond Tutu amongst others, and they were interested in what I had done!

Are there things that you still want to achieve, or be involved in?

The very first question I was interested in as a young scientist was: why do some people get a virus infection and it kills them, whereas others get only a mild infection or can't be infected at all? My erstwhile mentor Professor Ian Mackay referred to this as the dance of the 7 veils – you solve one part of the puzzle, and the next challenge reveals itself! We have some answers, but I'd still like to see the whole question answered.

What is something that we might not know about you?

I have enjoyed 100 days of heli-skiing in Canada – all while over the age of 60!

Many would expect a mathematics and information technology graduate to step into the world of finance, software or technology. For Associate Professor Kristen Gibbons, maths plus IT equalled a career in medical research.

Where *maths* meets MEDICAL RESEARCH

As an Associate Professor with UQ's Child Health Research Centre, Dr Kristen Gibbons is a senior epidemiologist working to solve problems affecting the health outcomes of kids around the world.



"My background is non-clinical but I've found myself working in a very clinically oriented research field," she explains.

"It was a happy accident many years ago. I'd finished my double degree in maths and IT and I was doing my Honours, but I had no idea what I really wanted to do when I was offered a statistician job at the Mater Hospital.

"I was the Mater campus statistician for more than 10 years before I transitioned to UQ.

"The role of statistician is much more crucial than many people realise. We very much partner

with the clinicians and help them design the research to maximise the use of the data that is collected, determine how many patients should be recruited, and then at the end we analyse the data."

This year, Dr Gibbons stepped into a lead role as the chief investigator of one of the largest clinical trials to be conducted into paediatric sepsis, which received \$1.3 million over five years from the National Health and Medical Research Council.

"Globally, a child dies from sepsis every 10 seconds and in Australia, a child dies every week," Dr Gibbons explains.

"It's crucial to diagnose and treat sepsis quickly which is made more difficult because children can't always communicate well about how and what they're feeling.

"Our international research will look at a new intervention – a boost of vitamin C and steroids which can help the body recover and allow the antibiotics to do their work.

"These treatments can be easily accessed in low to middle income regions, so instead of coming up with a solution to a global problem that's only suitable in Australia, we're hoping to come up with a global solution."

Dr Gibbons admits she's humbled by the recognition that comes with a major clinical trial grant being awarded to a statistician but adds she's incredibly fortunate that she is supported by a brilliant team of clinicians and researchers from around the country.

Apart from sepsis, Dr Gibbons is also involved in research that follows children who have undergone cardiac pulmonary bypass surgery as infants to determine how to best support them in the following years.

If juggling major projects and a family isn't enough, this mother of two is also keen to tackle research in the area of personalised medicine for children in the future.

"At the moment, we investigate one intervention at a time and hope that it will work for everybody the same way. But, particularly in paediatrics that's not the case – where you can be treating a 10-day-old baby and a 17-year-old for the same condition."

For someone who thought she'd end up working in either finance or insurance, this self-titled maths nerd is solving problems through leading medical research.

"I would never have thought that this is the impact I can have," she says.

"When I walk through the children's hospital, I can't help but be amazed that I'm someone who is helping these kids in a small way and my work is having a direct impact on the lives of children here and around the world.

"It's a dream job for someone who's come from a maths background."

Reaching for the stars

“Wherever the expertise lays that’s where we need to go in order to build these constellations of researchers who can look to answer questions that one group can’t answer alone.”



Like astronomers connected and grouped stars in the sky, Professor Craig Munns, Director of the Child Health Research Centre and Head of Mayne Academy of Paediatrics and Child Health, is linking and arranging an interdisciplinary team of stars into surprising constellations to undertake paediatric research.

“We need to grow connections and have more of an outward focus,” Professor Munns explains.

“By bringing on board experts from across the University, external researchers, the health system, Government and the wider community, we’ll build a collaboration of the willing and answer some of the big research questions in paediatrics.

“I’d like people to envisage the UQ Child Health Research Centre as the hub and support centre for paediatric research in Queensland.

“What we’re doing in the area of research at the Child Health Research Centre is highly translatable, and because we have such close ties to Children’s Health Queensland, it allows us to immediately start to get our research into clinical practice, and that’s very important.”

While Professor Munns has a laser-like focus on the future of paediatric research, there was a time when this former Logan City boy had a very different career in mind – a career that you could say failed to take off.

“I wanted to be a helicopter pilot in the Air Force,” he reflects with a grin.

“In year 12 at high school, I went through all the processes to become a helicopter pilot but at the end of the day, they said I should be an engineer.

“I was pretty upset but I was lucky enough to get the TE Score (Tertiary Entrance Score) to get me into medicine.”

After graduating from UQ, Professor Munns took a position at the Gladstone Hospital in Central Queensland where he found his niche in medicine and clear passion – paediatrics.

“You see the opportunity to help,” he explains.

“I could be in a bad mood and go to clinic and I’d come back inspired. The strength that children show, the strength that their families show, is amazing.

“Your ability to make a difference, a real lifelong difference, to a child and their family is incredibly rewarding.”

After a time at the former Royal Children’s Hospital in Brisbane under the mentorship of Professor Jenny Batch, it was his PhD that sparked his interest in bone disease and launched his research career.

This accomplished paediatric specialist and clinical researcher’s CV is notable with roles including Senior Staff Specialist, Genetic and Metabolic Bone Disorders and Endocrinology at the Children’s Hospital at Westmead, and Professor of Paediatric Bone and Mineral Medicine, Sydney Medical School, University of Sydney.

In February this year, Professor Munns returned to Brisbane and UQ to continue his world-leading research to improve the physical and psychosocial function of children with bone and mineral disorders, as well as tackle new major projects and explore emerging medical research.

“I want to work out how to prevent children developing musculoskeletal problems,” he says.

“This ties into the Medical Research Future Fund grant we received this year to look at musculoskeletal complications for children with cerebral palsy. To do this, we have built an interdisciplinary network of musculoskeletal researchers and clinicians from around Australia.

“And on the horizon is gene and cell therapy for children with genetic disorders – there is a lot of work going on in this area that could, for the first time, cure children of their genetic bone disorder.”

There is no looking back for this once aspiring helicopter pilot, whose deviation many years ago has helped him reach the altitudes of impactful research.

“I was once asked in an interview what was my most cited publication and by inference, my most important publication,” he recalls.

“I answered that if I published a case report that described a new way of treating a child, and that case report was read by only one other clinician who then went on to successfully treat their patient that way, then that’s my most important publication.

“So, from a personal perspective, my most impactful articles are those that in some way help others improve the health and wellbeing of children and adolescents.”



Virtual visions in healthcare

"I imagine a baby girl born today receiving digital healthcare that continuously evolves and improves during her life. This could mean her GP can predict and prevent her from developing health issues like adult-onset diabetes, or her specialist uses artificial intelligence to keep her safe during a difficult pregnancy or employs medical robots to replace her hip in later life."



For Associate Professor Clair Sullivan, it is all about patients and the people who care for them.

"Before I start any new research, I spend time thinking about the people who will use the end products of my work," Dr Sullivan explains.

"From professional healthcare providers, such as specialists and family doctors, to patients, like just-born babies and great-grandparents. I want my research to improve the lives of others by transforming the healthcare they receive.

"I can do this by helping to create a learning healthcare system that routinely collects data and patient experiences to continuously monitor and improve outcomes. Ultimately, I want to leave the health system better than how I found it."

It's no surprise that Dr Sullivan works with technology after recognising her higher calling from an early age.

"The nuns who taught me in primary school had some of the first Apple computers created and I was hooked," Dr Sullivan reveals.

"I had a wonderful time at school and growing up in Queensland, filling my time with lots of outdoor activities and reading books. I also travelled a lot and lived in the United States of America and the United Kingdom. Now, I wouldn't want to live anywhere else!

"I have always loved science and knew that I wanted to be a doctor from an early age. I have also always had a great interest in technology. I'm lucky that my work at UQ incorporates both."

It's clear that Dr Sullivan chose a career in healthcare because she wanted to make a difference in people's lives and help them live longer.

"After receiving my Honours in Medicine at UQ, I completed a Research Doctorate in Medicine through the University of Leeds and training with the National Health Service in the UK. My first role in the Queensland public health system was as a specialist endocrinologist," Dr Sullivan says.

"However, I quickly realised that digital health would be the future of healthcare and I moved into this area.

"I began a parallel career in this emerging field at the time by gaining my Fellowship in Digital Health.

"From there, I became a Clinical Lead for the roll-out of integrated electronic Medical Records in Queensland public hospitals, which was an Australian-first project that transformed our day-to-day healthcare. This really helped me to understand the power of computing for healthcare.

"My main contribution was assembling teams of people far smarter than myself and uniting them to a common goal," Dr Sullivan says smiling.

"I enable talented people to create wonderful new knowledge and ways of working."

Dr Sullivan was appointed Associate Professor of Medicine in Clinical Informatics at UQ in 2020 and is now the inaugural Head of UQ's Digital Health Centre.

"Digital healthcare offers countless opportunities for seamless and cutting-edge research, faster translation of research findings into clinical practice, and better outcomes for patients and the entire health system," Dr Sullivan affirms.

"Digital health also creates wonderful collaborative work environments, locally and internationally, where everybody in the team, including clinicians, information technology specialists and clinical informaticians, contribute to achieve success.

"I think it's becoming clearer to all of us that current models of healthcare are no longer fit for purpose, and we need to harness emerging technologies, like artificial intelligence, to reduce the load on clinicians and deliver better outcomes."

Right now, Dr Sullivan is working on the SMART Project – a gateway to Queensland's digital health future.

"This work is laying the foundation for a digital health revolution where researchers can accelerate learning and translate research findings into clinical practice at rapid speed," Dr Sullivan says.

"At the moment, it takes a long time for the benefits of traditional quality improvement projects to be realised because people can be very slow to adopt new practices.

"By switching to digital delivery, we can literally reduce potential harm overnight, for example, with medication errors, which is a wonderful outcome.

"Digital health is already transforming the way we live and interact with healthcare providers.

"Queensland Health's integrated electronic Medical Records, for example, is making it easier for clinicians to make complex healthcare decisions. Elderly people are for the first time now using technology such as virtual care to interact with doctors and carers. And, in the next 5-10 years, we will see artificial intelligence enable better and more precise care.

"Until then, and in the midst of all the challenging, life-changing and globally significant work going on, I regularly remind myself and my team that patients are at the heart of everything, and we love what we do!"

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The sleep whisperer

"I embrace being a clinician researcher who learns from patients and families about how to provide high-quality care to a unique group of children with sleep difficulties."



Associate Professor Jasneek Chawla and her labradoodle Ollivander - a companion dog for the children's charity Little Lives.



"My aim is to be a role model for all clinician researchers, especially young females, who deserve to realise that they can make a significant difference to the world."

It's this passion for paediatrics and her infectious positivity that drives Associate Professor Jasneek Chawla to improve the lives of others. In fact, some may say it's what keeps her awake at night!

As a Paediatric Respiratory and Sleep Specialist with the Queensland Children's Hospital and an Academic Title Holder (ATH) with the UQ Child Health Research Centre, Dr Chawla explores new treatments for children with neurodisabilities, including Down syndrome, and educates medical students.

"A key aspect of my clinical research is working with families and the organisations that support them to better understand the challenges they face and identify sleeping priorities for their child," Dr Chawla says.

"At the moment, I am leading a multi-centre study with colleagues in Sydney and Melbourne, and I will use the information to explore new diagnostic methods and treatments to improve sleep, quality of life and family functioning for these children.

"Their families have so many struggles and challenges, and sleep is a modifiable factor that, if treated correctly, has the potential to positively impact the health and wellbeing of these children.

"We want to give these children, who are often not included in large-scale research, a voice and platform to be heard, and inform the development of national clinical guidelines in this area."

Dr Chawla's work with children who have a neurodisability extends beyond Australia.

Born in London, Dr Chawla completed her education in Scotland before moving to Canada for further training.

"I completed my paediatric and paediatric respiratory training in Edinburgh, which included spending one year in Vancouver for a paediatric respiratory fellowship," she reveals.

"After qualifying as a consultant in paediatric respiratory medicine in 2012, I came to Australia to do a sleep Fellowship at the Mater Children's Hospital and then the Queensland Children's Hospital, when the two merged.

"At the same time, I joined UQ Medicine through the ATH Pathway, where I am heavily involved in medical and allied health student supervision, which is another passion of mine.

"My proudest research moment would have to be when the mother of a child with Down syndrome told me that she had just been to a birthday party and all the parents were excitedly talking about the study I am leading.

"This is exactly why I started clinical research - so I can contribute to making a difference to these families," Dr Chawla says enthusiastically.

"However, my research would not be possible without the incredible support that I receive from partners, such as Down syndrome Queensland. I feel privileged and very grateful for their support."

There is also one other very important supporter that Dr Chawla would like to recognise - her labradoodle, Ollivander.

"He is always so patient, waiting calmly for walks when I am busy working on the computer, and always brings a smile to my face with his cameo appearances during my virtual meetings," Dr Chawla says with a beaming smile.

"Ollivander is also a companion dog for 'Little Lives', the children's charity that I run. He truly brings joy to so many people."

It's this broad support that enables Dr Chawla to keep striving towards advancing her field of medicine.

"Sleep needs to be recognised as the third pillar of good health, which impacts the entire spectrum of a child's life and that of their family," she adds.

"My team's goal is to become the leading research group for sleep in children with neurodisability across Australia and, in time, gain international recognition as experts in this field."

Now that would be a dream come true!

In photos



2022 Alan Cooper Epiderm Lecture – Melanoma Diagnosis in 2030



Rural Clinical School 20 Years Thank You Celebrations

UQRCS hosted events across its footprint in Toowoomba, Hervey Bay, Bundaberg and Rockhampton.



Health Matters Lecture Series: July 2022

The next generation: How climate change and pandemics are shaping our children's future



Giving Day

For this year's UQ Giving Day, the Faculty promoted and raised funds for Rural Health Scholarships.



Health Matters Lecture Series: October 2022

Growing the rural health workforce: Are we on track?



In photos cont'd.



Class of 1970 Medical Reunion



Class of 1981 Medical Reunion



Class of 2000 Medical Reunion



Class of 1981 Medical Reunion

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Reshaping *forensics*

Associate Professor Carl Stephan
standing in front of his own chest x-ray.

One of the biggest misconceptions about forensic anthropology is that it's 'just' about the dead and irrelevant to those living.

The other misnomer is that anatomy students only learn lists of structures because all the useful science has already been discovered.

If you ask Associate Professor Carl Stephan, UQ's Chief Anatomist at the School of Biomedical Sciences, his thoughts on the matter, he is quick to debunk these perceptions.

"Legal medicine is equally important for the living, as it is for the deceased.

"For example, in law enforcement, forensic identification helps secure justice for deceased victims, and informs living families about what happened to a loved one, so the grieving process can begin," Dr Stephan explains.

"It's critical that bodies are quickly and correctly identified, so the perpetrators of crimes can be found and removed from public to keep communities safe.

"Identification is also a legal requirement for issuing death certificates, which are needed to execute wills and conduct body burials and cremations."

For students, Dr Stephan points out that anatomical methods are always used when molecular identification cannot solve the most difficult forensic cases.

"This highlights anatomy's pivotal role and proves there's still a lot to learn and uncover in forensic anthropology," Dr Stephan says.

"One of the main reasons I returned to Australia, almost nine years ago, was for the opportunities UQ offered to research and study anatomy.

"UQ has one of the largest body donor programs in Australia, which helps advance skeletal research and education.

"It enables us to use complete skeletons from willing donors for projects, such as developing automation methods for sorting bones found in mixed assemblages, like mass graves.

"The library has advanced osteometric sorting methods, radiographic comparison methods for identification, and 3D scanners for accurately recording skeletal anatomy," Dr Stephan says.

"Another project that I am currently working on concerns craniofacial identification and how to match photos of faces to skulls via image overlay.

"Bone 'shape' is a significant component of what makes applied anatomy relevant to the real world, and where a lot of the new science can be found," he says.

"Our aim is to advance these superimposition methods."

Prior to joining UQ, Dr Stephan worked on international applied science posts, including being deployed to Baghdad as part of the Mass Graves Investigation Team with the United States of America (USA) Army during the Iraq War in 2005.

"In this role I analysed skeletons recovered from multiple mass graves and documented large numbers of gunshot wounds," Dr Stephan reveals.

"After that, I spent five years working with the Joint POW/MIA Accounting Agency's Central Identification Laboratory (now called the USA Defense Prisoner of War (POW) / Missing in Action (MIA) Accounting Agency (DPAA)) establishing protocols for using chest radiographs to identify fallen USA soldiers in the Korean War.

"I feel honoured that since 2010, the methods have been used to identify fallen USA soldiers and repatriate their skeletal remains to families."

Dr Stephan now works as an external consultant for the DPAA, reviewing chest radiograph comparisons and running masterclass training sessions for analysts who travel from Hawaii to Brisbane to learn about forensic methods at UQ.

"I begin by teaching the DPAA analysts about relevant anatomy and the 3D arrangement of bone shapes in the body. The next few days are spent in darkened rooms analysing hundreds of radiographs to ensure the analysts can interpret 3D anatomy on 2D chest radiographs," Dr Stephan explains.

"It's very similar to analysing fingerprints for identification, but instead of using fingerprints, we use chest radiographs and focus on bones contained in the cervicothoracic junction, where the neck and body trunk meet.

"The analysts learn which bone shapes can help them identify a match between a post-mortem radiographic image of a skeleton and an ante-mortem chest radiograph taken during a soldier's military induction screening for tuberculosis.

"By examining the clavicles and neck vertebrae, the analysts can identify one individual from next because these bones are shaped slightly different in each person.

"This work is critical for honouring the USA Government's noble promise to its soldiers and their families that no one will be left behind," Dr Stephan affirms.

"It is also important for fulfilling one of my own goals, which is to forge a world leading research and training nexus for applied anatomy (legal medicine) that attracts international professionals to UQ for advanced training."

Not bad for a boy who grew up in the country Victorian town of Nhill, with a population of just 2300, and spent a long time abroad – away from home.

It's clear that Dr Stephan's experiences have not only shaped his work, but his life too!



Images courtesy of: 1. USA Defense POW/MIA Accounting Agency's (DPAA) Public Affairs Office, and 2. Associate Professor Stephan. The appearance of U.S. Department of Defense (DoD) visual information does not imply or constitute DoD endorsement. DPAA photographs taken by DPAA photographers: Staff Sergeant Leah Ferrante, Staff Sergeant Apryl Hall and Staff Sergeant Michael O'Neal. Other photographs by: Miss Telena Hona, Mr Sean Healy and Associate Professor Carl Stephan.

Leading the way



Dr Ellice Dart, September 1956.

Remembering a pioneer of teaching and lifelong learning

Dr Ellice E.P. Dart became a doctor and medical educator at a time when women were rare in both fields in Australia.

The first woman employed by The University of Queensland's fledgling Faculty of Medicine in 1936, she is being remembered in 2022 for her dedication to teaching and learning.

Dr Dart had a particular interest in literacy for people who are blind and in Brisbane, a Braille House publication has been renamed in her honour.

Emeritus Professor John Pearn, the official historian at the Faculty of Medicine, says Dr Dart (nee Hamilton) was an outstanding person.

"Dr Dart holds a special place as the first woman in the faculty," he explains.

"She was a demonstrator in the School of Physiology when it opened its doors in 1936 and there were only three women among the first cohort of 72 students.

"Dr Dart taught quite an extensive course involving 10 practical lessons each of about three hours in a building in William Street in the city.

"She had an exceptional background in both science and community service and came to the role at UQ with experience as a teacher in Sydney."

Dr Dart moved to Brisbane in 1925 with her husband, Dr John Leslie Dart, also a medical practitioner.

She had graduated from the University of Sydney with a Bachelor of Science (1915), a Bachelor of Arts (1917), and a Bachelor of Medicine (1922).

"She was actually appointed as a lecturer in physiology at the University of Sydney in 1922 while she was an undergraduate

in the medical school, but she had already graduated in science," Emeritus Professor Pearn explains.

"Prior to that, she had been a demonstrator in chemistry at the University and the Sydney Teacher's College."

At UQ, Dr Dart was a contemporary and friend of the University's first blind graduate, Mercy Dickinson, who wrote in her memoir, *As I've Seen It*, of her frustration at arriving to study and finding a lack of braille textbooks.

Volunteer readers stepped in to assist, while transcribers at the Queensland Braille Writing Association got to work, and by 1938 she detailed that the supply of books was "steady and unflagging" thanks to the "unflagging efforts of its volunteers".

Dr Dart taught herself braille during this time and began what would become a commitment over many years, transcribing texts for the not-for-profit organisation that is now known as Braille House.

Current Braille House General Manager Richard Barker says the transcription was done using a six-keyed Perkins Braille machine to punch the patterns of raised dots into thick paper.

"Dr Dart was particularly interested in, and transcribed, children's books and educational materials, some of which are still in our collection and lending library," Mr Barker says.

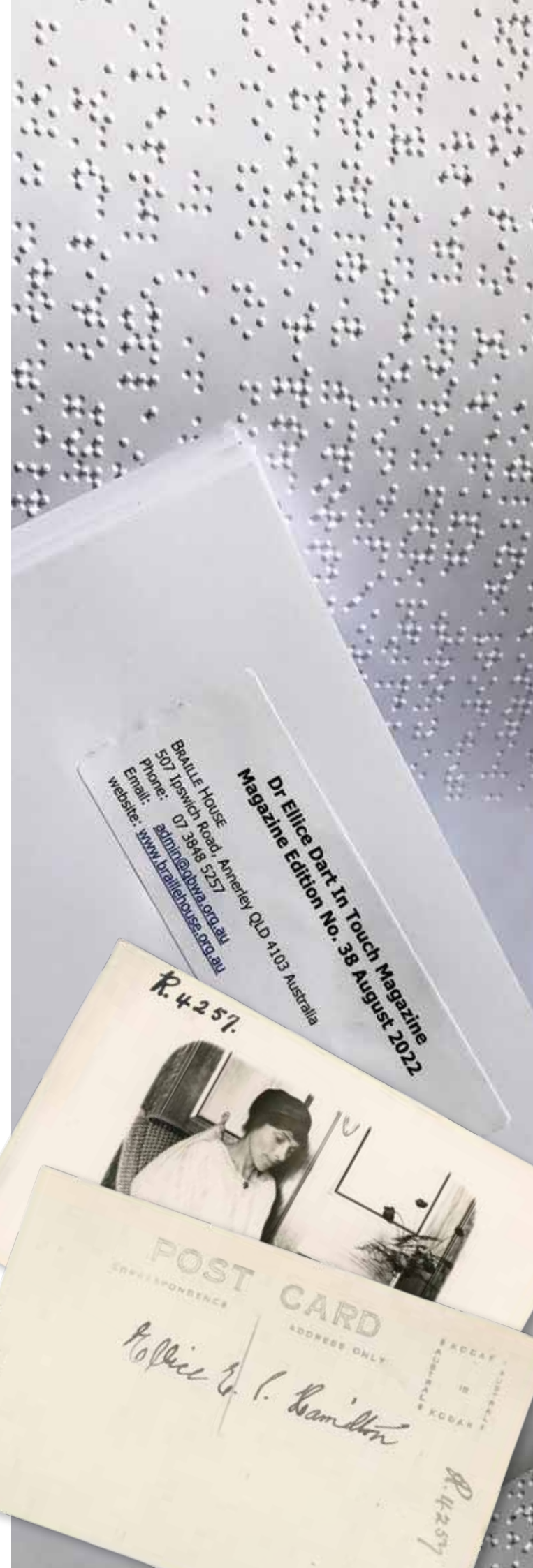
Dr Dart's support of Braille House is ongoing through a trust fund established after her death in 1981.

Her work and generosity have been honoured in 2022 with the renaming of a Braille House magazine. Now called the *Dr Ellice Dart In Touch Magazine*, this braille publication is compiled monthly and circulated internationally.

There are few pictures of Dr Dart, but that could be because she was often behind the camera. The Ellice E.P. Hamilton Collection of images is held by the University of Sydney's Chau Chak Wing Museum.

The collection contains 500 black and white photographs that she took during her student days from 1910 to 1920 documenting events and campus life during the years of World War I.

Her grandson Dr Philip Dart recalls that she photographed everyday life – something that was not well chronicled at the time.



A Perkins Brailer.



The University of Queensland Herston library circa 1938. Image: UQ Archives S178 b183

"She photographed workers protesting, picnics, university excursions and activities," he says.

"Over time, I've come to realise how unusual my grandmother was, and how broad she was in the things that she did.

"My brother and I lived with her for a short time when we were boys in the late 1960s.

"I remember her as being very strong-willed, almost single-minded and when you think about it, how could she not have been, to do all the things she did in that period as a woman?"

Dr Ellice Dart and her husband had three children and one followed them into medicine, Dr Clive Dart, who is a UQ alum.

Two of her grandchildren, also UQ alum, became academics. Dr Philip Dart in the School of Computing and Information Systems at the University of Melbourne and Professor Andrew Dart in the School of Veterinary Science at the University of Sydney.

The 38th edition of the Dr Ellice Dart In Touch Magazine published by Braille House

Signed photograph submitted to the Medical Board of New South Wales in 1922 with the application from Ellice Ettie Peden Hamilton for registration as a medical practitioner. Image: NSW State Archives NRS-9873-1-[2/758A]-R4257

Sowing seeds of support

Global food security concerns are growing, stirred by climate change, biodiversity loss, depletion of soil nutrients and over-exploitation of water sources. If we want a future that sustains the world, we must learn to serve nature first.

As the middle-daughter of natural therapies practitioners and the Faculty of Medicine's UQ Graduate of the Year nominee, Ms Kerri-Anne Gill understands this well. She is using her PhD to investigate the needs of small-scale farmers and how government policies globally can make life easier for them.



"This research is important to me simply because I like to eat well, and I like other people to eat well too," Kerri confesses.

"The nutritional value of food is being eroded by ultra-processing and long supply chains that transport produce across vast distances between producers and consumers.

"On top of this, almost one third of the food produced globally is wasted when nearly one billion people don't have enough food or aren't properly nourished by what they eat."

Kerri points out that policies have favoured large-scale industrial farming aimed at export markets. However, the majority of Australian farms are small-scale operations that occupy a minority of farmland.

She highlights that when COVID-19 and extreme weather events wreaked havoc on global supply chains, it was small-scale local food systems that proved to be more resilient.

"In some food categories, Australia is already supplementing local produce with imports," Kerri explains.

"This does put us at risk, especially when other countries face similar challenges as they try to feed their own populations, while reducing their impacts on climate and ecosystems."

Kerri is determined to plough ahead, reaping achievements along the way.

"People tell me I must be very proud of my accolades - the University Medal, the Dean's Award and Faculty Graduate of the Year for my Honours work in 2021," Kerri says.

"Those things certainly make my family proud, but using what I've learned to inspire others is what makes me feel the best.

"I teach permaculture at a local community college and use my UQ learnings to enhance how I explain concepts.

"When people tell me that they finally understand something, or that they have gained valuable new insight, that gives me a real sense of achievement.

"I used to work in rehabilitation and the corporate sector providing coaching services, career guidance and leading organisational change after completing my first degree in psychology," Kerri reveals.

"In 2010, I gave up my psychologist registration and made a Tasmanian tree-change, which I absolutely loved because it enabled me to live close to nature, connect with my food source and be part of a farming community.

"I returned to study and earned a UQ degree in nutrition and an Honours in food system policy.

"I feel incredibly grateful for the privilege to be part of the Faculty of Medicine. The lecturers, tutors, librarians and support staff have all provide me amazing support, especially my PhD Supervisor, Dr Katherine Cullerton."

Kerri hopes her research will encourage policymakers to support local food producers and find ways to garner support for them.

"Farmers around the world, particularly smallholders, are essential for feeding people and caring for the land, and they need community and government support," Kerri explains.

"I hope my research challenges assumptions, such as large-scale industrial farming is more productive than small-scale operations.

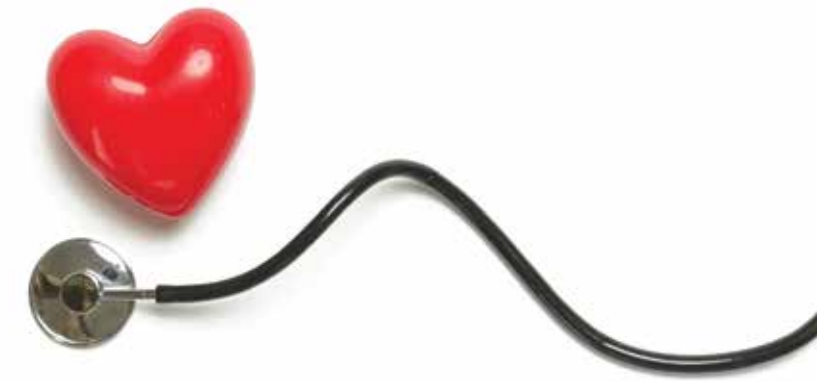
"Large monoculture systems may produce more of one crop, but they need a lot of energy and inputs to do so.

"Small, mixed farms, on the other hand, rely heavily on human labour, which creates jobs and livelihoods, and natural services such as pollination, pest control, rainwater irrigation and fertile healthy soils.

"I encourage everyone to learn about where your food comes from and grow some at home, school or in a community garden."



The **RURAL MEDICINE** experience



**Boonah Hospital
and Community
Health Services**

↖ **Main Entrance**
← **Emergency**



Third-year medical student Jess Traves' desire to become a rural doctor has only increased with each regional and rural placement.

Despite growing up in Brisbane's outer suburbs, the bush is in Jess Traves' blood and her happy place is a paddock with cows grazing in the distance.

As a child, she spent most weekends and holidays at her grandparents' avocado farm in Maleny or exploring other parts of regional Queensland with her family.

"I was already interested in pursuing a career as a regional doctor when I started studying medicine," she explains.

"That was largely based on a genuine love for regional towns, and an understanding that rural and regional towns had a great need for doctors that was not being met.

"During each of my rural and regional placements over the past three years, I have become more and more enamoured with regional and rural medicine."

The medical student's introduction to 'medicine in the bush' was her TROHPIQ observership at Boonah Hospital in first year. Her affection continued to grow with a placement through the John Flynn Placement Program in the beachside town of Bargara in second year.

In 2022, Jess moved to Hervey Bay to complete her third year of study at the UQ Rural Clinical School and elected to do a 12-week Extended Rural and Remote Medicine placement in the town of Theodore.

"I was so excited to study at the Rural Clinical School this year and learn from one of the greats of rural medicine in Theodore. I have very little doubt that it has been the best year of my medical studies yet," she says.

"I liken regional and rural medicine to the medicine you imagined as a kid growing up – a jack-of-all-trades kind of medicine – where you may have no choice but to rise to the occasion and upskill to serve a community's needs and requirements.

"Additionally, I think the work of the Rural Clinical School in introducing students to the regions and rural communities is paramount to one day seeing a health system in Queensland that is truly one of equal access and opportunity."

In between studying and placements, Jess works casual jobs to help fund her rent, food, travel and life outside of medicine.

"At certain times of the year, the requirement to work has been particularly taxing and hasn't left me with a whole lot of time that is truly my own," she explains.

"I've found that I need to be incredibly organised to juggle study, work and life – opening my Google calendar or diary can be a frightening experience."

In 2023, Jess will make the move to Toowoomba for her fourth and final year of medical school, with hopes of one day becoming a regional general paediatrician.

"There is such need for dedicated healthcare in the regions, and you never know whether you might just love it, unless you try it."

Student Scholarships *supporting dreams*

With the support and generosity of our philanthropic donors, UQ student scholarships give students the chance to reach their full potential and, in return, make a positive contribution to the lives of others.



Bronwyn Bevan-Smith

Rural Doctors Association of Queensland Prize

I am incredibly thankful to the Rural Doctor's Association of Queensland and The University of Queensland Rural Clinical School for the support I received attending the RDAQ2021 conference.

Professionally, I very much enjoyed learning more about the future of rural medicine in Queensland, particularly the highlights and challenges of building a general practice clinic in rural areas. The Doctors in Training stream was a wonderful opportunity to revise clinical teaching and learn additional skills. I also enjoyed hearing about the training experiences of junior doctors in rural areas and the opportunities available. The social events were also a great occasion to meet other medical students interested in rural medicine.

With thanks to RDAQ and UQRCS, I very much look forward to continuing to be involved with RDAQ throughout my medical career. Since completing my medical degree at the UQ Toowoomba Rural Clinical School, my family and I have settled into life in Toowoomba. I'm now in my intern year at the Toowoomba Base Hospital and hoping to complete my junior training locally, before training to become a GP with special interest in women's and children's health in the Darling Downs/Granite Belt area.

Dr Donald Perry-Keene

Drs Donald and Isobel Perry-Keene Family Scholarship

My wife, Dr Isobel Perry-Keene (nee McNaught), and I both graduated from the UQ medical course in 1966, with Isobel the second ever woman to be awarded First Class Honours. I progressed to FRACP, becoming an endocrinologist, and Isobel to FANZCA as an anaesthetist. Both of us came from lower income families in regional Queensland and had help as undergraduates from Open and Commonwealth Scholarships.

At our 50-year reunion in 2016 we convinced our year group to fund a scholarship for a medical student who was financially in need, which was duly awarded the following year. When Isobel and I had some spare funds after realizing some investments in 2019 to fund Isobel's entry into a nursing home after a stroke, we discussed establishing a Perry-Keene Family Scholarship. We were delighted to see our donation to UQ Medicine was matched by The University of Queensland as part of the Create Change Scholarship Match. The scholarship is for a medical student in financial need with a preference for someone from the Bundaberg or Wide Bay region. The first scholarship was awarded in 2021 and the second in 2022.

My mother and three sisters were physiotherapists, while a great aunt, an uncle and several cousins were doctors, and our daughter is a Medical Histopathologist. Therefore, we are so pleased to try to assist a medical student to pursue a career in medicine. We hope to maintain contact over the years with the recipients of the Drs Donald and Isobel Perry-Keene Family Scholarship.

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

Give now



Rural Health Scholarships provide financial support to deserving medical students who are studying rurally and interested in pursuing a career in rural medicine. Our vision is to be able to provide financial support to all students who need it.

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.

Find out more

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