



College of Medicine
and Public Health

Alumni Magazine 2023

Flinders University is
improving health through
innovative research

Contents

- 3** Making a difference through vital research
- 4** Vice-Chancellor's Award boosts cardiac fibrillation research
- 6** HMRB: A new hub that will accelerate research outcomes
- 8** Improving rural outcomes one test at a time
- 9** Kalinda Griffiths advances Aboriginal and Torres Strait Islander Health as Poche SA+NT Director
- 10** Flinders resources inspire ideas for PhD research
- 11** Learning more from teaching medicine
- 12** Bringing the frontline to the classroom
- 13** Realising a dream of science that assists
- 14** Determination drove this refugee to become a doctor
- 15** Striving to make a difference for international students
- 16** Understanding how sleep loss affects young shift workers
- 17** Embracing the challenges of rural healthcare
- 18** 2022 Alumni Awardees
- 20** At home in Mbantua, a graduate's journey to Central Australia
- 22** Continuing Professor Wing's passion for medical research

Published by the College of Medicine and Public Health, Flinders University

All enquiries please contact Alumni & Advancement:
alumni@flinders.edu.au +61 8 7421 9578

Editing / Production: Morgan Pearse
Design: tif.image design

Cover image: Getty Images

Flinders University acknowledges the Traditional Owners and Custodians of the lands on which its campuses are located, these are the Traditional Lands of the Arrernte, Dagoman, First Nations of the South East, First Peoples of the River Murray & Mallee region, Jawoyn, Kurna, Larrakia, Ngadjuri, Ngarrindjeri, Ramindjeri, Warumungu, Wardaman and Yolngu people. We honour their Elders past, present and emerging.

Copyright ©2023 Flinders University

Disclaimer: Views expressed in this magazine are those of the authors and persons quoted and not necessarily those of the College of Medicine and Public Health.

CRICOS No. 00114A

Printed in South Australia by Flinders Press using soy-based inks on Sovereign Silk paper which includes a mix of recycled content and content from suppliers who practice responsible forestry techniques. Using chlorine-free pulps, the paper is manufactured to strict regulations in Australian paper mills with international standards on low environment impact.



Yara (2016) by Judy Watson



Making a difference through vital research

Research, education and clinical care have been core to Flinders University's identity since inception. Our vision to be internationally recognised as a world leader in research, an innovator in contemporary education, and the source of Australia's most enterprising graduates is fast becoming a reality thanks to the impressive achievements of our alumni, researchers, educators, and clinicians.

Through research, our academic and clinical experts investigate some of the most pressing challenges society faces today. In this edition of the College of Medicine and Public Health Alumni Magazine I am pleased to share stories from our emerging researchers who are making significant contributions to the advancement of health and medical knowledge, translating into improved healthcare and outcomes for people.

The future of research at Flinders is the brightest it has ever been, with our College researchers attracting nearly \$50M in 2022, which has more than doubled since 2017, including a three-fold increase in category 1 funding (NHMRC, ARC, MRFF) to \$27M. As we look to the future of research at Flinders, we are particularly excited about the collaboration opportunities

our new Health and Medical Research Building (HMRB) will bring. Due to open in the first quarter of 2024, HMRB will be an outstanding biomedical research facility for South Australia and will bring together researchers and healthcare and industry partners to translate world-class research into better outcomes for our community.

Next year we will celebrate 50 years of the Medical School at Flinders. As we reach closer to this important milestone you will hear about ways you can be involved in our celebration plans and capturing key moments of our shared history.

As we share stories of achievements of some of our graduates, we remember that all our alumni are an integral part of the College's success story and thank each of you for the difference you make in health, research, and education.

Professor Jonathan Craig

MBChB, DipCH, FRACP, M Med (Clin Epi), PhD, FAHMS
Matthew Flinders Distinguished Professor
Vice President and Executive Dean
College of Medicine and Public Health

Flinders University Reconciliation Action Plan



Our vision for reconciliation

Our vision is to establish Flinders University as a place where reconciliation is embedded in the lived actions of the Flinders community. We aim to do this by promoting social responsibility and accountability, underpinned by truth telling, mutual respect and understanding, that champions Aboriginal and Torres Strait Islander people's self-determination.

Flinders University affirms its commitment to reconciliation through sustainable change that builds on our institution's progress and advocates for tangible, social accountabilities for Aboriginal and Torres Strait Islander peoples. Recognising the dualities of knowledges and culture is crucial to achieving reconciliation. We believe that deep listening, togetherness, reciprocity, and respect are foundational concepts that underpin this process.

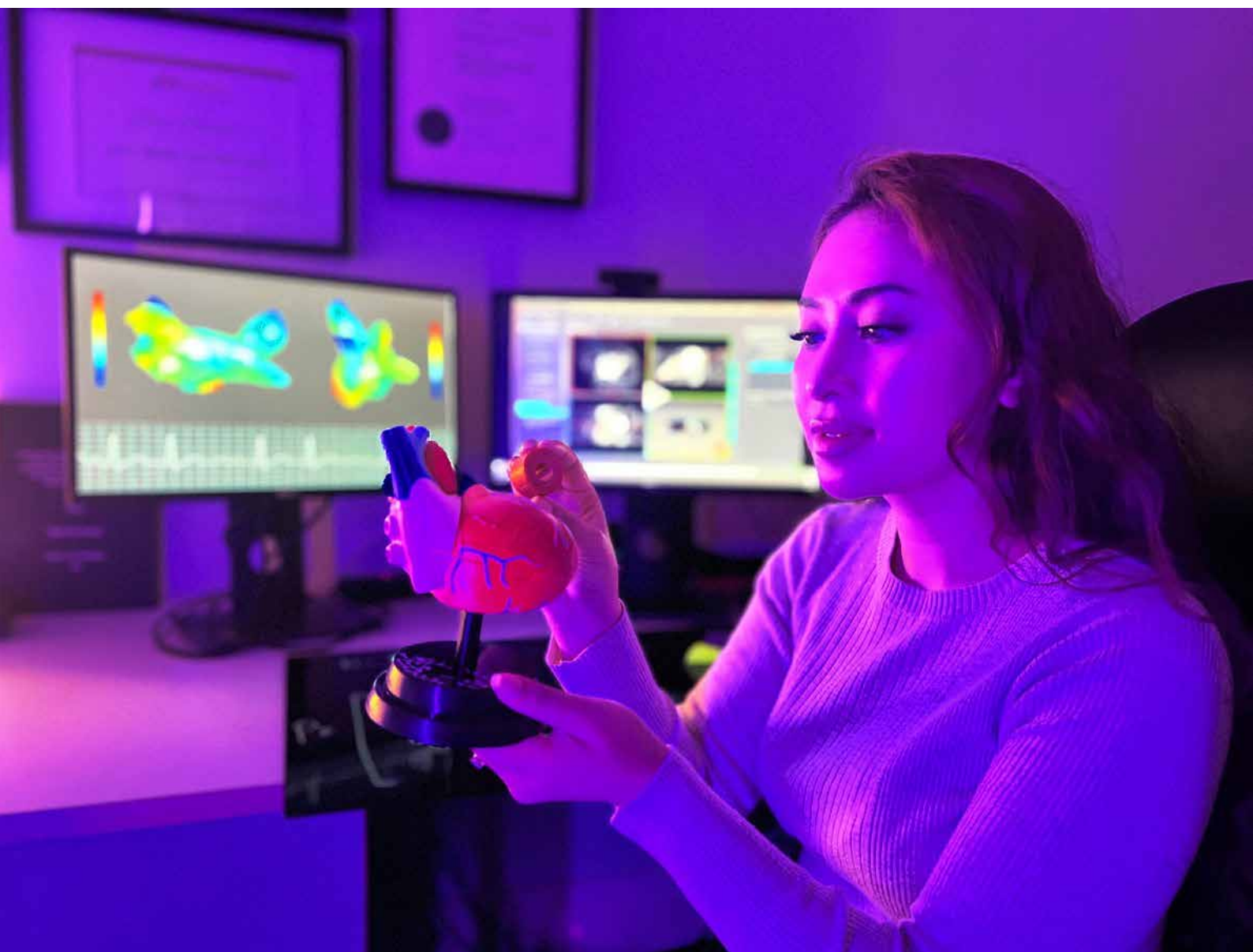
As a University community we understand that reconciliation is a two-way exchange that inspires generosity of spirit, truth telling and entwines our paths to share the weight of colonisation. We recognise the influence and effects staff, students, and alumni can exert towards momentous shifts in race-relations, social policy, justice, and reconciliation. We commit to the development of an anti-racism statement. The 2017 Uluru Statement from the Heart calls for constitutional reform and an Indigenous Voice to Parliament. Flinders University acknowledges this call for change and recognises its sphere of influence through higher education.

Learn more about Flinders Reconciliation Action Plan [Flinders.edu.au/rap](https://flinders.edu.au/rap)

Tile artwork painted by Yungkurinthe participants. Each tile is part of a mosaic built into the material and cultural fabric of the Yungkurinthe building at Bedford Park. The mixture of styles and colours celebrate creativity, diversity and unity of purpose.

Vice-Chancellor's Award boosts cardiac fibrillation research

By Shannon Coleman



The Vice-Chancellor's Early Career Researcher Award at Flinders University recognises and rewards excellence in research across all colleges. The award not only acknowledges the exceptional work of early-career researchers but also provides them with opportunities to broaden their networks and enhance their standing and recognition as staff members of the University.

This year, five outstanding researchers from the College of Medicine and Public Health were recognised with the award. These winners included Kristie Stefanoska and Yohannes Adama Melaku and Flinders alumni Courtney Ryder (BSc '06, BEng(Biomed) '06), Hannah Scott (BPsych(Hons) '17, PhD(Psyc) '20), and Dhani Dharmaprani (BEng(Biomed)(Hons) '16, PhD(Med) '20).

Dr Dhani Dharmaprani is a Biomedical Engineer and Postdoctoral Research Associate in Cardiac Electrophysiology at the Cardiac Signals Analysis Laboratory, led by Professor Anand Ganesan. She graduated with a Bachelor of Biomedical Engineering with Honours at Flinders in 2016, before completing her PhD in 2020. Her current research focus is on exploring computational and analytical approaches to better understand the mechanisms underlying cardiac fibrillation.

Dr Dharmaprani's work addresses the significant challenges posed by both Atrial Fibrillation (AF) and Ventricular Fibrillation (VF). These disorders, characterised by irregular heart rhythms, are associated with high risks and limited treatment options. She aims to uncover new ways of treating AF and VF by studying computer models of the heart, analysing signals from human patients and animal models, and establishing anatomically and electrophysiologically accurate computer models called 'virtual hearts'.

"It is clear that current treatments, particularly for AF, are only moderately effective at best," Dr Dharmaprani explains. "Underlying these failures are the heterogeneous electrical dynamics responsible for cardiac fibrillation in individuals, which makes it difficult to understand what treatment is needed for a specific patient."

At the Cardiac Signals Lab at Flinders University, Dr Dharmaprani and her team develop ways to measure and quantify this unique electrical behaviour to guide treatment selection based on the patient's specific electrical dynamics.

By establishing 'virtual hearts', Dr Dharmaprani hopes to provide a unique opportunity to simulate and test different interventions in a virtual environment before applying them to patients. This approach has the potential to optimise treatment plans, enhance the success rate of interventions, and minimise risks and complications associated with invasive procedures.

Dr Dharmaprani's research has shed light on the mechanisms underlying cardiac fibrillation, challenging the conventional understanding of the role of electrical waves called 'rotors' in AF and VF. She has used mathematical approaches inspired by thermodynamics in statistical physics to accurately measure how rotors form and die in the heart. Her findings indicate that it is not individual rotors that sustain AF and VF but rather the continual process of their regeneration. This ground-breaking work has led to the development of the first 'governing equations' that summarise and predict AF and VF.

Her research has also extended to understanding how a patient's cardiac electrical dynamics respond to specific antiarrhythmic drugs and whether these drugs increase the likelihood of AF termination. Dr Dharmaprani aims to develop technologies that integrate these metrics to guide AF treatment and treatment selection.

Dr Dharmaprani's work has received numerous accolades, including being presented the Heart Rhythm Society Young Investigator Award 2021, alongside research from prestigious institutions such as Harvard's Brigham and Women's Hospital, Mayo Clinic, and Johns Hopkins. She has had the opportunity to present her work at conferences worldwide, including the Cardiac Society of Australia and New Zealand Annual Scientific Meeting, the Heart Rhythm Society Annual Scientific Meeting, the Asia Pacific Heart Rhythm Society Annual Scientific Meeting, and the IEEE Engineering in Medicine and Biology conference.

Flinders University's support, including the Vice-Chancellor's Early Career Researcher Award, has enabled Dr Dharmaprani to expand her networks and collaborations, further enhancing her contributions to the field of cardiology.

HMRB: A new hub that will accelerate research outcomes

By David Sly

The prospect of moving important glaucoma research projects into the Flinders Health and Medical Research Building (HMRB) excites Dr Mark Hassall – not only for providing access to new state-of-the-art facilities, but also in having the necessary space to accommodate all the relevant researchers, clinicians and laboratory teams.

Dr Hassall, an ophthalmologist with the Flinders Centre for Ophthalmology, and a Flinders Practitioner Fellow who also researches gene therapy in the eye, believes that the new facility will help accelerate research outcomes.

“There will be enough space to have patients come in for clinical measurements, and have all of our laboratory experts in the same building who are working on our genetics research and handle all of our blood, saliva and DNA samples,” says Dr Hassall.

“This will heighten the efficiency and accuracy of everything we do.”

Dr Hassall is currently working on a project to deliver protective genes to the retina, with the aim of protecting retinal ganglion cells and prolonging vision for people with glaucoma.

Glaucoma – which affects the ganglion cells of the retina through increased eye pressure and genetic susceptibility, resulting in vision loss – is a leading cause of irreversible blindness and affects an estimated 80 million people worldwide.



Dr Mark Hassall. Photo: Brenton Edwards

The opening of the HMRB facility will be especially timely for the Flinders glaucoma researchers, who have recently been making significant advances under the leadership of Professor Jamie Craig.

Currently, the glaucoma research team is spread across three facilities: the first using areas within Flinders Medical Centre to see patients, two separate laboratories spread far apart within the hospital, and a third location within the College of Medicine and Public Health used for administration and research workspaces. Dr Hassall says centralising clinical research into the one location within the new Flinders HMRB will provide a huge benefit for his team.

“Bringing all of our people and research assets together into a single space will accelerate research outcomes even further,” says Dr Hassall.

Once the new HMRB facility is complete, Dr Hassall and his colleagues will use their large clinical registry of glaucoma patients and their genetic material to design new trials that can test people’s genetic risk for glaucoma.

“We’ve done a lot of discovery work on the genes involved in glaucoma, and now we are ready to start running trials of people at high risk of glaucoma to see whether we can make early sight-saving intervention,” he says.

Running the current glaucoma registry involves about 2500 glaucoma patients who are examined every six months at Flinders. “Twice a week, we have at least 15 patients in, each sitting for a whole battery of tests and measurements. Having a new dedicated space to run those clinics will be excellent,” says Dr Hassall.



“The health system has its challenges just trying to fit its current load of patients into facilities, let alone trying to accommodate a whole new set of patients for important clinical trials, so this new dedicated research facility with additional space is going to be invaluable.”

He also believes that Flinders HMRB providing a centralised area where all the Flinders medical researchers can work together is going to stimulate important new research collaborations.

“Having a single space dedicated to health-related research will bring together so many experts who are ultimately working towards common health improvements. The new facility will foster an environment where it will be easier to have weekly symposiums with people presenting their latest research, which could present you with new collaboration ideas, or just the convenience of being able to easily call on other people with outside expertise,” says Dr Hassall.

“I’m honestly very excited by what this facility holds in store for us. Every day, I walk past the new building and watch it taking shape, so I can’t wait to get inside the finished facility and get some fresh momentum happening in our research.”



The new Health and Medical Research Building in southern Adelaide (artist impression) Image: Architectus

Embracing sustainability: new Health and Medical Research Building sets a new standard in design

Our \$255m Health and Medical Research Building (HMRB) incorporates strong sustainable design that embeds it in the beautiful surrounds of our Bedford Park campus. As the flagship building in Flinders Village, the HMRB sets the standard for sustainability across our developments and captures our bold vision for a brighter future.

The HMRB will use 100 per cent renewable electricity, generated by the sun on campus and supported by wind power from a local South Australian wind farm, significantly reducing our reliance on fossil fuels. The design allows for future connection of recycled water to reduce the use of potable water, and we’re targeting 100 per cent waste diversion from landfill during construction. The structure will feature a beautiful and functional façade, orientated to reduce heat load. The façade system also incorporates glazing that rejects 75 per cent of heat from the sun.

With a design that also includes a Climate Change Adaptation Plan to address future climate impacts, the HMRB is certainly a building for the future.

Learn more Flinders.edu.au/hmrb



South Australian Premier Peter Malinauskus MP and Flinders University Vice-Chancellor Colin Stirling sign the final beam at the Topping Out Ceremony for the Health and Medical Research Building. April, 2023. Photo: Mark Zed

Improving rural outcomes one test at a time

By Morgan Pearce

Dr Brooke Spaeth (BMedSc '09, BSc(Hons) '10, PhD(Med) '18) (centre) with the NT Point-of-Care Testing Program team. Photo: Annika Dean



A spur-of-the-moment decision to undertake an elective in Point-of-care testing (POCT) during her Medical Science studies at Flinders University led Dr Brooke Spaeth (BMedSc '09, BSc(Hons) '10, PhD(Med) '18) to her current role as Project Chief Investigator of a study trialling a newly available POCT device which provides full blood examination (FBE) results in less than 10 minutes.

"At the very first POC lecture, I was hooked," says Dr Spaeth.

"The lecturer, Professor Mark Shephard, described the scope and applications for POC testing as 'unlimited', and I immediately thought of my experience of blood testing growing up in a rural town, and how it could have been dramatically improved with POCT."

"I was lucky enough to be the first student to approach Professor Shephard to do an honours project which has ultimately led to my rewarding career."

So why is POCT such a game-changer for communities nationwide? Rather than waiting sometimes many days, pathology results are presented to patients during the initial consultation, meaning decisions regarding patient care can be made and communicated quickly, significantly improving patient outcomes and safety.

In rural and remote locations, the benefits of POCT are amplified due to the vast distances to central laboratory services, which creates barriers to accessing traditional pathology testing. "The overarching aim of the trial is to improve outcomes, particularly for sepsis, and to reduce health costs for rural and remote healthcare while ensuring equitable access to fundamental blood tests for Aboriginal and Torres Strait Islander communities," says Dr Spaeth.

“The study also aims to determine the broader clinical benefits of having immediate full blood examination results available, which may include improvements in monitoring kidney disease, respiratory infections and anaemia.”

Despite being the most requested laboratory pathology test in Australia, FBE tests are not reliably accessible in rural and remote communities, leading to delayed diagnosis and treatment.

Dr Spaeth, who is also a Research Fellow and former Coordinator of Flinders University’s Northern Territory POC Testing Program, says the availability of the FBE test is especially important for time-critical clinical conditions, where early and accurate diagnosis can significantly improve patient outcomes and has the potential to save lives.

The study, titled *‘Equitable access to Full Blood Examination (FBE) testing at the point-of-care in remote primary health’*, aims to reduce time to treatment with antibiotics for patients who are suspected of sepsis in remote primary health care centres, thereby reducing sepsis-related morbidity and mortality.

“Our main aim is to understand if using the test reduces the time to treatment for patients who are diagnosed with sepsis, while also looking to see if access to the test reduces the incidence of both septic shock and the need for medical evacuations for suspected sepsis, as well as generating economic benefits that justify the costs of establishing the program” says Dr Spaeth.

“The scope and potential of Point-of-care testing is limitless. Scalability is key, and so we will ensure any improvements we are able to uncover are translatable to other rural and remote communities, while ensuring cultural safety and delivering improved health equity for Aboriginal and Torres Strait Islander communities.”

The study has been awarded almost \$3M by the Medical Research Future Fund Primary Health Care Research stream, and has now received ethical approval with the first health centres to commence using the FBE POC device in early 2024.

Project partners are Sepsis Australia (George Institute for Global Health), Northern Territory Health, National Aboriginal Community Controlled Health Organisation, Aboriginal Medical Services Alliance Northern Territory, and the Royal College of Pathologists of Australasia.

Learn more about POC testing at Flinders.edu.au/poc-testing



Associate Professor Kalinda Griffiths.
Photo: supplied

Kalinda Griffiths advances Aboriginal and Torres Strait Islander health as Poche SA+NT Director

In April 2023, outstanding epidemiologist and advocate for Aboriginal and Torres Strait Islander health, Associate Professor Kalinda Griffiths, became the Director of Poche SA+NT. With more than 20 years of experience studying health disparities affecting Indigenous communities, her goal is to improve health outcomes through cultural continuity, capability building, and research support. She prioritises supporting Elders on campus, creating innovative pathways for younger generations, and researching cancer, genomics, and Indigenous data governance.

Kalinda’s career journey reflects her commitment to her community and family. “My community and family are the reasons why I do the work that I do,” she says. Her motivation stems from a desire to ensure equitable health and wellbeing outcomes for future generations.

Passionate about working with youth and students, she finds joy in witnessing their growth in knowledge and confidence. She looks forward to the proposed Referendum for an Aboriginal Voice to Parliament, supporting self-determination for Aboriginal and Torres Strait Islander peoples and recognising mechanisms to shape policies affecting their lives.

Professor Jonathan Craig, Flinders University’s Vice President and Executive Dean, commends Associate Professor Griffiths for her credentials and commitment to research. “It’s not enough to simply identify the issues and challenges; the evidence generated by research needs to then be applied in order to make a difference, and that’s where Associate Professor Griffiths’ skills and vision will prove transformative.”

Under Associate Professor Griffiths’ guidance, Poche SA+NT will promote Aboriginal and Torres Strait Islander research and education in South Australia and the Northern Territory. It aims to bridge health gaps, develop education pathways, and drive equitable services and outcomes. The centre reflects Flinders University’s dedication to Aboriginal and Torres Strait Islander engagement and authentic reconciliation.

Read more about POCHE at Flinders.edu.au/poche

Flinders resources inspire ideas for PhD research

By David Sly

The opportunity to plug into the research expertise and clinical facilities at Flinders University has provided Flinders medical alumnus Dr Alex Barnes (MD '13) with a new way of looking at the effects of Inflammatory Bowel Disease (IBD).

The combined resources of Flinders University and Flinders Medical Centre (FMC) have provided unique inspiration for the continued studies of Dr Barnes, who is completing a PhD at Flinders that examines the significance and aetiology of sleep disorders, fatigue and mental health conditions in people with IBD.

Dr Barnes, who graduated from Medicine at Flinders in 2013 before undertaking an IBD fellowship at FMC, built the idea for his PhD on exploring gaps in the existing knowledge of IBD.

While diet is understood to have an influence on inflammation of the bowel, limited research had been done into the effect of sleep deprivation on this disease. Dr Barnes thought that Flinders' strong sleep expertise and sleep research community could help.

"There was some research about 10 years ago that showed people with Inflammatory Bowel Disease have quite poor sleep, but that hasn't been addressed further," says Dr Barnes.

"We know that if you deprive people of sleep, markers of inflammation in their blood go up – so we wanted to investigate further."

Pursuing this line of research has resulted in surprises for Dr Barnes, who is in the third year of his PhD, being completed part-time alongside his ongoing clinical work.

"I didn't think that sleep apnoea was as common among people with Inflammatory Bowel Disease," he says.

"We are certainly seeing more obesity amongst people with Inflammatory Bowel Disease, which will predispose them to sleep apnoea, however this does not explain the entire picture, with further research required."

There is also evidence that sleep apnoea changes the microbiome, and Dr Barnes thinks this may influence IBD.

To build a larger body of objective data, Dr Barnes is now recruiting more people for sleep study tests in their home.

"I'm very fortunate to have the FMC sleep study facilities available, including expert sleep researchers such as Associate Professor Sutapa Mukherjee," says Dr Barnes.



Dr Alex Barnes. Photo: Brenton Edwards

“Will this research mean that patients don’t need as many medications? Will it mean that the symptoms are less severe, or that people don’t need to go to hospital as much? These are the outcomes that we want to try and influence.”

Dr Barnes says his line of research underlines the scale of possibility for diverse and innovative investigations through working with Flinders.

“There is a lot of opportunity here with the hospital and University working so closely together. It is a place of possibility.”

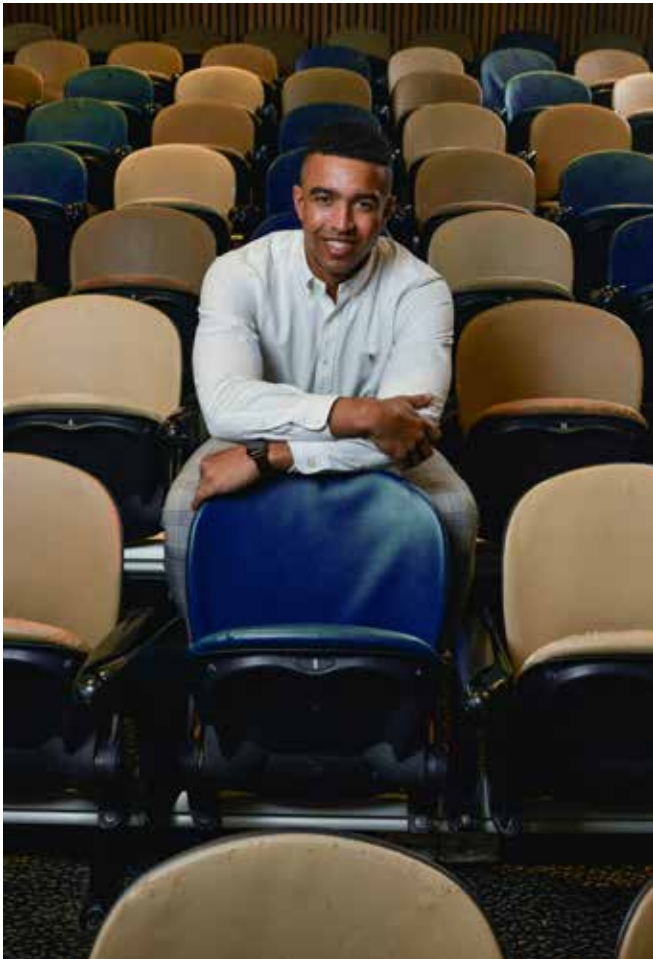
Learning more from teaching medicine

By David Sly

The short journey from student to teacher makes clear sense to Flinders University medical alumnus Dr Kenneth Wills (MAUD '18, MD '21). The Surgical Resident at Flinders Medical Centre is also an Associate Lecturer at Flinders, and he sees great value in combining the two duties.

"I really appreciate the convenience of being able to work and teach in the same location," says Dr Wills. "Within the Flinders facility, there's a melting pot of academics, clinicians and also the future generation of clinicians, all mixing in this one busy place. It's a one-stop shop where you can be a clinician but can also give back in an educational sense, without having impossible burdens on your time, because it's all literally a walk down the hallway."

"I especially have to thank Associate Professor Nicola Dean in the College of Medicine and Public Health at Flinders, who has been an inspirational mentor. She has enabled me to balance work and teaching with time off during work hours. This made everything possible."



Dr Kenneth Wills. Photo: Brenton Edwards

Dr Wills enjoys the challenge of teaching, which he believes further informs his own practices through reinforcing essential knowledge.

"When I was an anatomy student, I had a big interest in making surgery the focus of my career, and this led to me doing some anatomy tutoring, which kept my knowledge fresh," he says.

"By the time I'd finished my medical degree, I had probably gone over the anatomy course at least three times, and so I got asked to do anatomy tutoring for paramedic students and now lecturing as well. It seemed like a natural progression."

Having graduated from Medicine at Flinders in 2021, after completing his Masters in Audiology in 2018, Dr Wills says he has found the bridge between clinical practice and teaching both easy to navigate and interesting.

"I believe you don't truly understand a concept completely until you can explain it to someone else who is completely unfamiliar with it," he says.

"It's a worthwhile challenge to learn something yourself, then simplify it so that others can also build a sound knowledge towards becoming a functioning clinician."

He applies this approach to his own clinical practice, especially when trying to explain medical details clearly to patients.

"Having the ability to be succinct and clear when you explain medical details is an important skill, and teaching has certainly helped me to improve in this area," says Dr Wills.

"I'm aware of patients being frustrated by some doctors' bedside manner, and I think it's something we can focus on to change. Patients certainly appreciate being more clearly informed, because then they make better decisions about their own health care."

Maintaining close ties to the world of study and research will also fuel Dr Wills' long-term ambitions as a surgeon. "I'm currently rotating through various surgical specialties, but I've become particularly interested in plastic surgery, especially trauma reconstructions," says Dr Wills. "There's now lots of research to be done by me in this area, plus the training program and getting more hands-on experience as a clinician. My journey of learning in medicine continues."

Learn more about teaching at Flinders [Flinders.edu.au/career-streams](https://www.flinders.edu.au/career-streams)

Bringing the frontline to the classroom

By Morgan Pearce

In the ever-evolving field of paramedicine, James Pearce (BHlthSc (Paramedic) '07), Flinders University Senior Lecturer in Paramedicine, registered paramedic and PhD candidate, tells us how he balances working on the frontline with teaching at the front of the classroom.

James' passion for paramedicine began in his high school years, inspired by a Year 10 science assignment that introduced him to the field. After graduating with a Bachelor of Health Sciences (Paramedic) degree at Flinders in 2007 and joining SA Ambulance Service as an intern, James pursued further studies, including a Master of Advanced Practice.



James Pearce. Photo: Brenton Edwards

This guided his career path, going on to work interstate and in the public and private sectors, gaining diverse experience across the board. James was attracted back to Flinders, where he now works as a full-time senior lecturer and is pursuing a PhD, focussing on the use of reporting guidelines in paramedicine and pre-hospital care research.

Paramedicine itself has undergone a paradigm shift in terms of patient care. James explains, "When I first started back in 2006, people mostly called 000 for major emergencies like car crashes or cardiac arrest. Nowadays, the field has shifted towards responding to lower-acuity cases, including social and situational crises, drug and alcohol dependency, and mental health-related conditions."

Reflecting on the lasting effects of the COVID-19 pandemic, James highlights the positive introduction of virtual care. Although a difficult time for all, the pandemic gave rise to innovative problem-solving within the industry, leading to lasting positive changes.

When James is not providing clinical care, he dedicates his time to lecturing at Flinders. Balancing his teaching responsibilities with his clinical work, James finds joy in merging his experiences to create a contemporary learning environment for his students. By incorporating real-life scenarios based on his 15 years of clinical practice, he enriches their education with authentic and relatable examples.

"Using real-life examples means the students can really latch on and understand the teachings. There's the recognition of 'This is something my lecturer did last week, and now they're teaching me how to do it,'" says James.

The satisfaction of passing on his knowledge to enable his students to contribute to society in a meaningful way is by far the most fulfilling aspect of his work.

"What my students have learned here at Flinders University has a huge flow-on effect all over the world - that's pretty cool!" says James.

Being a frontline paramedic, lecturer, husband, and father of four young boys certainly keeps James busy. An average week can be a juggling act of meetings, marking, supervising, teaching and everything in-between – not forgetting the childcare pickups and footy practice too.

"There are not many hours left in the day for anything else, to be fair," he says with a smile. "But I wouldn't have it any other way. As a paramedic, lecturer and father, I have the three best jobs in the world. It's a real privilege."



Realising a dream of science that assists

Verynnia Neilson. Photo: David Klar

By Leonard Rowe

Growing up next to an abandoned research centre for malaria in Papua New Guinea, Verynnia Neilson (BMedSc '22) and her brother would rummage through all the discarded paraphernalia, discovering mosquito slides, lab notebooks and microscopes, allowing them as children to disappear into another world while examining long-forgotten insects.

What could have been the beginning of a love story with cells, sadly wasn't to be... yet. Attending school in a developing country meant Verynnia was never afforded the opportunity to access scientific instruments or explore the world of biology, so when given the chance to fulfill her personal aspirations later in life, she took it with both hands.

"I knew I wanted to study science, but it didn't seem a possibility until the time I applied and sat the entrance exam for university and was accepted," says Verynnia.

"My first exposure to a Bunsen burner was at age 43 with Flinders University! The University's Biology Discovery Centre peeled the foggy veneer from my eyes to expose me to sights I had never seen."

Fast forward a few years and Verynnia has now finished her placement in Genetic Molecular Pathology with SA Pathology, and has just one more semester of professional placement to complete in Anatomical Pathology to be fully qualified as a Medical Scientist in Laboratory Medicine.

"I always wanted to feel job-ready from my journey embarking into education at a mature age and this degree has given me this tenfold."

"I have a wonderful support network from all my lecturers, including two incredibly inspirational women who spring to mind: Dr Voula Gaganis and Associate Professor Jill Carr. Their passion and professionalism is nothing short of awe-worthy," says Verynnia.

"Participating in laboratory sessions provided me with the necessary skills to feel competent within a laboratory setting, while giving me courage to create my own scientific adventure and self-belief."

The structure of the Bachelor of Medical Science meant Verynnia could diversify and fine-tune her topics to achieve personal goals in areas of specific interest. These pathways exist to a huge number of medical specialisations, with experts and researchers ready to prepare students for their chosen career.

"I was supported every time I asked a question or sought more information to a task which I couldn't quite get my head around," Verynnia explains.

"I originally came to University as a mature age student because I had a dream to work in public health – I particularly wanted to work at SA Pathology, so now being employed by SA Pathology in the Flinders Medical Centre is literally a dream come true for me."

Determination drove this refugee to become a doctor

By David Sly

Arriving in Australia from Pakistan as a refugee in 2013, Dr Ata Ul Hadi (MD '22) had an unwavering desire to become a medical doctor – and he thanks Flinders University for providing the opportunity for his dream to become a reality.

Having graduated in 2022, Hadi, as he prefers to be called, is now working as a Medical Intern at the Royal Adelaide Hospital. However, it was far from an easy journey for Hadi to earn his qualification.

He fled Pakistan with his father to escape religious persecution of Ahmadi Muslims, torn by having to leave behind his mother and youngest sister, as they tried to establish a new life for the family in Australia.

“I was 20 and had never spoken a full sentence in English,” says Hadi. “I did not know what the future in Australia would be like, but I had a dream to become a doctor. Our family supports the charitable organisation Humanity First International that relies predominantly on volunteers to run its various services, so I am determined to do this to help humanity.”

Having initially settled in Melbourne, Hadi worked odd jobs to support his full-time studies that began with a Diploma of Health Sciences at Deakin College, before transferring to study a Bachelor of Life Sciences at Monash University, then embarking on Honours studies.

Although Hadi went to an elite school in Pakistan, he found great difficulty mastering English for tertiary studies. He sat the GAMSAT medical school admissions exam six times without success over four years.

“I was asking questions of whether this whole exercise is futile and if perhaps I was dreaming bigger than what I am capable of,” he recalls, “For two consecutive years of applying after completing my degrees, I didn’t get any offers from medical schools.

“Finally, I received the invitation to study at Flinders University. I wish I could paint the moment when I read the email of acceptance. My mother, who joined us in Australia in 2015, and my father were all in tears and overcome with emotion and gratefulness to God.”



Dr Ata Ul Hadi. Photo: Brenton Edwards

“I am so grateful that Flinders considers people from disadvantaged backgrounds and provides more equitable opportunities in medicine,” he says.

The reality of working as a doctor is more than meeting his expectations of his dreams. “There’s a lot more paperwork than I expected,” he offers with a chuckle, “and it’s interesting to learn how real patients present so differently to the textbook definitions, but I am enjoying a fantastic learning curve as an intern.”

He is now confident of pursuing his dream of volunteering as a medico working overseas, and hopes to spend time in South America or Africa after completing his internship.

Striving to make a difference for international students

By David Sly

When Sri Lankan medical student Reynal Adrien Jayatilake Tennakoon Mudiyansele arrived to study at Flinders University after COVID-19 international border restrictions lifted, he felt excited but also concerned about how he would cope in such an unfamiliar environment.

"It was such a cultural shock – not only being in a different country with different customs, but also adjusting to the amount of independence I had," says Reynal.

To establish a new network of friends and community of contacts, Reynal revitalised the Sri Lankan Students Association at Flinders University, which had folded after the onset of COVID-19 travel restrictions.

Rather than shrink from the challenge, Reynal felt compelled to take positive action and formed an important new student club that has helped build a stronger community of international students and won the 2022 Best New Club award from the Flinders University Student Association.

This work – along with maintaining a GPA of 7.00 in his Clinical Sciences studies – also led Reynal to be named the Academic Undergraduate Winner at StudyAdelaide's 2022 International Student Awards.

Reynal, who is studying a Doctor of Medicine, having completed his Bachelor of Clinical Sciences in 2022, says the inclusive environment at Flinders has made a big difference to his outlook and development.

"I found there was a great need among international students to connect with each other, so the club became very popular. It soon expanded beyond Sri Lankans to include students from a lot of other cultures as well."

"Through sharing, everyone in the club realised that there were many close links between the different cultures of people attached to the club."

"We are all trying to find our role and our purpose, and through our discussions in a social environment, we came to see all of our similarities rather than our differences."

Reynal's energetic involvement with the student community is tied to his aim of becoming a doctor. Upset that many doctors in Sri Lanka see themselves as elites, Reynal is determined to become a clinician who provides services for the benefit of all people.

"I have a great passion for making a difference," says Reynal. "My education will enable me to do this, but also – to my surprise – I have learned so much about myself during my time at Flinders."

"My great misconception was that I would have to change myself to fit into a more developed country – but now I realise that I undervalued my own contribution of what I could bring to Flinders University."

"My thoughts and feelings never changed, but the way that I address them is different. I am making a difference."



Reynal Adrien Jayatilake Tennakoon Mudiyansele
Photo: Brenton Edwards

Understanding how sleep loss affects young shift workers

By David Sly

Increasing awareness about sleep disorders affecting people of all ages is opening a gateway to advanced sleep health, with Flinders University researchers finding new ways to diagnose and manage sleep problems.

“Poor sleep affects people’s health in so many ways, and in recent years we have learned just how common some sleep disorders are,” says Associate Professor Amy Reynolds, Co-Lead of the Insomnia, Shift Work and Body Clock Disruption team at Flinders Health and Medical Research Institute Sleep Health (FHMRI, formerly Adelaide Institute of Sleep Health). “20 per cent of young people have a sleep disorder that needs treatment – and this figure doubles by the time people reach middle age.”

“My research is particularly interested in the ways that work, sleep and health interact, and I’m currently doing work with young shift workers who have sleep problems and are impacted by sleeping out of sync with their body clocks.”

A trial conducted through 2022, funded by the Flinders Foundation, aimed to identify and diagnose the types of sleep disorders being suffered by young Paramedicine students before they had to start doing shift work, as a way of identifying clinical sleep disorders that could be treated early.

“Both of my parents worked as volunteer paramedics, and mum was a nurse; I grew up listening to their stories about the difficulties of trying to get enough sleep when they did shift work. It sparked an interest that I’ve been able to carry through into focused research,” says Associate Professor Reynolds.

“Last year we found that if young adults have a sleep disorder and they also work night shifts, their mental health is much more impacted than those without this combination of influencing factors. It’s a significant concern for the individuals, but also amounts to lost productivity through absenteeism due to sleep disorders in our workplaces.”

Associate Professor Reynolds recently delivered a report to SafeWork SA about the experiences of fatigue and sleep disorders among paramedics, which highlights there is much work to be done educating and providing options for the management of sleep in shift workers.

“If we get onboard early in a person’s working life to identify sleep disorders, we could make changes that will have a big bearing on their lives,” she says. “We need to be raising awareness and supporting sleep from early adulthood.



Associate Professor Amy Reynolds
Photo: Alexander Robertson

“It all points to a real need to reduce the stigma that surrounds sleep disorders, and show young adults that getting treatment early could provide huge benefits for their health and safety.”

Associate Professor Reynolds’ work forms an important plank within the broader sleep health research program at Flinders University, unlocking a complex puzzle to identify and then combat sleep disorders. “I’m one piece of a big, awesome, multi-disciplinary team,” she says, “and our particular areas of interest and expertise have overlap, so our shared insights are forming a more complete picture about sleep health.”

Embracing the challenges of rural healthcare

By Morgan Pearse

As an accomplished medical professional and proud Indigenous woman, Dr Carrie McKenzie (BMBS (GradEntry) '10) has made significant contributions to rural medicine and education. Growing up in Darwin, she developed a strong affinity for rural living and recognised the need for improved healthcare in these areas.

"I have always enjoyed living rural and find cities a little overwhelming. Rural people deserve top quality healthcare as much as anyone," says Dr McKenzie.

Dr McKenzie's path to medicine was unconventional, working as a veterinary nurse, an emergency department nurse, a registered nurse in the Royal Australian Air Force, a security guard and even as a DJ, before embarking on her medical studies.



Dr Carrie McKenzie. Photo: supplied

A pivotal moment in Dr McKenzie's career was her time as the sole doctor in an Aboriginal community outside Katherine. As Senior GP in the Katherine Hospital Emergency Department, she utilised her local knowledge and commitment to improving healthcare access to play a key role in establishing the Big River Region COVID outpatient response during the pandemic, ensuring vital information and services reached rural and remote areas and under-served populations.

Currently based in Mount Gambier, Dr McKenzie serves in a multi-faceted role, supporting and guiding aspiring medical professionals. As Regional Director, Clinical Director Regional Training Hub and Clinical Educator, her expertise and experience is invaluable in helping medical students and junior doctors navigate the complexities of the medical system and ethical challenges they may encounter.

"I was a Flinders graduate, having done my third and most of my fourth year in Mount Gambier. Now, I have moved back with my family and I'm so honoured to be working with the University that took me on as a medical student," says Dr McKenzie.

Outside of her professional pursuits, Dr McKenzie finds enjoyment in her hobbies, such as caring for animals on her property and indulging in creative activities like sewing and smocking. With each smocked garment taking up to 40 hours to complete, Dr McKenzie jokes that it is teaching her the value of patience!

In providing advice to her younger self and Indigenous students aspiring to study medicine at Flinders University, Dr McKenzie emphasises the importance of taking risks and pushing boundaries. She encourages others to apply without doubting their abilities, seek support through scholarships and tutoring if needed, and embrace the challenges that come with pursuing a medical career.

Congratulations to our 2022 Alumni Award recipients

The achievements of 14 outstanding Flinders University graduates, across a range of career paths, industries and community involvement, were acknowledged at the 2022 Flinders University Alumni Award gala dinner, held on Thursday 24 November 2022 at Sanctuary, Adelaide Zoo. The College of Medicine and Public Health was thrilled to have five of their alumni recognised in this impressive group.

Convocation Medal



Professor Justine Smith
PhD(Med) '99

Awarded for her outstanding leadership in the field of ophthalmology, serving as a tireless mentor and role-model for young clinician-scientists, especially women.

Photo: Brenton Edwards



Dr Ruth Mitchell
BM, BS(GradEntry) '07

Awarded for her outstanding contributions to the global community, through humanitarian services and activism as a member of the International Campaign to Abolish Nuclear Weapons (ICAN).

Photo: Brenton Edwards

Read more about Professor Smith and Dr Mitchell in the 2023 edition of Encounter
[Flinders.edu.au/encounter](https://flinders.edu.au/encounter)

Distinguished Alumni Award



Anastasia Bougesis

BHlthSc(Paramedic) '10,
BNg(GradEntry) '12

Awarded for her distinguished leadership in disaster relief, both as a volunteer and employee, bringing together a passion for emergency management, community service and women in leadership.

As Chief Development Officer of Disaster Relief Australia, Anastasia has played a pivotal role in growing the support organisation that was run by only two volunteers in 2016, to now have more than 50 paid and part-time positions.

Instrumental to the growth of Disaster Relief Australia has been Anastasia's rebranding of the organisation in 2020, and her success in lobbying for federal government funding of \$38.1 million over the next three years.

Anastasia graduated from Flinders University as a paramedic and trained nurse, having undertaken the Rural Placement Program in Loxton and joined the Study Abroad exchange program with Chongqing University, China, in 2010. Her results earned a Commendation from the Dean.

Photo: Brenton Edwards



Dr James Doube AAM

BSc '96, BM, BS(GradEntry) '02

Awarded for his distinguished contribution to rural and remote medicine, and environmental conservation efforts.

Dr Doube, a general practitioner at the Kangaroo Island Medical Clinic and a senior medical consultant with the MedStar medical retrieval service and SA Ambulance, developed an interest in conservation during his childhood, completing a Bachelor of Science in Marine Biology at Flinders University before going on to study Medicine.

After graduating, he served missions for the Australian Antarctic Division on Macquarie Island and led Search and Rescue Teams to develop emergency response capacity.

Dr Doube has served on several humanitarian missions overseas with the Australian Medical Assistance

As Acting Chief Medical Officer at SA Ambulance, Dr Doube was awarded an SA Emergency Services Medal in April 2021, for outstanding efforts and service during the 2019-20 bushfires on Kangaroo Island.

Photo: supplied

Early Career Alumni Award



Assistant Professor Suvimol Charoensiddhi

PhD(Med) '17

Awarded for her significant contribution in the field of marine bioproducts for human health and nutrition, and for actively contributing to the wider scientific community.

Focusing on marine bioproducts for human health and nutrition, Dr Charoensiddhi's research on the biorefinery of South Australian brown seaweeds has for the first time demonstrated significant gut health-benefits and established a key research platform for the future.

As a result, she has published ten high-impact papers, including eight first-authored.

Dr Charoensiddhi's outstanding performance was recognised with the Vice-Chancellor's Prize for Doctoral Thesis Excellence in 2017. In April 2018, she was offered and accepted the academic position of Assistant Professor, Department of Food Science and Technology at Kasetsart University, Top Universities in Thailand.

Dr Charoensiddhi has dedicated her time to also securing an impressive amount of grants, valued at more than AUD\$500,000, for her group from the University.

Photo: Brenton Edwards

Read the inspiring stories of our awardees: [Flinders.edu.au/alumni-awards](https://flinders.edu.au/alumni-awards)

At home in Mbantua

Dr Lesley Shorne Memorial Scholarship Matthew Flinders Scholarship

By Lynda Allen

Advocating for the rights of minority groups, especially women, has prompted a move to Central Australia for Dr Vanshika Sinh (BSc(Hons) '18, MD '22).

After two years in Alice Springs, 29-year-old Dr Sinh is feeling at home. She has taken Arrernte language classes to communicate better with the community and has fallen in love with the view of the MacDonnell Ranges she experiences each day of her internship at the local hospital.

“Alice Springs, or Mbantua as it’s called in Arrernte, is one of the most beautiful and charming places I have ever lived in. It has the most stunning mountain ranges that allow for amazing camping and hiking, and there is such a warm community of people living here,” says Dr Sinh.

Along with the tenacity it takes to complete a medical degree, it was two Flinders University scholarships that Dr Sinh thanks for getting her to this point in her career - and to the middle of Australia.

In 2020 she received the Dr Lesley Shorne Memorial Scholarship for female, mature-entry Doctor of Medicine students who have an interest in women’s health, assisting them with costs associated with their studies.

The annual scholarship was created to honour the life and work of Dr Lesley Shorne (BA '81, BMBS '84), a leading South Australian forensic examiner and pioneer of cervical screening, who achieved significant improvements for women in the medical and legal processes relating to sexual assault.

Dr Shorne was an advocate for the advancement of women, particularly those from disadvantaged backgrounds. She was a keen campaigner for their rights and for their health and worked to develop women’s health training programs.

Dr Sinh says she shares Dr Shorne’s values.



Dr Vanshika Sinh. Photo: Brenton Edwards



Dr Vanshika Singh exploring the Macdonnell Ranges with Vasana Bhaskaran. Photo: supplied

"Advocating for the rights of people within minority communities, particularly women, is something I am very passionate about and is the reason I applied for medical school."

With this scholarship support and driven by her passion, Dr Singh moved to Alice Springs for a six-month placement at the Central Australian Aboriginal Congress, a community-controlled health organisation.

"At Congress I had the chance to learn how to better practice culturally-safe medicine and to shift my idea of what health means outside of a Western context," says Dr Singh.

During this time Dr Singh also had the opportunity to spend time at the Alukura Women's Health Service, a centre dedicated to supporting Indigenous women and babies where she learned about the unique challenges Indigenous women face.

"Women in Central Australia are particularly vulnerable due to the difficulty in accessing health care because of geographical isolation. They are also subject to some of the highest rates of domestic violence nationally."

Keen to deepen her knowledge and provide care in First Nations' communities, Dr Singh wanted to stay on in the Northern Territory for further placements – but she found supporting herself without a regular part-time job was difficult.

"Being a student can be a very financially vulnerable time. A lot of people are forced to work multiple jobs, do unpaid internships or placements, or take out loans."

"I was originally working full-time during uni holidays, but it became more and more difficult to work as I advanced through my medical degree and was required to complete full-time unpaid placements to expand my skills."

Dr Singh received a Matthew Flinders Scholarship for students in financial need, which gave her the boost she needed to immerse herself in further placement opportunities.

"It enabled me to do further medical placements in Darwin, Alice Springs, Tennant Creek and Santa Teresa."

"Within these communities lie some of the poorest health outcomes in Australia. Common conditions such as rheumatic heart disease, trachoma and post-streptococcus glomerulonephritis are common in these communities – while incredibly rare, if not completely non-existent in major centres across Australia"

Grateful for the opportunities she's been able to realise through the Dr Lesley Shorne Memorial Scholarship and the Matthew Flinders Scholarship, Dr Singh says, "Having the support of these scholarships helped me immensely - not only being able to get through my degree, but also in being able to pursue areas of medicine that interest me."

"The enormity of being able to learn from all these different environments has not worn off on me and it was during this time that I fell in love with Alice Springs and the reason I'm now doing my medical internship here."

On the verge of finishing her internship, Dr Singh is considering her area of speciality and her next move, but knows that her time in the NT has changed her.

"I feel very strongly that these experiences will continue to be incredibly formative for my career, no matter which pathway I go down."

Scholarship support can change a student's life. Learn more [Flinders.edu.au/support](https://flinders.edu.au/support)

Continuing Professor Wing's passion for medical research

Lindon Wing Research Fund

By David Sly

As Dean of the School of Medicine at Flinders University from 1998 to 2007, Professor Lindon Wing OAM valued the improvements that innovative research brought to medical science.

His research formed crucial platforms in the advancement of blood pressure control and the broader understanding of clinical pharmacology. As co-author of the inaugural *Australian Medicines Handbook* in 1998, his deep understanding of clinical pharmacology contributed to a comprehensive pharmaceutical compendium for every doctor and pharmacist in Australia. It immediately became an essential reference tool and remains so to this day.

Now, the Lindon Wing Research Fund – commemorating the influence of Professor Wing, who passed away in 2021, aged 78 - will foster innovations in medical research through a grants program that supports collaborative research between health and medical researchers at Flinders University and clinician researchers at SA Health.

Two projects to receive grants are a partnership between the University's Associate Professor Andrew Rowland and SA Health clinician Dr Kate Muller to address the leading cause of chronic liver disease; and innovative research approach to Type 1 diabetes by the University's Professor Claire Jessup and SA Health's Professor Toby Coates.

Professor Wing's wife Barbara Wing and their two daughters are proud that his research legacy will continue. Along with donations from friends, family and fellow-researchers, Barbara has contributed generously to the fund in her husband's name.

"Supporting research is so important in developing new ideas and innovative solutions to important clinical questions," says Barbara, who welcomes further donations to bolster the Lindon Wing Research Fund.

She says Professor Wing vigorously promoted research among clinicians and scientists of all levels.





Barbara Wing at home with a photo of her husband, Professor Lindon Wing OAM. Photo: Brenton Edwards

“Lindon saw research as being more productive when a clinician’s work was linked with a scientist, as it provided a better result, faster. The fund will help to keep facilitating this, across broad ideas, and to stimulate fresh outcomes.”

Barbara believes this funding will provide an essential opportunity to initiate research and generate early results. She hopes the recipients will then be able to use these early results to be competitive for larger research grants to continue their work.

“It will be so valuable to promote both clinicians and researchers to pursue the same line of critical thinking about medical research that was so much a part of Lindon and his career in Medicine,” says Barbara.

“It will produce results – and that is so very gratifying.”

Learn more about Professor Lindon Wing and how you can support medical research [Flinders.edu.au/giving-lindonwing](https://flinders.edu.au/giving-lindonwing)

The future of **HEALTH & MEDICAL RESEARCH** is at Flinders University

“Every institute in the world wants co-location partnerships. The Health and Medical Research Building will make that happen on a transformative level.

Being co-located means I can talk daily with clinicians about problems they're facing in the clinic or operating theatre – which then informs my research.

It will be incredibly productive.”

Dr Claire Jessup
Immunology Researcher
Flinders University



Flinders University is distinguished by its people and their shared sense of purpose.

Opening in 2024, the Health and Medical Research Building has been designed to create powerful partnerships between researchers, clinicians and practitioners, with a focus on research that is guided by patient need.

From clinical advances, to outstanding delivery of care and prevention, our integrated and holistic efforts will help solve the most challenging health problems of today and tomorrow.

[Flinders.edu.au/hmrb](https://flinders.edu.au/hmrb)