



GLOBAL PROBLEM

Farzaneh Haghighi's insight into the 'Woman, Life, Freedom' protests in Iran



ADVANCING TREATMENTS

Neuroscientist Chris Shaw keen to share his passion for biotechnology with New Zealand students



HONOURED FOR CARE

Tess Moeke-Maxwell and the Te Ārai Research Group are changing palliative care policies

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IN THE **NEWS**

A selection of Waipapa Taumata Rau, University of Auckland staff and student expert commentary in the media recently. Email: uninews@auckland.ac.nz



WAVES OF CHANGE

Dr João Albuquerque (School of Environment) told TVNZ's Breakfast that changes in wind patterns under global warming will alter New Zealand's waves, with the effect becoming more pronounced towards the end of the century. Waves may get bigger off the country's west coast and smaller off the east coast, while changes in wave direction will have implications for coastal erosion. In exposed locations, "You can either work with some improvements in sea defences or you can work with managed retreat," he said.

Link: tinyurl.com/wave-changes



BRAZILIAN ELECTION

Associate Professor Walescka Pino-Ojeda (Faculty of Arts), was interviewed on Breakfast and 95bFM on the election in Brazil and the close race between the 'Trump of the Tropics,' far right president Jair Bolsonaro and the now president-elect Luiz Inácio Lula da Silva ('Lula'), a former president who ran on a ticket of reversing the climate-destroying policies of his rival, in particular protection of the Amazon rainforest.

Link: tinyurl.com/bFM-Brazil

WHALE TIKANGA

Dr Ramari Stewart, the tohunga tohorā awarded an honorary doctorate from the University this year, talked to Stuff about tikanga relating to dead whales, after a sperm whale washed up on a Coromandel beach. While most iwi bury whales, that was not the traditional approach. She said observing a decomposing whale offers insights into the state of the moana, adding that management of both dead and live whales needs to be reviewed to align with tikanga.

Link: tinyurl.com/whale-tikanga



BLACK FERNS' BRAND BOOST

The brand value of the Black Ferns will skyrocket thanks to their Rugby World Cup win, Associate Professor Bodo Lang (Business) told the Southland Times: "It's clear the Black Ferns are unique ... compared with the All Blacks, they possess different qualities that make them quite a different sponsorship proposition." Professor Jennifer Curtin (Public Policy) also told Newstalk ZB that the Black Ferns succeeded in attracting new rugby fans. She said the women reached audiences who wouldn't typically watch the game and could now build on the interest among girls.

Link: tinyurl.com/bodo-RWC-brand



SLICE OF THE ACTION

Dr Subhamoy Ganguly, Business School senior lecturer in Information Systems and Operations Management, was in hot demand to help several news outlets break down the logistics of getting frozen pizza from Italy to New Zealand. He shared insight with RNZ and Stuff on how Italian-made pizzas were able to be priced at just \$4.

Link: tinyurl.com/four-dollar-pizzas



SMALLER WHEELS TO WORK

Dr Timothy Welch (School of Architecture and Planning) talked to bFM about his project, funded by Waka Kotahi, to set up a micromobility hub at Penrose station. The aim is to encourage people living in the outer suburbs to e-bike or scooter to the hub then ride the bus, rather than drive a car to the hub before catching a bus.

Link: tinyurl.com/bFM-tim-welch

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STAY IN THE LOOP

Your staff email newsletter Whaimōhio The Loop comes out every fortnight. If you have content or achievements to share. email: staff-comms@auckland.ac.nz. Deadlines are on the intranet under News, Events and Notices, The Loop.

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Something to share? The next issue is March 2023, copy due in February. Email: uninews@auckland.ac.nz. Until then, have a great break!

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A FUTURE FOCUS

Selected students will collaborate on global projects as part of a new opportunity called Future 17.

The Business School has a reputation for experiential learning and non-traditional content delivery and that's put it in good health to be part of a new course.

The University will take part in the QS Future 17 educational initiative from January 2023, a programme created by QS World Merit, the charity arm of Quacquarelli Symonds (QS). QS Future 17 is led by Exeter University in the UK, which first offered it in 2022 and is now broadening its global reach. Other universities taking part include the Chinese University of Hong Kong, University of São Paulo, Brazil, and Stellenbosch in South Africa.

Students from all over the world collaborate on interdisciplinary projects related to the 17 Sustainable Development Goals. In 2023, 30 third-year students from across faculties at the University of Auckland will take part in the creditbearing course, after a selection process.

The academic lead on the Auckland working group for Future 17 is Andrew Patterson, associate dean in the Faculty of Business and Economics, and Professional Teaching Fellow in Management and International Business. An award-winning innovative educator, he has experience in developing and delivering multidisciplinary course content. He led the design of Business 202, an interdisciplinary compulsory stage two course that has been shortlisted for the Wharton-QS Reimagine Education Award in the Learning Assessment category. The non-traditional Business 202 assessment structure develops students' professional skills in a way they might use them in the modern workforce.

"We use AI, we have peer reviews, we have a virtual reality presentation and students create infographics," explains Andrew. "That kind of course is very much in the mindset of what QS is doing with Future 17. Our 202 modules are also about competing globally, the future of work, and issues related to climate change. The essence is to address global grand challenges."

For Future 17, students tap into the expertise and teaching power of experts around the globe, including five academics from Auckland.

"I can see why the University grabbed the chance to be involved in this. It fits well with the University's values and the direction it's taking."

Based on his experiences with students in Business, he knows plenty will fit the bill.

"I'm starting to see an emergence of SDG values coming through in our students. Given a business project, many self-select something that's not purely profit-driven, such as a social enterprise that can make an impact. I view that as a really positive thing."

He says the educator's role is not to stand at the front of a lecture theatre and tell students what to think. "We're growing future leaders and helping them develop a way to think, and to collaborate and work on global issues."

He says Future 17 and the likes of Business 202, which was taken by around 1,500 students this year, are important in the context of the Curriculum Framework Transformation. "It's all about the push towards transdisciplinarity and upskilling to incorporate relational learning."

The selection process for students is being undertaken in December and they will then enrol to complete the course through Exeter.

"They have a four-week online induction to get to know others on the programme and the people from the other partner universities," says Andrew. "In February, their projects begin."

Each team of six receives a project card summarising the challenge they'll attend to.

"An example this year was a project called Soap for Hope. With millions of people living in slums with no access to soap, they launched a programme to recycle soap discarded from hotels and distribute it to people in need, with all the logistics that entailed."

Exeter works with QS to organise teams, based on an indication from students about the sorts of things they're interested in. The programme can also involve New Zealand companies and organisations keen to have students help solve their problems or work with them to find solutions.

"It's a great way of getting real-world experience while still studying, and hopefully making some sort of impact," says Andrew. "They can develop cultural competencies and work effectively in a cross-cultural collaborative environment, across different time zones, working with a real-world business partner. One of the key things is to figure out how they can work with people from a completely different academic discipline too, for example Business and Science. That is a really important skill."

While the University is starting small with 30 students involved, Andrew says the steering committee, led by the Vice-Chancellor, is hoping to increase the number of students taking part as the programme goes on.

Read more about it: tinyurl.com/QS-future-17



"Given a business project, many students self-select something that's not purely profit-driven, such as a social enterprise that can make an impact."

 Andrew Patterson, professional teaching fellow, Department of Management and International Business



GOOD TO KNOW

LIGGINS LAB GETS GREEN TICK

The Liggins Institute's laboratory has earned the highest level of international sustainability certification.

The research lab is the first university lab in Aotearoa New Zealand to gain My Green Lab certification and only the second lab of any sort across New Zealand.

My Green Lab is a not-for-profit, run by and for scientists, that sets standards for sustainability and supports labs to reach them.

"Laboratories are significant energy consumers and waste producers, so tackling their environmental impact helps achieve the University's sustainability goals in its strategy *Taumata Teitei*," Liggins director Professor Frank Bloomfield says.

A My Green Lab survey of lab users kicked off the accreditation process, finding the laboratory was doing well but there were areas for improvement.

"It has been a matter of educating people about what we were already doing, as well as making some key shifts in laboratory practice," says Liggins technical services manager Eric Thorstensen.

The laboratory had been recycling for some time, for example by sending old lab coats to schools and ice packs to the University's Rec



Centre. However, it stepped up its efforts to earn the accreditation. The ice-pack initiative started about 18 months ago as a way of reusing the cold packs that come with refrigerated deliveries.

Clarissa Mafoe, customer experience supervisor at the Rec Centre, says, "Since our first ice-pack pick-up, we've been able to provide for our members' injuries, but have also given a few boxes to low-decile schools in South Auckland."

Liggins researchers are also maximising the use of stock. "We have developed an inventory and a checklist for people when they leave the lab, because often there's a whole lot of unused stuff that gets forgotten. It helps ensure we actively use up products," Eric says.

Another important area is making lab users conscious of water and energy usage. Labs are very energy intensive, with two items alone – incubators and tissue/cell-culture hoods – using as much energy in a year as an average household. Signs around the lab now alert people to which items can be safely turned off, and timers and sensors are being introduced.

"Simple acts, such as turning off equipment after use and lights in unused rooms, help conserve energy and save the University money," Eric says.

While there is a cost to the My Green Lab process, Eric says it has proved its worth – not only for the savings, but also in reducing the lab's environmental footprint. "Sustainable practices aren't hard, anyone can do them, we just generally don't in a workplace setting."

The University was placed tenth in the inaugural QS Sustainability Rankings this year, and sixth in the Times Higher Education 2022 University Impact Rankings.

Vice-Chancellor Professor Dawn Freshwater recently spoke at the QS Higher Education Summit in Indonesia and urged universities around the world to partner with community leaders to progress sustainability initiatives.

"It's only by working together that we can solve the world's biggest problems."

Full story:

auckland.ac.nz/liggins-lab-green-tick

MICROPLASTICS ALTERING ECOSYSTEM IN WAITEMATĀ

Clams, crabs, shrimp and microscopic worms live in an ecosystem fundamentally changed by tiny pieces of plastic.

Doctoral candidate Sam Ladewig (Faculty of Science) has investigated how microplastics are affecting an ecosystem on intertidal flats in the Waitematā Harbour which is inhabited by clams, cockles, crabs, algae and microscopic worms. She found nature's fundamental cycles, such as

the flow of oxygen through the system, are being altered, with uncertain effects.

Her research involved sampling, with colleagues, 16 places on intertidal flats of sand and mud in Little Shoal Bay, Northcote, and Shoal Bay (Oneoneroa), on the opposite side of the bridge, and Ngataringa Bay. In an intertidal ecosystem, the flow of oxygen includes plants producing oxygen through photosynthesis and

sea creatures consuming it. By taking water and sediment samples from sites with varying levels of plastic pollution and conducting statistical analysis, Sam was able to show plastic particles affecting the cycles of both oxygen and nitrogen.

"What was different about this research was getting out of the lab to look at the real-world effects of microplastics on nature's fundamental cycles," says Sam. "As far as I know, this was the first study anywhere to do that in relation to intertidal ecosystems."

Around the world, some of the highest concentrations of microplastics are in coastal sediment. While New Zealand's levels are lower than in many countries, every site Sam sampled was polluted. This included everything from lost fishing gear to fibres dispersed by washing synthetic clothes.

Full story: auckland.ac.nz/microplastics-research





GAME ON!

Esports have become a viable career option whether it be competing globally through playing, or developing games.

The University had a soft launch and blessing of its new Esports Arena recently, a quality gaming lab for students, situated in the Kate Edger Information Commons.

Esports have developed over the years into an activity in which participants build teams, develop complex strategies and undertake intense practice sessions. Coaches even train competitive players.

The new gaming lab has 22 high-spec gaming computers, eight consoles and world-class streaming equipment aimed at developing high-performance competitors in the Asia-Pacific esports scene.

The official opening of the Esports Arena will take place in O Week in February 2023. More info: auckland.ac.nz/esports





HONOURED FOR **END-OF-LIFE CARE**

The outstanding contribution of Dr Tess Moeke-Maxwell and the Te Ārai Research Group has been recognised with the Health Research Council (HRC) Te Tohu Rapuora Medal from the Royal Society Te Apārangi.

HRC chief executive Professor Sunny Collings says Tess (Ngāi Tai ki Tāmaki, Ngāti Porou) has led or supported numerous studies and community collaborations with her Te Ārai and School of Nursing colleagues and with kaumātua who have all put whānau aspirations and tikanga front and centre. Sunny says: "Tess's research has informed Aotearoa's palliative care policy, increased Māori access to palliative care, and supported whānau access to knowledge about tikanga processes across the end-of-life pathway, from the time of diagnosis through to

the hura kōhatu (unveiling), disposal of ashes, and bereavement.

"She is regularly asked to provide advice to the Ministry of Health and national bodies such as Hospice New Zealand. She is also in high demand as an educator and presenter in Indigenous endof-life care both nationally and internationally."

Tess says the medal is acknowledgement of Professor Merryn Gott's inspired decision to bring a national palliative care group together and the vision of the late Matua Rawiri Wharemate. "The end of life is a tapu (sacred) time when the wairua (spirit) is very active, so it's imperative that great care is taken in this space."

Other HRC excellence awards went to Professor Timothy Mulgan (Arts), Associate Professor Yvonne Underhill-Sem (Arts), Dr Hamid Abbasi (ABI) and Associate Professor Nigel Wilson (FMHS).

Full story about HRC awards: auckland.ac.nz/royal-society-HRC-honours Tess story: auckland.ac.nz/Tess-HRC-medal

TECH HUB'S 5G **BOOST A FIRST**

The Business School officially unleashed its 5G-powered technology hub Te Ahi Hangarau in November.

Fittingly, voice-activated 5G-connected robot scissors cut the ceremonial ribbon. When the magic words, "Alexa, open the technology hub," were spoken, developer and Maker Space co-ordinator Hayden Moore says a smart-home device picked them up, a message was sent to the internet over Vodafone's 5G network and on to the Internet of Things (IoT) robot scissors before a motor was activated enabling the scissors to snip the ribbon, no hands required.

The build, which took around ten hours, utilised emerging tech, including 3D modelling and printing, a customised smart-home routine, and lots of testing, says Hayden. The unique ceremony was a small demonstration of the impact 5G can have.



Along with expansive virtual experiences, Te Ahi Hangarau offers students the chance to utilise 3D-printing technology and the IoT.

"By engaging with these emerging technologies now, our students can develop the skills they need to succeed in the future," says Dean of the Auckland Business School Professor Susan Watson. "We are proud to be the first business school in Aotearoa offering our students access to 5G and all the benefits that come with it."

The future-focused tech hub has received significant financial and technological investment from Vodafone in partnership with

Commerce student Isabella Bouwer is already

a fan. "My parents often ask me what I'm up to at uni, so I told them I was creating a business space in the metaverse. They said, 'when did you get a job at Facebook?' When they asked me to explain the metaverse, I initially struggled, but I believe the clearest way to tell someone about the metaverse is to think about what it isn't - it's not a new technology, app, or tool; it's a way of thinking about combining many technologies to experience how we use tech and interact with it across our lives in an

"The metaverse and the utilisation of VR technologies will soon transform the workplace as we know it."

entirely new way.

Full story: auckland.ac.nz/new-tech-hub



Matire Harwood is a proud wahine Māori who divides her working time across two worlds.

She's a general practitioner at Papakura Marae Health Clinic and also an associate professor in the Faculty of Medical and Health Sciences at Waipapa Taumata Rau, University of Auckland.

A specialist in primary healthcare, Matire (Ngāpuhi, Ngāti Hine, Ngāti Rangi ki Moerewa) was recently promoted to Head of Department of General Practice and Primary Healthcare at the University. She says her community health and academic worlds complement each other and allow her to draw on her involvement in the Auckland community of Papakura, to boost her passion to teach, learn and give back to Māori communities

"I feel like I can't do one without the other," she says. "Ever since I was a little girl, I saw the issues around poverty and housing, and how they affected everyone's health. That's why I always wanted to be a doctor - one who'd make sure all people would get excellent care."

"Ever since I was a little girl, I saw the issues around poverty and housing, and how they affected everyone's health. That's why I always wanted to be a doctor."

Dr Matire Harwood, GP and Head of Department of General Practice and Primary Healthcare, Waipapa Taumata Rau

After being promoted to head of department in September, Matire now does one day as a GP and the rest at the University, with research interests including asthma, heart disease and diabetes.

South Auckland has been at high risk of Covid-19, yet vaccination rates were at an incredible low at the height of Omicron. Matire drove community-centred initiatives to change that. She ensured vaccinations were available at the marae and on a bus that drove into local communities for whanau with accessibility issues.

She was a regular commentator in the media about the importance of vaccination and boosters, vaccine hesitancy, and informing vulnerable communities about changes to alert levels.

In July 2022, she was awarded the prestigious Community Service Medal from the Royal New Zealand College of GPs for her services to Māori hauora during the pandemic.

It's one of many contributions for which she's been recognised as part of her dedication to creating effective health changes for Māori. But she says personal recognition sits a little uneasily.

FFATURF

"At first, I was a bit angry to have been nominated because it wasn't a solo effort. All of us went above and beyond during lockdown to ensure the safety and well-being of the community. It wasn't easy for anyone.

"But then I took it as an opportunity to recognise my colleagues and the work we do, to celebrate one another and how hard we work. It was a huge honour, although I thought I didn't deserve it."

Matire's road to becoming a doctor began aged six, when she visited a hospital with her grandfather, Ngāture, a tohunga in her whānau and a significant inspiration in her life.

"At first, I was a bit angry to have been nominated because it wasn't a solo effort. But then I took it as an opportunity to recognise my colleagues."

- Dr Matire Harwood

"I remember being so intrigued by the work everyone was doing and thought, 'I'd like to have a job like this', and Pāpā said to me, 'Not only will you become a doctor, but you will be at the top.'"

In 1977, Matire and her whānau, including Ngāture, moved to Australia where she lived for ten years. In 1979, Ngāture passed away and was brought home to be buried at Tautoro, near Kaikohe. Matire continued living in Australia, but made frequent visits to Aotearoa as a way of staying connected to her pāpā and her roots, until she decided it was time to follow her passion and start studying medicine.

Following Ngāture's passing, she was drawn to serving the people of Aotearoa. Matire began

her studies in the Faculty of Medical and Health Sciences, at just 17, and relished it.

"I love science, I love research, I love working with people.

"I'd thought about going to med school in Australia, but I always knew I had to do this at home. I had a really strong connection to Aotearoa. Every time I came back on holidays, I'd say 'I wish I could stay here'."

Matire's mother was her biggest supporter and even during the family's years in Australia, "she was always pro-Māori".

"She never let any of us kids forget it. We used to live in council flats in Freemans Bay during the 1970s, but then my parents decided they wanted their own home. My mum, Haupuru, has always been about going places where people don't want 'us'. That's her Hone Heke genes coming through.

"She said: 'Let's move to the North Shore; there are no Māori there. Let's go park our flag there!"

That kind of attitude inspired Matire's mindset to always create space for Māori, particularly in places where they are unseen. She also wants that to happen in New Zealand's health system; to see more Māori working in healthcare.

"We need to build robust pipelines for our people getting into the health workforce and to address the pay associated with those roles too. If you get whānau into better-paying roles, it gives them better opportunities and influences good decision-making.

"Poor housing, poverty, lack of education – these have huge impacts on whānau health and well-being and can diminish their mana. We need to address that."

Matire says having more Māori in healthcare will also improve connections and understanding.

"Doctors and clinicians have a responsibility to ensure people get the best care possible so that when they leave their appointments, they're in the best position to carry on. It's about quality care in our health system."

Being a Māori academic at Matire's level means she is in a position to increase Māori staff, which is

an opportunity she is embracing. She supervises many Māori doctoral candidates, including some who have won Vice-Chancellor Awards for the best thesis based on kaupapa Māori research.

"I count myself lucky that I'm able to open doors for others, because I'm all about filling up space with our people. The health system in New Zealand can be hierarchical; people often play games to get ahead. You're meant to suck up to people and I find that challenging, especially if I think you haven't earned my respect."

Sucking up was never the case for Matire.

"Looking back I think 'jeez I worked hard'. It is a sacrifice, and you do end up going above and beyond.

"Pāpā Ngāture always used to say to me, 'Don't get mad, don't even get even, just be better'. That's the attitude I adopt to address racism, sexism or any 'isms' I encounter in my work."

Matire acknowledges the example of her hardworking parents, Haupuru Werekake/Wilcox and Peter Harwood, who are big on community and helping others. But she also pays tribute to her academic mentors, Professor Papaarangi Reid (Auckland), Professor Richard Beasley (MRINZ), Associate Professor Bridget Robson (Otago), Professor Linda Tuhiwai Smith (Waikato) and Professor David Tipene Leach (EIT). It's a wide network of like-minded people striving to achieve similar goals in health equity.

Outside of work, she has goals too: out on the water. Matire paddles in a mixed masters waka ama crew and they won silver at the 2022 National Long Distance (26km) race at Waitangi in October.

She trains three times a week from Te Atatu and Ōkahu Bay boat ramps, getting in ten to 25km each time.

"I love it: love being out on the water, participating in a sport that originated in Te Moana-Nui-a-Kiwa, the Pacific region. It does wonders for the mind, wairua and body."

■ Te Rina Triponel

WET ALL ROUND

The Great Waka Ama Race – Ōkahu edition – was held in October with students competing across seven University of Auckland teams. Faculty and association crews paddled from the Hyundai Marine Sports Centre at Ōkahu Bay around a two-kilometre course that took them out towards the wharf, left past the Ōrākei marina lighthouse and back to shore. There was a sprint start and finish for each crew during the race. As is the case every year, the race was fast and the competition fierce – but there was rainy weather to contend with as well. The FMHS Seabass took the win, closely followed by the Law Lions and Commerce Cougars.

■ Video highlights: auckland.ac.nz/waka-ama





As a student at university in the late 1970s, Professor Chris Shaw was ahead of his time.

"A lot of my friends at Otago were Māori and Pacific. We were involved in political activity promoting Māori language which, reflecting on it now, was quite unusual. We wrote a play depicting the persecution of the tangata whenua that we took around schools. It was a lot of fun and created some strong friendships."

Chris is impressed with the cultural changes that have occurred in New Zealand over the 30 or so years he has been working in the UK.

"I'm so proud of New Zealand and its transformation, to acknowledge the importance of Māori culture and Māoritanga, and the resurgence of te reo Māori. I feel like I left New Zealand and came back to Aotearoa."

Chris is now a world-leading neurologist at the forefront of gene therapies for neurodegenerative disorders. He is a professor of neurology and neuroscience at the Institute of Psychiatry, Psychology and Neuroscience at King's College, and the director of its Maurice Wohl Clinical Neuroscience Institute.

He is returning to New Zealand from London to become the inaugural Hugh Green Foundation Chair in Translational Neuroscience at the Centre for Brain Research (CBR), one of the University's seven flagship transdisciplinary research centres.

Initially there'll be a few years tripping back and forth from the UK to New Zealand, but when he's back for good, Chris would like to track down some of his old university buddies.

Chris's desire to inspire Māori and Pacific students into medicine comes from the heart.

"I want to reconnect with Aotearoa and make some sort of contribution. Whether it's going out to schools or giving lectures, I'll do what it takes to get young people to consider biological sciences as a career."

With the economic crisis biting, he knows it's not easy for students to dedicate many years of their life to study so would also be keen to establish scholarships funded through philanthropy.

"I think that's one good way to do it. But the first thing is to show that it's incredibly exciting, and there are amazing opportunities. And it's such a rewarding part of life."

Chris left New Zealand in the mid-90s and his first job was at King's, where his roles since, along with all his research, include running the teaching programme, working in the clinical service and leading academic neuroscience.

He has also been a big driver of fundraising for research, raising more than £100 million over the years for the college.

"Part of that money helped to design, build and recruit for a new research facility. The Maurice

Wohl Clinical Neuroscience Institute is one of the largest neuroscience research facilities in Europe. It is home to around 250 neuroscientists and it's buzzing."

His special interest is in motor neuron disease (MND).

"MND starts with a disability, and then takes more from you until you're unable to move your limbs, feed yourself and talk. Later you're unable to toilet yourself, and then can't breathe. It is grim.

"Nearly 30 years ago, I met two women with the familial form of MND. They'd seen their mothers die of it."

The first woman told him she'd spent her life waiting for the disease. Every time she tripped on a paving stone or had trouble opening a door, she wondered if that was the onset. Worse, she feared she'd passed it on to her children.

"It was the year that the first gene for motor neuron disease was discovered, and we found she had a SOD1 gene mutation.

"I met a second woman with a different SOD1 mutation three months later. I thought this was probably the worst disease you could possibly get. From that time, I've worked to understand what causes MND and to advance new treatments"

Over the next 25 years Chris and colleagues tracked down the genes that cause MND, to gain an understanding of the disease mechanism and thereby share their research so experts could develop treatments that could work.

"We did a lot of gene hunting, and we discovered more genes than pretty much any other laboratory. We were also part of massive international collaborations and have changed the field. Now we really do have fantastic insights into the disease's mechanisms."

As a result, some of Chris's MND patients, including a New Zealander, are now enrolled in clinical trials of anti-sense oligonucleotide (ASO) therapies that target three different genes. One of these therapies, targeting the faulty SOD1 gene, appears to be effective.

"It absolutely works. If you get in early, you can stop the disease in its tracks."

Treatment is by lumbar puncture injection every month and expensive.

"We're working on trying to get the body to make its own anti-sense to target the same genes. It can be done, it's just not easy."

For that, the neuroscientists are using a virus that contains a genetic package capable of making 'silencing micro RNA', and it can do this continuously from a single injection. Delivering this into the brain and spinal cord is complex the brain is good at protecting itself from virus particles getting through its protective pial membrane, which Chris describes as "like cling wrap around the brain, preventing viral entry".

Chris says other researchers have had remarkable success using viruses to deliver missing genes in a condition called spinal muscular atrophy which is an infantile form of motor neuron disease. Untreated, these children will end up on ventilators or dead by the age of two.

"A group in the US used an adeno-associated virus (AAV) to carry a package containing the gene that's missing in these kids and delivered it intravenously. If given in the first year of life, a virus in the bloodstream can cross over into the spinal cord and deliver the genetic package to motor neurons, so that the body will keep making the protein that they're missing.

"The downside is you have to get in early, and the drug is very expensive but it's a one-off treatment. It was originally \$4 million for the injection. Some of the kids treated with AAV are now seven or eight years old, running around, going to ballet, going to school, things they could never have done before."

He says these remarkable results threw down the gauntlet to other neuroscientists to crack on with curative therapies.

But it's harder to get AAV into the brains of adults as their bodies' protective mechanisms are better developed.

"I started to read papers describing how neurosurgeons had delivered AAV directly into the brain tissues. We did something similar in mice, then sheep. We launched a company on the back of that called AviadoBio."

Chris is founder and chief scientific officer of AviadoBio which is now developing gene therapies to target neurodegenerative disorders such as motor neuron disease and frontotemporal dementia, backed by \$100m.

"We are poised to try and treat our very first patients, probably by early 2023.

"I didn't plan to start a company and have no commercial interest whatsoever, but these clinical trials are so important. And I'm grateful to the investors who have funded us because they believe in what we're doing."

Chris will continue to work with AviadoBio alongside his role with the CBR.

"I've wanted to come back to New Zealand for quite a long time. I love New Zealand; I just love its ethos. I think it has a wonderful spirit. New Zealanders are usually endowed with a ridiculous sense of self-confidence and optimism. We tend to do things that other people would say, 'don't do that, it's not a good idea'. We just go and do it."

Chris's wife is a Turkish-born New Zealander whose family emigrated when she was eight. She has a doctorate in economics and is an economic consultant.

"Before Covid, we used to come back pretty much every year with our two children, now aged 18 and 22. "The reason I've wanted to return is to give something back to the country of my birth. I want to inspire people to take up biotechnology and, of course, especially neuroscience."

As well as Professor Sir Richard Faull, Chris already knows Dr Emma Scotter from the CBR.

"She's a remarkable person. She came to work in my lab in England, and it was a bit alarming because she was waiting for funding to come through, but got bored and decided to come anyway. That Kiwi thing! Anyway, she got fantastic funding and was a great asset to the lab."

"I want to see Māori and Pacific really engaged in science, biological science, neuroscience in particular."

Professor Chris Shaw, neuroscientist,
 Hugh Green Foundation Chair in
 Translational Neuroscience at the
 Centre for Brain Research

Emma is now back at CBR. "She's been a huge success and remains a valued colleague."

Chris also works with scientists at Lincoln, and will maintain his connections at King's and AviadoBio, which will be hugely beneficial to university researchers in New Zealand.

And despite the impressive roles he has had overseas and the work he has done in fundraising, he will operate differently in New Zealand.

"I'm not trying to replicate that. To be honest, trying to run a company with 50 people and a

research institute of 250 people, as well as clinical practice and running clinical trials is tough. So I consider New Zealand a chance to re-energise.

"What I want to do in New Zealand is offer whatever help and advice I can to the people in CBR, including whatever connections I've got to facilitate them in their outreach into my network of people.

"I want to go into schools and get young people excited about research. Not just any people – I want to see Māori and Pacific really engaged in science, biological science, neuroscience in particular. I want to get them excited about the opportunities in biotechnology and medicine."

The role at CBR has been a slow-burner stemming from mutual admiration between Sir Richard and Chris.

"Chris Shaw is so passionate," says Sir Richard. "He's going to light a fire as part of our translational neuroscience network within the CBR."

Says Chris: "I'm a huge admirer of Sir Richard and what they've created in the CBR is so impressive. One of the reasons I left New Zealand for the UK was there was so little funding for research and almost none for neurological research. But things have changed, thankfully.

"I really want to work with Sir Richard and build a strong research group, and raise some funds and proselytize about the opportunities in science, neuroscience and biotechnology. But I see myself more as a cheerleader than building up a huge group of scientists."

As well as delivering his inaugural lecture at the University in October, Chris was able to see his 92-year-old mum for the first time in three years, as well as a brother and great-nephew who live in Wellington.

"I was born in Dunedin and my father was a biochemist. We went to the States when I was six, and then my parents split up. My mother brought up three boys in Christchurch as a schoolteacher - she's five foot one and fierce. We all managed to stay just inside the boundaries of good behaviour.

"I think we've done alright." Must be in the genes.

■ Denise Montgomery



ART & CULTURE

SPECIAL INSIGHTS

Trying to identify the creator of some
19th-century pen-and-ink sketches and
pinpoint locations depicted in early
20th-century photographs was absorbing
work for two Museums Studies students
completing projects in the General Library's
Special Collections.

The pair were among six postgraduate students, supervised by Associate Professor Linda Tyler (Arts), who gained experience this year working with rare material for a self-directed component of Museums 760 and 761. The students settled on the focus of their six-month projects after discussing their interests with Linda and the curators in Special Collections, and viewing material brought out to pique their curiosity. "The opportunity to work with heritage materials such as the historic publications, manuscript and photos in Special Collections gives students an insight into the specialised skills used in looking after such material," says Linda.

Student Helena Lunt chose to process the Edward W. Payton collection of sketchbooks, etchings and early 1900s photos of Aotearoa.

"Payton is a significant figure in the history of the Elam School of Fine Arts, and having studied there myself, I was intrigued to see his artistic perspective," says Helena. "The images are beautiful. It felt special to be able to handle the photographs and their original envelopes."

Cindy Huang worked on Emeritus Professor Manying Ip's papers on the history of Chinese settlement in New Zealand. She appreciated





having discussions with Professor Ip about the collection. "I was fortunate to work on a project I knew would enrich my existing knowledge and continue to motivate my personal interest.

"The highlight was having the privilege to meet Manying, who is someone I have constantly referenced during my undergraduate studies."

Special Collections team leader Nigel Bond says embedding Special Collections more formally into programmes means students can have an immersive learning experience.

"They can fully explore the richness of what we hold here. They come away with real-life research experience and practical skills."

This includes arranging and describing archival collections, historical and provenance research, collection care and materials science research.

Helena says she found processing the collection daunting at first, but with everyone's support was able to work through the tasks.

"It made me realise just how much you have to constantly assess and adapt when processing an archive; questions constantly pop up."

Several students had to contact other

specialists, academics and institutions, nationally and internationally, which built their professional relationships and exposure to related collections held elsewhere. One student found that not all puzzles that arise in curatorial work are easily solved, with the identity of the artist behind the pen-and-ink sketches yet to be confirmed.

"This is a great lesson to learn as it's one of the challenges and realities for all those who end up working with such material," says Nigel.

He says students also discover that the scope of the projects is not limited to arts or historical themes. Although material relating to Aotearoa and Moana Pacific is a particular strength, Special Collections' holdings are extensive and cover most disciplines and many languages and eras. Contemporary collections such as artists' books, the published works and manuscripts of prominent literary figures and academics, migrant settlement and racism are all areas that have been the focus of student projects.

"Special Collections can be an exciting place of discovery for students, and we are always looking for new opportunities to collaborate."

EXACTLY WHAT SHE WANTED

Master of Creative Writing student Yvette Thomas has won first place in the 2022 Caselberg Trust International Poetry Prize.



In selecting Yvette's poem *Not what you* wanted from 130 others, judge Glenn Colquhoun says he chose it because, "It sang. It hurt. And it made me recognise the hurt in all of us."

Alumnus Glenn, a notable poet and children's author, also admired the poem's use of language and the way it "juxtaposed words in combinations that made me think and feel the freshness of rejection all over again – no matter how old a friend it has been. And because it rose up and fought back and was beautiful. It spoke with a single uninterrupted voice."

Returning to the University this year after a 30-year absence, Yvette says she has always enjoyed creative writing. "I only came back to poetry during those Covid lockdown weeks at home. I found it a wonderful creative outlet."

On a whim she decided to apply for the masters course in creative writing and figured she could make it work with her job if she switched to part time. "I have loved the course, it's incredibly well run," says Yvette, who would eventually like

to put out a book of poems. "I'm also enjoying being back at university after such a long absence and doing something I've always wanted to do properly. Life always got in the way until now."

Yvette has previously worked in television and film and wrote a short story, *The Lost One*, which was published in *Takahe* (NZ) and *Pendulum* (Australia). She adapted it into a short film which she directed and it screened in the 2007 New Zealand International Film Festival.

As part of her prize, she will receive \$500 and a week's stay at Caselberg House in Dunedin. Her poem, and the judge's report, was published in November in *Landfall 244* – Spring 2022.

The Caselberg Trust International Poetry Prize (caselbergtrust.org/prizes) attracted poems from Aotearoa, Australia and the UK. Glenn says it was the most difficult poetry competition he'd ever had to judge. "The long list stretched out behind me for miles. I had to cast my eye back over it again and again to whittle it down."

■ Julianne Evans

MAKING QUITE A SCENE

The School of Music's Opera Scenes was held in October, giving students studying classical voice the chance to shine in a performance curated around them.

"This year's production focused on some of the standard operatic repertoire, especially highlighting Mozart, to allow the students to get to know this music from the inside," says Dr Gregory Camp who directed the 2022 production.

It was performed in the School of Music Theatre and "was set in an imaginary museum of opera whose exhibits come to life at night and get up to mischief with each other".

Last year's production was cancelled because of lockdowns, but this year's Opera Scenes combined with the University's inaugural aria competition, supported by Opera Factory, a local fringe opera company. There were two categories: undergraduate students had to choose an aria from the classic pedagogical collection of *Italian* Songs and Arias, while postgraduates were allowed to sing any aria. The undergraduate prize went to Antonia Brightwell for her performance of Christoph Gluck's O del mio dolce ardor. Antonia is a soprano in her final semester of a Bachelor of Music majoring in classical voice. Opera Scenes was the highlight of her year, she says, as Covid meant much of her degree was done online.

"The piece I sang was one I'd learnt with my teacher, Morag [Atchison] in my first year, so it was special to have it come up again in my final year."

Maeve Herd won the postgraduate prize with Giulietta's aria Oh, quante volte from Bellini's I Capuleti e i Montecchi. Maeve finished her Master of Music in classical performance (voice) this year and is now the acting director of music at the Cathedral of St Patrick and St Joseph in Auckland, and teaches singing at Rangitoto College, Baradene College and Holy Cross Catholic Seminary. The result was her first win in an aria competition. "I feel honoured to be the first-ever winner of this particular competition," she says. "It felt even more special that this inaugural competition was interpolated with the University



Opera Scenes performance. Opera Scenes is an important part of the University year for the classical singers - both as a major assessment and to foster community and camaraderie within the voice class."

Dr Ben Kubiak, a pianist and vocal coach at the University and the New Zealand Opera School, and a freelance singer and musical director, accompanied the arias on piano. He also led the musical preparation of the scenes alongside the School's collaborative piano and coaching staff, Robert Wiremu, Rachel Fuller and Lindy Tennent-Brown. This was the first time the voice department collaborated with the composition department for the production, with some scenes arranged for an 11-piece chamber orchestra. Composition students, under the supervision of Dr Chris Gendall, competed for a prize for the best orchestration, which was won by Anna Reyes, completing her BE(Hons)/BMus, for her work on the Barcarolle from Offenbach's Tales of Hoffmann.

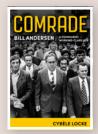
Singing with an orchestra provided new challenges for the singers, and also gave the instrumental performance students the chance to work on stage. "Opera Scenes is a unique opportunity for students and staff across disciplines (voice, composition, instrumental music, and piano) to collaborate and produce a high-level performance," says Gregory.

■ Margo White



BOOKS

Comrade: Bill Andersen - A Communist, **Working-Class Life**



Dr Cybèle Locke has a PhD in history from the University. Her biography of Bill Andersen, trade union leader, provides insights into the people and politics behind unionism in this country. Bill died in 2005 and the book draws on

more than 40 oral interviews, as well as Bill's unpublished autobiography, to explore what it meant to be a communist trade unionist.

Cybèle Locke, Bridget Williams Books, \$50



Towards a Grammar of Race in Aotearoa **New Zealand**

Contributors to this book include alumni Faisal Al-Asaad, Garrick Cooper, Tze Ming Mok, Nathan Rew and staff member Dr Patrick Thomsen. Each brings their

own experiences and insights to life in a racialised society, seeking to articulate and confront ideas of race in Aotearoa New Zealand. One of the book's editors, Anisha Sankar, is a doctoral candidate.

Eds Arcia Tecun, Lana Lopesi and Anisha Sankar, Bridget William Books, \$40

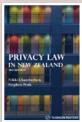


Quinoa, Chemistry and **Technology**

An academic book for food scientists, technologists and students with an interest in quinoa grain. Dr Fan Zhu, a senior lecturer in chemical sciences, says quinoa has been tested as a candidate

for food production in space via simulations of extreme conditions including radiation, low pressure and low temperatures. "The final germination rates of quinoa reached values of up to 90 percent regardless of the extra-planetary experimental conditions."

Fan Zhu, Academic Press, \$240 (Kindle \$180)



Privacy Law in **New Zealand**

The third edition of the book, by Nikki Chamberlain and Stephen Penk (Faculty of Law), examines New Zealand's privacy principles from

theoretical and practical perspectives. It also incorporates the new Privacy Act 2020.

Nikki Chamberlain and Stephen Penk, Thomson Reuters, \$189, out 23 December



WOMAN, LIFE FREEDOM

With a feminist urban social movement sweeping Iran in response to the murder of 22-year-old Mahsa (Zhina) Amini in September by the 'morality police', I have found myself disturbed by the unprecedented violence against the Iranian people.

I am also inspired by brave schoolgirls, amazed by revolutionary artworks and songs created every day, and disheartened by the prolonged silence of international organisations over the death of Mahsa. I think back to the global solidarity that rose within hours over the killing of George Floyd in the US, and feel frustrated by simplified and biased mainstream media narratives over Iran.

Widespread protests against the killing of Mahsa and, more widely, the mandatory hijab, have led to tragic bloodshed in Iran. As I write, 326 have been killed, including 43 children, in this latest uprising.

The time has come to dismantle the binary division between the oppressed traditional global-south and the free democratic modern global-north. Police brutality, the anti-democracy project of neoliberal economies and the rise of authoritarianism are shared problems in our globalised world.

The latest Iran protests, with the slogan of 'Woman, Life, Freedom', are now about demanding the right to live. They are non-violent movements and not an invitation for military intervention. They are not advocating for separatism, nor are they an attack on Islam or the hijab.

The state use of excessive and lethal force has for a long time brutally crushed dissidence in Iran. For example, the Green Movement of 2009 that arose in response to election fraud, was violently oppressed with at least 71 killed and 10,000 arrested. From 2017, there were protests by educated, young and largely unemployed middleclass poor in reaction to high prices. These led to at least 25 being killed and 3,700 arrested. In 2019, in protests following crippling fuel prices, up to 1,500 people, including children, were killed by Iran's security forces and 7,000 arrested.

By way of background, most of Iran's population

of 85 million is struggling, with inflation at 40 percent and unemployment at just under ten percent. GDP decreased 55 percent from 2012 to 2019, and 38 percent of the population now lives below the poverty line. Under US sanctions, Iran's currency continues to lose value, and the UN has announced the sanctions are harming Iranians' right to health. The livelihood of ordinary Iranian people is in a parlous state, thanks to corruption on the inside and sanctions from the outside.

According to US political scientist Professor Dursun Peksen, economic sanctions empower authoritarian regimes. The targeted regime hoards and controls the scarce resources, and also blocks opposition access to any funds. Sanctions also lead to the deterioration of human rights. The targeted country's isolation from global economies and political influences reduces the opportunity for international organisations to make the regime accountable for violence against its citizens. This can be a gift to authoritarian regimes to freely accelerate violence against their citizens.

Violence against the Iranian people, whether by the autocratic regime of Islamists or economic wars wrapped in the rhetoric of humanitarian interventions or sanctions, must be condemned.

Iranian women aren't strangers to struggle – they've been familiar with it since the roots of modern Iranian feminism were firmly planted during the constitutional revolution of 1905-1911. A notable event was the emergence of mezzosoprano Ghamar-ol-Molouk Vaziri (1905–1959) who became the first woman to sing highly charged political songs in public without hijab.

Today's movement is built on the courage of the women who have gone before, but also on the unimaginable determination of Iranian women – and men – who are redefining what non-violent democratic resistance means. People like the Iranian women's basketball team who removed their hijab and posted the image on Instagram recently using the Woman, Life, Freedom slogan. And Elaheh Mohammadi and Niloofar Hamedi, the two journalists who first published the photo of Mahsa on the hospital bed, which played a significant role in publicising her murder. But arrested, imprisoned and accused of being spies of Western and Zionist intelligence agencies,

they could be sentenced to death. Journalist and activist Noushin Ahmadi Khorasani, founder of the 'One Million Signatures Campaign' repealing discriminatory laws against women, was sent to prison for three years in 2007 accused of 'threatening national security'.

Bahareh Hedayat, a women's rights activist, was arrested in 2019 and is still in prison over a Tweet announcing she would attend the mourning for the victims of the Flight 752. Nasrin Sotoudeh, a human rights lawyer, represented various imprisoned political and human right activists including Iranian Nobel Peace Prize Laureate Shirin Ebadi. Nasrin was arrested several times before being charged with espionage in 2018 and sentenced to 38 years in prison. This year, Iranian rock climber Elnaz Rekabi broke the mandatory hijab laws of the Islamic regime by competing without a headscarf in South Korea, and is now under home arrest in Iran.

These heroines prompt me to ponder my role in making life possible for the many who are stripped of all rights, from the right to have access to medicine or the internet; to the right to use public spaces without being shot dead. While practising as an architect, I participated in the 2009 Green Movement, a revolutionary event that prompted me to return to academia to study the nexus between urban space and social movement. What I can say is that a collective movement within a public space in Iran is generally controlled with a high likelihood of oppression, because public spaces are policed. Praise for social movements or admiration of the brave dissidents often ignores the high price being paid on urban streets. The streets may be the only space left for Iranian people to express discontent, but their lives are not, and should never be, rendered disposable.

Standing in solidarity with Iranian people means understanding their fight not as an inexplicable event within the boundaries of a country, but recognising the body politic is alive and universal. This body should assert the right to live and for people to determine their own destiny, beyond any autocratic regime or humanitarian interventions.

■ Dr Farzaneh Haghighi is a senior lecturer at the School of Architecture and Planning.

The views in this article are personal opinion and are not necessarily those of the University of Auckland.