

Uni NEWS

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March 2022



KAREN WALDIE: UNDERSTANDING NEURODIVERSITY

Why we need to learn more about
ADHD, dyslexia and autism

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TACKLING AN ARMY

Doctoral student Hossein Jahedi has a personal motivation for undertaking pancreatic cancer research

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BLINK OF AN EYE

With no clear guidelines on safe levels of screen time, Alex Müntz warns there are risks to our vision and general health

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THE POWER OF RADIO

When Carlo Fiorentino heard Professor Thor Besier being interviewed, it inspired a generous bequest

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Just a few of the University of Auckland staff and student achievements in the media recently. Email: uninews@auckland.ac.nz



Shane Cronin

VOLCANIC EXPERTISE

Professor Shane Cronin (Science) appeared in numerous media all around the world to share his expertise following the January eruption of Hunga Tonga-Hunga Ha'apai, the submarine volcano in Tonga. His article in *The Conversation* was the best-read for some time, and Shane talked to more than 20 media outlets including the BBC, *Washington Post*, ABC, Chinese TV, *Japan Times*, Al Jazeera and CNN, reaching hundreds of millions.

Links include: tinyurl.com/shane-BBC
tinyurl.com/shane-Al-Jazeera



Saeid Baroutian

SMART WASTE DESTRUCTION

A group of scientists, led by Dr Yvonne Anderson (FMHS) and Associate Professor Saeid Baroutian (Engineering), have found a way to disinfect clinical PPE for potential reuse or safe destruction. The disinfection takes place in a mobile shipping container that can be sent to places experiencing PPE shortages. Saeid told TVNZ that PPE that can't be safely reused can be broken down into water and vinegar, using a method being developed in the Faculty of Engineering. The PPE is destroyed using hot pressurised water and compressed air making it "truly green and clean," says Saeid. It's a game-changing solution to stop massive dumping of Covid-related waste into landfills and oceans.

Link: tinyurl.com/TVNZ-PPE

DANGERS OF CONVERSION THERAPY

As the Conversion Practices Prohibition Legislation Bill passed its final reading, Dr John Fenaughty, a senior lecturer in Counselling, Human Services and Social Work (EDSW), said in a *Stuff* interview that Rainbow youth whose parents suggest they get conversion therapy for being queer or transgender are twice as likely to consider suicide and self harm. John presented the findings of a survey of 4,800 young Rainbow people to the select committee on the bill.

Link: tinyurl.com/Stuff-Fenaughty



John Fenaughty

MARAE FILLS A HEALTH NEED

Associate Professor Matire Harwood (FMHS) talked to RNZ's *Nine to Noon* about Papakura Marae Health Centre's mahi during the 2021 Delta outbreak. Matire, who is also a GP, explained how the centre became the default provider of medical and welfare care for self-isolating patients, because the Ministry of Health was failing to provide adequate care.

Link: tinyurl.com/RNZ-matire



Matire Harwood

MANDATE MATHS NOT SIMPLE

Vaccinologist Associate Professor Helen Petousis-Harris (FMHS) criticised the vaccination-rate workings of ACT leader David Seymour in his call to end mandates. She told the *Otago Daily Times*: "It is very easy for armchair epidemiologists to do some back-of-the-envelope calculations, we all do it. However, you can't make policy on it and calculating vaccine effectiveness properly is actually rather complicated and requires a lot more data than you can get from any website."

Link: tinyurl.com/ODT-HPHarris

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STAY IN THE LOOP

Your staff email newsletter *Whaimōhio The Loop* comes out every fortnight, with the next edition 16 March (copy due 11 March). If you have content or achievements to share, email: ruchita.bharbhari@auckland.ac.nz. Details of other deadlines are on the staff intranet under News, Events and Notices, *The Loop*.

EDITOR: Denise Montgomery

denise.montgomery@auckland.ac.nz

PHOTOGRAPHY: Billy Wong, Elise Manahan

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VISION: BLINK OR YOU'LL MISS IT

Ophthalmology researcher Alex Müntz says guidelines are needed for safe screen use, especially in education.

When research published by Alex Müntz at the School of Ophthalmology revealed that young people using screens for long hours were showing signs of an eye condition usually seen in the elderly, alarm bells rang.

"But we should be wary of adding to the anxiety we're already having in this pandemic," says Alex. "It's more important to think of our daily habits long term, not necessarily now while we need to be online for work and learning."

The research that attracted attention came from a study of more than 450 young attendees at a 2019 Auckland gaming convention. It showed that, on average, they had around 43 hours of screentime a week across all devices, which aligns with OECD data on children in New Zealand.

Research has consistently shown that extended screen use is linked to dry eye disease in adults, but it's also becoming common in younger people.

"Some of our older patients have such bad dry eye they can't open their eyes for several hours or leave the house, which can lead to depression," says Alex. "It's an invisible condition that's like sandpaper on your eyes and can also affect vision. We don't want children going down that path."

He says the problem with handheld devices is that the content is interactive, and people scroll and engage. "That affects blinking because when you're focusing up close, you blink less."

Dry eye is complex and other factors play a part, including water intake, diet, sleep, alcohol and caffeine. The non-modifiable factors are age, gender and ethnicity. "Your risk increases if you are Asian, female or post-menopause," says Alex. "Preliminary work shows Māori may also be at higher risk. We're investigating if that's to do with the anatomy of the eye or other factors."

In terms of screen use, there are ways to ameliorate risk, such as do less online. International guidelines say children under two shouldn't have any close screentime and from around two, up to an hour a day. While there are apps for babies, they're not recommended or needed.

"If you've had a tough day or you're on an aeroplane, there's no harm in a child using a screen for a limited time every now and then. The issue is with daily unlimited use from an early age."

What causes dry eye in people using screens all day is that they don't blink enough. However, forcing yourself to blink can be an effective remedy.



"We have a limited understanding of the risks involved with high screen use in children."

– Dr Alex Müntz, School of Ophthalmology

Alex and his team have undertaken studies that get people with dry eye to do blinking exercises.

"Every 20 minutes you do this sequence: gently shut your eyes, open, shut, squeeze and open. It's a bit of an investment, but after a month of doing it, people reported much better symptoms and we saw better clinical signs."

He says artificial tears can help, but shouldn't be the first line of defence. "It won't circumvent the fact you're doing 16 hours of screen time each day. You're better off training yourself to blink more, and reduce screen use. If needed, eye drops must be good quality and non-preserved. Get advice from an optometrist or someone specialising in dry eye."

Alex says voices in neonatal care have singled out screentime from an early age as the biggest threat to neonatal development in New Zealand.

"We have among the highest digital screen use in education in the world. Yet we have a limited understanding of the risks involved with high screen use in children and how it affects many areas of health, not just eyes. Research is now emerging, so we need to develop and implement guidelines for safe screen use in a child's early years."

Heavy screen use isn't just associated with dry eye, but also myopia (short-sightedness).

"Screens, especially smartphones, mean a close working distance for many hours a day and a lack of natural sunlight. This drives the growth of the eye, which results in myopia. Excessive growth leads to high myopia, which dramatically increases the risk of blinding diseases. Wearing glasses does not solve or prevent that," says Alex.

"While some schools in New Zealand are going full digital immersion, in parts of Asia, where up to 99 percent of teenagers have myopia, screen use is being reduced in the face of emerging evidence."

Parts of the US and Australia have already started adopting policies to reduce screen use in schools – and don't allow phones at all.

Alex realises the world has changed and we need to bear that in mind. "But there are tablet holders for cots now! What happens if a young child spends ten hours a day on screen?"

Alex is part of a multidisciplinary group of clinicians, scientists and educators collaborating

to support the development of evidence-based guidelines relating to screen use in children. He says teachers and caregivers need New Zealand information based on research.

"Colleagues in clinics are seeing children who have been gaming for up to 16 hours a day – forgoing sleep, food and school. Some stay up all night to engage with the North American market because they see becoming a professional gamer as a viable career option."

As well as eye issues, some develop serious health problems relating to posture and weight, and mental health due to social isolation.

"Covid-19 has exacerbated screen use in children and youth with the adoption of online learning, so it's time for the potential health impacts to be taken seriously and for pragmatic health guidelines to be made available in New Zealand."

He says adults do have alternatives. "You can pick up a book, or phone rather than Zoom."

Alex makes a conscious effort to be off-screen as much as he can, even at work, and pen and paper remain trusted tools. He loves reading actual books and playing in the real world, be it the guitar, cycling, skateboarding or on his new motorbike.

Born and raised in Transylvania in Romania, Alex has been here for four years. At 18, he went to Germany for his optometry training. He then studied in Canada for seven years, completing his PhD in the university town of Waterloo.

His toddler son is yet to meet his overseas family. But if they do make the long plane trip, Alex says his son will certainly be allowed lots of screentime.

"I do have one emergency app when there's no other way. It's uncanny, you hand over the iPad and it's quiet. When you take it away all hell breaks loose, but you may be ready to deal with it by then!"

He says information is power when it comes to safe amounts of screentime.

"As a society, I'm hoping we are at the peak of a phase where we're just enamoured with technology and can't see the alternatives. We will eventually find more awareness and the balance that's needed. Because you can't be in bed at 3am scrolling through TikTok. That's just not viable."

■ Denise Montgomery

BEQUEST FUNDS NEW ABI SCHOLARSHIP

The legacy of a remarkable couple with ‘uncommon courage’ will help Professor Thor Besier and other researchers improve the lives of those with movement disorders.

Carlo Fiorentino and Julie Thornley, who were both born with cerebral palsy, have left their estate worth \$1 million to the Auckland Bioengineering Institute (ABI).

This is the first bequest made to the ABI in its 20 years. It was made after Carlo heard Professor Thor Besier interviewed on RNZ’s *Nine to Noon* about the ABI team’s research into the musculoskeletal system and disorders that affect it. He asked to meet Thor, which he did in 2020.

“It was such a privilege to meet and spend time with Carlo,” says Thor. “His attitude towards living a full life was inspirational. He particularly enjoyed the enthusiasm of the early career researchers and postgraduate students who are wanting to make a difference for people like himself.”

Cerebral palsy is caused by damage to parts of the brain before, during and after childbirth, and it affects a person’s ability to control movement, balance and posture. The lesions that cause the disease are static, but the musculoskeletal systems of those with the condition worsen over time and impairs their ability to walk.

Using imaging techniques and computational modelling, Thor and the team aim to better understand how and why this happens. This will help them identify what interventions could be made to lessen or prevent that progression.

Jane Carrigan was Carlo and Julie’s friend and disability advocate for more than a decade and, recently, the executor of their will.

“Carlo and Julie lived uncommon lives, with uncommon courage,” she says. “They did so with dignity and joy, notwithstanding, in their later years, their almost complete dependence on third parties.”

Carlo was born in Nelson in 1949, and Julie in Wellington in 1953. As young children they both spent time at Queen Elizabeth Hospital in a specialist cerebral palsy unit at Rotorua, although they didn’t meet till later at the Pukeroa Home for disabled young people in Hawke’s Bay, when Carlo was 18 and Julie was 14.



Professor Thor Besier was blown away by the gift.

“Carlo’s attitude towards living a full life was inspirational. He particularly enjoyed the enthusiasm of the early career researchers and postgraduate students who want to make a difference for people such as himself.”

– Professor Thor Besier, the Auckland Bioengineering Institute

However, as Pukeroa was for young people, there came a time when they had to leave.

“At that time, it was common for young people with a disability to end up in geriatric hospitals or aged care,” says Jane. But thanks to the efforts of a group of women in the 1960s, the Laura Ferguson Trust was set up to offer a much better alternative and opened in Auckland in 1970.

“It was very competitive to get into the Trust, where living as independently as possible was the goal,” she says.

“Carlo spent several months at the Palmerston North Hospital rehabilitation unit to get himself sufficiently independent to qualify and was accepted in 1972. It was three more years before Julie was accepted.”

Carlo and Julie stayed at the Laura Ferguson Trust until the late 1980s when they purchased and moved into their own home near the Trust. Carlo worked for a construction company as a calculator operator and Julie as a sub-editor on a

local newspaper. They married in 2012.

“As they grew older, their cerebral palsy took its toll,” says Jane. “They both became wheelchair bound, and later needed virtually full-time care and support, but they still retained a great independence – they would often be off on their mobility scooters on their own or together, or in the company of staff.”

Julie passed away in 2019 and Carlo in September 2021. The scholarship comes from the sale of their home and is a legacy that will be used to establish and support the Carlo and Julie Fiorentino PhD Scholarship in Movement Disorder at the ABI.

“We are extremely humbled by Carlo’s generosity,” says Thor.

“The legacy he and Julie left will continue to support our research efforts to improve the lives of people with cerebral palsy and others with neurological disorders that affect mobility.”

■ Margo White



Carlo and Julie met as teens and married in 2012. Their legacy is the Carlo and Julie Fiorentino PhD Scholarship in Movement Disorder.

TOP CANCER AWARD

Cristin Print, professor in molecular medicine and pathology in the Faculty of Medical and Health Sciences, has won a prestigious award for cancer research.

The New Zealand Society of Oncology (NZSO) presents the prestigious Translational Research Award annually to “an eminent New Zealand investigator who has made outstanding contributions to translational cancer research”. The Society fosters translational research, which is where researchers and clinicians generate scientific findings together and translate them into clinical practice.

Each year, a panel of NZSO judges selects the award recipient following a competitive nomination process.

Cris graduated in Medicine and Surgery from the University in 1989 and began research while working as a house surgeon in Dunedin. A PhD at the University of Auckland led to a four-year postdoctoral fellowship in the Walter and Eliza Hall Institute in Melbourne, then six years at Cambridge University in the UK, where he was a Fellow of St Edmund’s College. It was there he developed a deep interest in the fields of



Professor Cristin Print.
Photo: Billy Wong

genomics and bioinformatics and he co-founded an international bioinformatics biotechnology company that was listed on the Tokyo stock exchange.

In 2005, he returned to Auckland where he has co-led a large transdisciplinary research team of clinicians, cell biologists and data scientists. They use genomics, systems biology and bioinformatics to better understand human disease, especially cancer.

Among many other roles, Cris leads the University’s Genomics into Medicine strategic research initiative, is bioinformatics director of

Grafton Clinical Genomics, is deputy chair of the NZ Institute of Environmental Science and Research (ESR), and is a principal investigator in the Healthier Lives National Science Challenge. In the Maurice Wilkins Centre of Research Excellence, he co-leads the centre’s cancer theme with Associate Professor Adam Patterson.

Over the years, the Society has acknowledged several other distinguished cancer scientists and clinicians from the University, including emeritus professors Bruce Baguley and Bill Denny, KNZM.

■ Jodi Yeats

STUDENTS’ SUSTAINABLE IDEAS

University of Auckland students’ sustainability projects were shared with more than 300 educators around the world at a United Nations (UN) workshop recently.

In one, students proposed gamifying litter collection with an app that people could use to scan rubbish and earn points. In another, a ‘comeback container scheme’ would cut waste to landfill generated on campus by lending food containers to students.

Professor Niki Harré from the School of Psychology in the Faculty of Science, showed videos of the projects at an online UN Academic Impact (UNAI) workshop called Sustainable Development Goals (SDGs) in College Curricula: Mainstreaming & Mapping. UNAI is an initiative for tertiary institutions to help achieve the SDGs, which include environmental sustainability, addressing poverty and protecting human rights.

The student projects were part of the University’s three Sustain courses, which teach what sustainability means, its underpinning values, and the role individuals and organisations play in creating solutions at the local and international level. The courses are

available to arts and science students, with the first-year course available to all students as a General Education option.

A curriculum review now underway at the University aims to see all students exposed to sustainability and has led to proposals including a Sustainability Centre and a potential first-year course. In 2021, the University retained a top 10 place (9=) in the international Times Higher Education (THE) University Impact Rankings which measure how universities are performing against the SDGs.



Students working on sustainability projects.

RON JONES EARNS HONOUR

Emeritus Professor Ron Jones has been honoured for helping to expose one of New Zealand’s most notorious medical scandals, known as the Unfortunate Experiment.

Ron, 82, a former clinical professor of obstetrics and gynaecology, is the first New Zealander to receive the Scientific Freedom and Responsibility Award from the American Association for the Advancement of Science. This is a rare honour that recognises his lifetime of defending patient rights and scientific integrity. He was one of the doctors who published a paper alerting the medical world to the 1960s and 70s National Women’s Hospital practice of not treating women with serious cervical abnormalities, leading to the 1988 inquiry.

Another emeritus professor, Ron Paterson, former Health and Disability Commissioner, says, “Ron Jones was a brave whistleblower during a dark chapter in the history of National Women’s Hospital. He spoke up for the women at the heart of ‘the unfortunate experiment’. The award is just recognition of Ron’s courage and persistent care for the truth in the face of denial and denigration.”

Read more: tinyurl.com/Ron-Jones-Award

KAREN WALDIE: WHY NEURODIVERSITY IS MORE THAN A BUZZWORD

Professor Karen Waldie wants educators to be armed with more knowledge to improve the outcomes for neurodiverse learners and prevent them ending up with mental health issues in later life.

Having a rigid measure of education that focuses on numeracy and literacy and requires constant attention to detail doesn't necessarily work for children whose minds operate differently, says Professor Karen Waldie from the School of Psychology.

Not only that, but these neurodiverse children are more at risk of developing mental health challenges later in life. Karen says educators need to be equipped now to give these learners the best chance.

"Our education system requires sustained attention and good social skills but these children can't always conform to that," she says.

"Classrooms might have three or four kids who are neurodiverse, yet teachers still aren't being trained for these scenarios. Teachers are stressed, parents are stressed, the children are certainly stressed. The system needs reworking."

The last time she checked with the Ministry of Education, there was one course about managing neurodiversity in the classroom that's part of teacher training, but it's not compulsory.

Karen notes that reforms to the Western education system, over the past 100 or even 50 years, put heavy emphasis on a syllabus deemed to create the best opportunity for educational success.

"In the industrial age, kids were working on farms, in shops, whatever, but with the reforms to our education system internationally, of course that's changed. But you can't expect our brains to have adapted to all these changes in 100 years. Sitting still in a chair for hours, keeping track of time and following instructions can all be extremely challenging for some kids. It's the parents who feel the fall-out, with outbursts and meltdowns at home a common result.

"Diversity is good – it's what keeps our species going and being successful. But trying to cram all that variation and diversity into one little model in the classroom can't work."

Karen has many prongs to her research, but a key focus for the past 23 years has been Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorder (ASD), dyslexia and dyscalculia. She is particularly interested in understanding co-morbidity – why these conditions coexist so frequently. There is also a higher incidence of mental health problems in people who are neurodiverse.

"Our studies have found there's an increased likelihood that neurodiverse kids will develop a mental health concern."

She has published around 150 peer-reviewed journal articles and book chapters, including more than two dozen papers with her husband Professor Ian Kirk, who is also her colleague in

– an earlier breakthrough also involved brain scans. When she arrived in New Zealand from Canada 20 years ago, she was surprised to find the Ministry of Education didn't include anything in its teacher training on neurodiversity. Nor did it recognise dyslexia as a neurodevelopmental condition, despite it being acknowledged as one

"Teachers need to know more about the typical brain, the atypical brain and neurodiversity. The Ministry needs to include more compulsory classes because by teaching teachers, you're also helping the parents."

– Professor Karen Waldie, School of Psychology, Faculty of Science

the School of Psychology. He is from Dunedin, but the pair met in Canada when he was doing his postdoctoral studies and she was starting her PhD. When he won a research grant in 1998 at the University of Otago, she took a role on the country's longest-running longitudinal study, the Dunedin Study, before moving to Auckland in 2001. She remains an associate investigator for that study.

What Karen hopes we can eventually understand are the underlying causes of neurodevelopmental problems such as dyslexia, ADHD and autism. To do that requires a combination of neuroimaging research, genetic research and life-course data from multiple national longitudinal studies, including our largest, Growing Up in New Zealand (GUINZ). She has been a named investigator on GUINZ since its inception and is researching the predictors of child depression in Aotearoa New Zealand, for a Royal Society Marsden study titled, 'Polygenic and environmental markers of mental health status in New Zealand children'.

This involves looking at genes and environmental factors to see how they may affect child depression and anxiety symptoms. The most recent published study pointed to a number of prenatal factors that contribute to poor mental health in children – among them, the mother's stress, smoking, being overweight and, somewhat surprisingly, the use of paracetamol (see auckland.ac.nz/karen-waldie-paracetamol).

Karen is no stranger to making discoveries that change the way the education system works

overseas. "They told me that, 'no, they didn't have dyslexia here'."

She set out to prove that wasn't so.

Partly to blame for this attitude was the early intervention work done by pioneering educational researcher Marie Clay on reading recovery. Though it is effective for many children, Karen says research shows it is not the best path for children with dyslexia.

"Because of the lack of government funding for my dyslexia research, I was lucky enough to get Faculty of Science and philanthropic funding. I was able to show brain-based differences between neurotypicals and individuals with dyslexia, and this helped the Ministry of Education to formally recognise dyslexia in 2007."

But she says more than acknowledgement is needed. "Teachers need to know more about the typical brain, the atypical brain and neurodiversity. The Ministry needs to include more compulsory classes, because by teaching teachers, you're also helping the parents."

She says better knowledge would assist parents in helping their neurodiverse children navigate modern society.

"But New Zealand parents have few places to turn to for assessment and treatment to help. With co-morbidity the norm, we are just doing research to understand why that is, and what early interventions could do to help."

When Karen was doing her PhD, she worked in a non-profit government agency, the Calgary Learning Centre, where parents could bring their children for assessment.



Professor Karen Waldie says some people with ADHD aren't diagnosed until they get to university.

Photo: Elise Manahan

“They could be assessed and then receive individual or group therapy. It didn't even have to be a label; it could just be that there were some indications of some potential difficulties down the line. We don't have this here, even now.

“Many kids aren't even identified until they get to university where we have the ability to assess them and they'll get a reader/writer, extra time or whatever assistance is needed. But the number of adult ADHD cases has gone through the roof because it's only relatively recently they've been able to be assessed, unless parents pay privately.

“These children have navigated their school years because most of them are highly intelligent, but at university the demands on their organisational skills and cognitive processing can be too much.”

She says in recent years mothers are also being diagnosed.

“For a parent with ADHD, having to organise multiple children and their own life creates a real problem with time. In the old days they may have had undiagnosed ADHD, but they didn't have to work as well so there wasn't as much pressure. Now, it's sometimes being picked up when a parent takes a child to be assessed.

“We just have to look at the family tree for parents and siblings and grandparents and there's a good chance that there'll be a record of a family member who also struggled.”

“Our education system requires sustained attention and good social skills but these children can't always conform to that.”

– Professor Karen Waldie, School of Psychology

Karen knows at a personal level the power of genetics. She is adopted and says when she was growing up with her two siblings, they were all similar in their interests and outlook, but their differences became more stark over the years when genetics shone through.

Her biological parents were high-school sweethearts who had her during their first year at university. Her biological mother, whom she met later in life, is a microbiologist. Her adoptive mum has passed away, and in 2020 Karen dedicated her inaugural lecture to her – describing her as “her rock”.

Karen has an ongoing fascination with the cognitive and biological markers of conditions like ADHD. At the moment she's involved in a new ADHD study using functional Magnetic Resonance Imagery (fMRI). The difference between an MRI and an fMRI is that an MRI looks at the structure of the brain – for example, it can reveal if you have a tumour or have had a stroke. The fMRI shows the activity in a brain when people are performing mental tasks. The University of Auckland's CAMRI, the Centre for Advanced MRI, was the first place

in New Zealand to get an fMRI scanner, in 2006. But now, this interdisciplinary work is being carried out using “new impressive brain-imaging facilities” at Mātai in Gisborne with the help of physicist Associate Professor Samantha Holdsworth, Associate Professor Justin Fernandez from Engineering and two doctoral students. “We have fascinating preliminary research showing that while neurotypical people show specific areas of brain activity when at rest versus while performing a task, neurodiverse people don't show this uncoupling. Interestingly, their frontal lobes normalise when they fidget.

“A lot of people don't realise the amount of variation there is in the human brain. Brains are different. And it's not that they're abnormal although we are good at telling our kids they have a problem, right? But 200 years ago, they wouldn't have, because there was little universal education or literacy.”

■ Denise Montgomery

Watch Karen Waldie's inaugural lecture in November 2020 through this Big Q page: tinyurl.com/Waldie-lecture



Architect Julie Stout.
Photo: Rebekah Robinson

AND THE GOLD GOES TO ...

Julie Stout wins the Gold Medal in architecture.

Architect, activist, ambassador and Professional Teaching Fellow in the School of Architecture and Planning, Julie Stout has been named Te Kāhui Whaihanga New Zealand Institute of Architects (NZIA) 2021 Gold Medallist.

The award is the highest individual honour for architecture in Aotearoa New Zealand, and Julie is the first woman to receive it. Since 1999, the NZIA has honoured architects who consistently achieve the highest standards for – and with – their clients, and who make an outstanding contribution to the advancement of architecture in Aotearoa. The Gold Medal recognises Julie’s high-quality body of built work, her contribution to the future of the profession through teaching, and her tireless advocacy for a better urban environment in Tāmaki Makaurau.

“I am deeply honoured that the profession, which has given me so much, has recognised my mahi and my career in this way,” says Julie.

“Architecture has influenced my life, my loves, my work and my hopes for future generations. I am sure that in the near future, we will look back and ask, ‘Why did it take so long for a woman to win?’. By then, being a woman architect winning the Gold Medal won’t be unusual.”

NZIA president Judi Keith-Brown says Julie is a “unique and worthy” recipient of the accolade.

“I thought it was very telling that when I rang her to say she was the 2021 Gold Medal recipient late on a Friday afternoon, she was in her office working with two masters students.

“As a practitioner, she has always been true to herself, while willing to share her time and knowledge with others. Her practice, education and advocacy have played a critical role in uplifting the profession of architecture.

“As well, her brave and relentless advocacy for a better urban environment is a generous gift to the people of Tāmaki Makaurau.”

The medal also recognises Julie’s contribution in education. A role model and mentor to many, she is a Professional Teaching Fellow at the School of Architecture and Planning, and has served as adjunct professor at Te Whare Wānanga o Wairaka Unitec School of Architecture.

Professor of Architecture Deidre Brown, Deputy Dean of the Faculty of Creative Arts and Industries, says the honour is fantastic news.

“Julie has made a tremendous contribution over many decades and shaped our city and the way we engage with urban environments. She was an inspiration when I was a student, a role model, and is now doing the same for a new generation.”

Julie’s professional career spans close to 40 years, much of it in collaboration with her partner in life and practice, 2005 Gold Medal recipient David Mitchell. This includes Auckland’s NEW Gallery (1995) and Te Uru Waitākere Contemporary Gallery (2014,) as well as school buildings, urban design projects and private residences. She was also a member of the creative team behind New Zealand’s 2014 exhibition at the Venice Architecture Biennale.

Since the early 2000s, she has been a staunch advocate for improving Auckland’s urban environment and helped instigate the Mayoral Task Force on Urban Design in 2005. As a key driver of a public campaign to halt the expansion of Auckland’s port in the Waitematā Harbour, Stout went on to front – and win – a 2015 legal challenge that stopped the port company’s plans.

Watch the video about Julie at:
tinyurl.com/Julie-Stout-video

FIGHTING AN ARMY

The loss of his grandmother to pancreatic cancer fuels Hossein Jahedi’s drive to help win the war against this aggressive, challenging disease.

Over the past year, Hossein Jahedi has become more determined than ever to add to the pool of knowledge about the components, causes and potential cures for pancreatic cancer.

Hossein is a doctoral candidate in the Faculty of Medical and Health Sciences, whose research focuses on the role of hyaluronic acid in the progression of pancreatic cancer.

“In people with pancreatic cancer, hyaluronic acid absorbs water from the blood vessels surrounding the tumour, which leads to the collapse of those vessels. When they collapse, it prevents chemotherapies getting in.

“Scientists are figuring out how we can deplete or break down the hyaluronic acid in the tumour, so chemotherapies can do their job.”

They have also found that hyaluronic acid attaches to certain receptors in pancreatic cancer cells, making the cancer more aggressive.

“There was a drug that went on to phase-three clinical trials that depleted the hyaluronic acid in pancreatic cancer tumours,” says Hossein. “But it was discontinued because of the combined side effects of the new drug and the chemotherapies. So, it’s about finding a drug that can do that job with minimal side effects.”

For Hossein, the research is personal as well as professional.

In February 2020, his grandmother was diagnosed with pancreatic cancer. She was staying in Brisbane, with Hossein’s Iranian-born parents. When lockdown came in March, it meant Hossein, who had been intending to visit his grandmother in Brisbane, couldn’t. Sadly, she passed away a few months later.

“It happened very quickly so it was tough, and the only blessing is she was with my parents. She is always at the back of my mind and fuelling my drive to push through with this research.”

Hossein was born in Iran, but his family moved to Malaysia when he was 14. That was where he went to university and, for his honours degree, began his research on pancreatic cancer.

“I was interested in continuing and saw a scholarship funded by the Hugo Charitable Trust for a researcher in pancreatic cancer at the University of Auckland.

"I applied and that's how I came to New Zealand. It has been great, but it was a challenge during lockdowns. You plan and conduct experiments that take week or months, and they get disrupted. Then re-setting up these experiments once out of lockdown takes time too. My work involves using pancreatic cancer cells in Petri dishes. One good thing is that I can store them in the freezer when I'm not working with them."

Cells haven't been the only thing on ice during lockdown.

Hossein is a Latin American dancer who has competed in national competitions so has had to keep fit by running around Mission Bay and, when in lockdown, dancing by himself.

"There was a bit of dancing alone in the living room," he laughs. "It's a good thing the windows act as mirrors at night! But I had to keep match-fit for when it started again. During competition, you have to perform a minute and a half for each of five dances – about seven very energetic minutes. You must be fit enough to go through that with high energy and also make it entertaining. You don't want to be huffing and puffing in the middle of the dance floor!"

Hossein began Latin American dancing – the likes of rumba, cha cha cha and jive – in Malaysia when he was around 17. It began by doing a few classes and eventually turned into something more serious. "I just like doing things properly," he says, adding that he thinks everyone should try Latin dance once in their lives.

His favourite dance style, of those most of us only know from *Dancing with the Stars*, is the cha cha cha.

"It's a cheeky dance, quite flirtatious."

In late 2021, it was more like flirting with himself, however 2022 is looking more hopeful on the dance front provided Omicron settles down.

In the meantime, he has plenty to get on with. Through Auckland's extended lockdowns, Hossein worked on his thesis and also on writing a critical summary review of what other people have explored in his field of research.

"There's a lot of new information that's come up about why pancreatic cancer is so different from other types of cancer and why it's hard to treat. Now it's a matter of figuring out how to tackle it.

"If you look at the rate at which people have died from different malignancies over the past 20 years, there has been no improvement for pancreatic cancer. Breast cancer and lung cancer are more common, but in the past few years their deaths have been going down, but pancreatic cancer deaths have increased slightly.

"By 2030, it's estimated that pancreatic cancer will be the second most-common cause of cancer-related mortality in the world, especially in developed countries."



Hossein Jahedi's research has a personal motivation.

Photo: Billy Wong

"By 2030, it's estimated that pancreatic cancer will be the second most-common cause of cancer-related mortality in the world."

– Hossein Jahedi, doctoral candidate, Faculty of Medical and Health Sciences

Part of the improvement in survival for other cancers is awareness and developments in treatment.

"Naturally, more funding has been going to find cures for common cancers – like breast, lung, or even prostate cancer. But looking at the data, more funding is needed for pancreatic cancer research to help save lives. Rather than coming to that conclusion in five or ten years, it's better to think about it now, when there is a clear trend."

The pancreas sits behind the stomach and has a dual function. It is involved in the body's digestive processes and also makes hormones, for example, insulin needed to regulate sugar levels. The reason pancreatic cancer is hard to detect is because the pancreas is hidden which makes imaging difficult. Its symptoms are non-specific and, just as the tumour's collapsed blood vessels make it difficult for chemotherapy to get in, they also make it hard for pancreatic cancer markers to get out into the bloodstream.

"Imaging doesn't work so well because of its anatomical position," explains Hossein. "It's a slimy sort of thing in the middle of all the organs."

Research shows that high levels of hyaluronic acid in the blood could be a potential marker.

"If we can see it early enough, it may be a good detection tool. We need more diagnostic research to screen for things that come up in the blood early because symptoms of pancreatic cancer can be mistaken for other gastrointestinal problems."

Hossein is working on understanding what's known as the stroma and stromal-targeting therapeutics in pancreatic cancer.

"Let me give you a medieval analogy for the stroma. Imagine pancreatic cancer as an army. Strong armies need a strong castle – they need to be based somewhere before they can go to other places. The stroma is the castle. It is made of bricks, structures, and gates that hold the army – or in this case the tumour. This castle prevents intruders from getting in – i.e., the drugs, the chemotherapy.

"What we are doing with my project is figuring out the function of hyaluronic acid within the castle and how it prevents drugs entering. Hyaluronic acid also makes the cancer army more aggressive, so has a double function.

"There has been a lot of attention on drugs that target that stroma. Some of them have failed, some are ongoing, but the fact that there are more, means, hopefully, there'll be a point where we can get drugs that target that stroma 'castle' successfully.

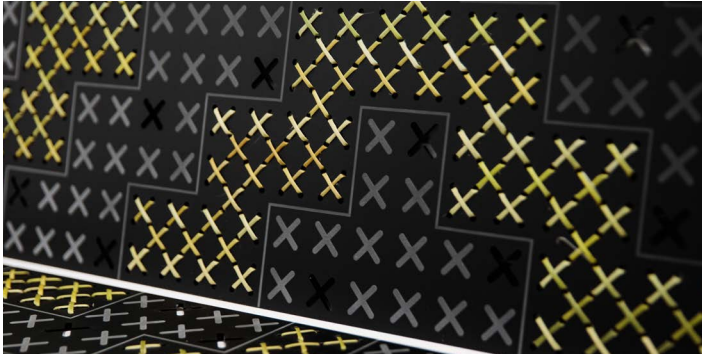
"We need to gain a better idea of how hyaluronic acid exerts its effect, because that will help us pick targets for drug development."

And then we have a chance of winning the war.

■ Denise Montgomery

Interested in Latin American dance classes at the University? See: tinyurl.com/AKUni-Dance or contact Hossein Jahedi

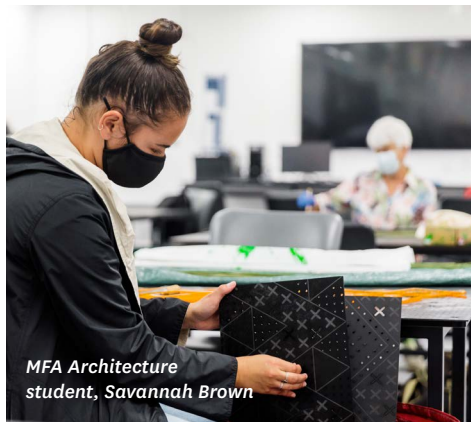
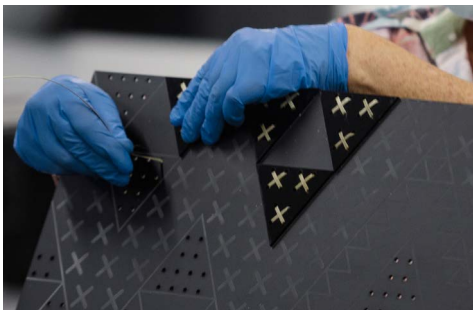
ART & CULTURE



Fine Arts student,
Bree London



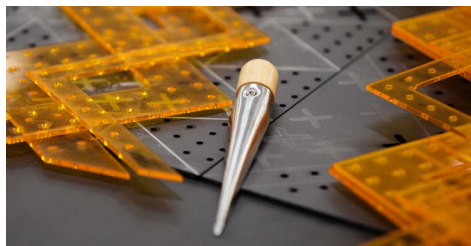
Installation artist, Dr Maureen Lander



MFA Architecture
student, Savannah Brown



Elam MFA student,
Atareta Black



WEAVING MAGIC

A renowned Māori artist has been working alongside students from several faculties at her alma mater to create an intricate installation artwork in the Engineering building.

Over the years, the University of Auckland Art Collection has purchased and commissioned many artworks for our campuses, to create vibrant cultural spaces for our University community, but a current artwork commission is also providing hands-on experience for our students.

Pou Iho is a project that has resulted in an

BOOKS

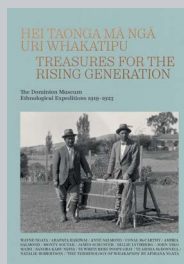


House & Contents

Poetry and paintings by acclaimed poet and Arts alumnus Gregory O'Brien. *House & Contents* is a meditation on earthquakes and uncertainties,

parents and hats.

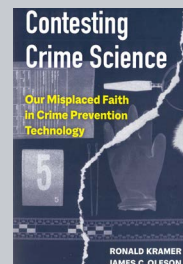
Gregory O'Brien, Auckland University Press, \$30



Hei Taonga mā ngā Uri Whakatipu

A landmark book telling the story of four expeditions made by staff of the Dominion Museum between 1919 and 1923.

Multiple authors, including Dame Anne Salmond and Billie Lythberg, Aotearoa Books, \$75



Contesting Crime Science: Our Misplaced Faith in Crime Prevention Technology

Dr Ronald Kramer and Associate Professor James Oleson (criminology, Faculty of Arts) radically critique Western society's overreliance on technology to deter and solve

crime. Full story: auckland.ac.nz/Kramer-Oleson
Ronald Kramer and James C. Oleson, University of California Press, \$46

opportunity for a group of students to work collaboratively with each other under the guidance of celebrated Māori installation artist and weaver, Dr Maureen Lander (Ngāpuhi, Te Hikutu).

They have designed and are creating a new work being installed in the atrium of the Engineering Building 405, Te Herenga Mātai Pūkaha. The kaupapa of the project embodies what lies at the heart of the University – the aspiration for and the passing down of knowledge.

The installation artwork was proposed as

“It’s satisfying to see everyone apply their own creative skills and knowledge, which we’ve all developed within our respective disciplines.”

– **Atareta Black, Elam masters student**

a response to the pou whenua, the carving commissioned by the Faculty of Engineering, which now stands outside the building. The concept for *Pou Iho* is embedded in the long-standing history that Engineering and the University holds, while drawing inspiration for the design from the tukutuku panels woven by Mere Toka (located in the University ClockTower). The *Pou Iho* installation, being designed for the atrium, consists of two elements – a ladder-style treatment of large wooden poles (pou), and patterned panels that sit inside circular steel beams surrounding the poles. Both components are a combination of laser-cut and engraved acrylic, with hand-stitched and braided flax elements.

The transdisciplinary project has provided a real-world employment opportunity for students from Engineering, Architecture and Fine Arts to work together.

Atareta Black, a masters student at Elam, says she enjoyed being able to collaborate with other students across different faculties on the project.

“It’s really satisfying to see everyone apply their own creative skills and knowledge, which we’ve all developed within our respective disciplines, and put everything we’ve learnt over the years at the University into practice.”

She says a lot of time on the project was spent in the collaborators’ homes during lockdown.

“Working on a collaborative project from a distance had its challenges, but we were fortunate to be able to continue the project despite the circumstances. It’s really rewarding looking at the beginning of our journey and finally coming together as a group to see the installation through to the end.”

With the campus allowed to be open under Covid-19 red setting, Maureen and the students have been working together on site to physically create the artwork, with the support of the Art Collection and the Faculty of Engineering.

All going to plan and Covid cases not withstanding, *Pou Iho* will be on display in the Engineering B405 Te Herenga Mātai Pūkaha Atrium soon for staff, students and the wider community to see.

■ **Lara Koolen, Kaitohutohu Kohinga Toi, Art Collection Adviser**



MARCH MOVIES AT GUS FISHER

In March, Gus Fisher Gallery is hosting weekly film screenings relating to its exhibition *Multiply Each Day*. This is an opportunity to see work ranging from classic British cinema through to contemporary Indigenous filmmakers. Films include *Dissolution Trilogy*, *Caravaggio* and the homegrown *Waru* (24 March). Screenings are free to the public and will be held at 6.30pm every Thursday starting 3 March. Socially distanced seating will be provided under the red alert level and numbers will be limited, so book online to secure your place.

WHEN: 3, 10, 17, 24, 31 March

WHERE: Gus Fisher Art Gallery, 74 Shortland Street

HOW: Free, register online through: gusfishergallery.auckland.ac.nz/march-film-screenings/

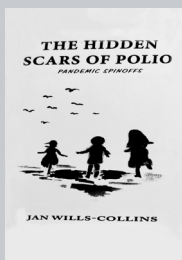
WOMEN’S DAY ONLINE PANEL

To celebrate International Women’s Day, the Business School is hosting an online lunchtime panel discussion featuring staff, students and alumnae. Hear 2021 Women of Influence award finalists Rebecca Thomas (CIO, PwC) and Maria Jose Alvarez (investment manager, WNT Ventures), Velocity CEO Nandini Singh, Te Mana Pakihi co-president Te Ao Leach, and

social science researcher, Dr Barbara Plester. Associate Dean Equity and Theresa Gattung Chair for Women in Entrepreneurship, Professor Christine Woods, will facilitate the discussion.

WHEN: Tuesday 8 March, 12-1pm

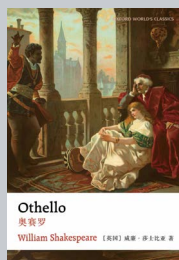
HOW: Online. Register at uabswomen.eventbrite.co.nz



The Hidden Scars of Polio

Alumna Jan Wills has written a timely memoir that’s a reminder of how we halted the most feared disease of the 20th century – polio – and why it matters for Covid-19. Jan

is an 80-year-old polio survivor, retired nurse and health and safety adviser for the NZ Fire Service. **Jan Wills, \$20, email: scarsofpolio@gmail.com**

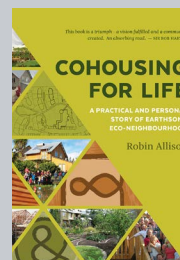


Othello

Oxford University Press has released a special edition for the Chinese market of Emeritus Professor Michael Neill’s Oxford World’s Classics *Othello* by William

Shakespeare.

Editor, Michael Neill, Oxford University Press



Cohousing for Life

Architecture alumna Robin Allison writes a personal account of the creation of Earthsong Eco-Neighbourhood, a 32-home co-housing community in West Auckland that combines

sustainable design with co-operative living.

Robin Allison, Mary Egan Publishing, \$49, robinallison.co.nz

AT CROSSROADS FOR CHILD PROTECTION

Child protection social work is a fraught and emotive topic. It is also an area of fraught and emotive practice.

I worked in statutory social work bureaucracy for 20 years and have now spent more than 15 years in tertiary education, trying to communicate the relational skills needed to work ethically in this field.

My recently published book, *A Political History of Child Protection – Lessons for Reform from Aotearoa New Zealand*, explores the history of child welfare policy and identifies the social and economic roots of modern practice.

The book excavates some uncomfortable truths, although perhaps not the expected ones about the depths of family dysfunction or the abusive behaviours humans are capable of. It focuses rather on the systemic inequality that results from capitalist economic and social relations, and the history of the liberal state in relation to processes of social exclusion.

Since the late 19th century, efforts to define a ‘problem’ population on the margins of the working class have been linked to a remedial focus on the deviant behaviour of the residual poor. This divisive thread within the liberal political tradition serves to conceal the structural determinants of relative poverty and inequality in Aotearoa New Zealand and comparable societies.

It is families on the frayed edges of the working class – often young brown women parenting in relative poverty – who are disproportionately drawn into the contemporary child welfare and protection system. This situation is firmly rooted within the political economy of our settler colonial state. The New Zealand colonial project was not simply connected with the cultural imperialism of the late British Empire. Colonisation involved the systematic separation of Indigenous Māori from their communal system of land ownership and production and the imposition of the social relations of liberal capitalism. More specifically, Māori children were assimilated within the Native School system and trained as a labouring workforce for white settler society.

From the later 1960s through the mid-1980s, tamariki Māori were taken into state care at approximately six times the rate of non-Māori. This had a flow-on effect to Māori disproportionality within the prison system which, in turn, generated a range of damaging consequences for whānau, hapū and iwi. The

“Responsibility without adequate resourcing, and power without genuine authority, is not a formula for effective child welfare outcomes.”

process of removing Māori children and young people into institutional care was facilitated by urbanisation, poverty and associated social suffering, and fuelled by institutional racism. As reported to the current Royal Commission of Inquiry into Historical Abuse in the Care of the State and Faith-Based Institutions, a lower standard of human rights was routinely applied to the children of the para-proletariat.

The ground-breaking Children, Young Persons and their Families Act, 1989 (now the Oranga Tamariki Act) was a significant move towards whānau, hapū and iwi empowerment in child protection policy and practice. Regrettably, the vision of this legislation was over-run by the neoliberal juggernaut of the 1990s. Responsibility without adequate resourcing, and power without genuine authority was not, and is not, a formula for effective child welfare outcomes.

In many ways we have come full circle and are now at a crossroads for child protection. The convoluted and largely counter-productive reforms of the John Key-led National governments were, at least in part, generated by racist media-driven moral panic – the spectre of ‘feral’ Māori families posing a threat to ‘middle New Zealand’. The social investment policy umbrella that focused on the forward fiscal cost of a beneficiary underclass carried all the hallmarks of early 20th century eugenics. The injunction of the Modernising Child Youth and Family Expert Panel to ensure that children were secured in safe and loving homes at the earliest opportunity was always going to generate a spike in the forced uplift of pēpi Māori.

The now infamous *Newsroom* exposure of events at Hawke’s Bay Hospital brought the trauma of ham-fisted child protection intervention into our living rooms and sparked

a rash of public inquiries. We are still working through the implications for future reform. Significantly, the Waitangi Tribunal report into the Wai 2915 claim – *He Pāharakeke, He Rito Whakakikanga Whāruarua* – makes the point that the state must reduce socially unequal outcomes in relation to health, housing, education and income if te Tiriti obligations are to be honoured. The Tribunal recommended a planned transition to a redesigned for Māori, by Māori, child protection service in Aotearoa.

The government is yet to rise to this challenge. A socially just child welfare system is not impossible, but it requires a reconfiguration of authority in terms of the relationship between the Crown and Māori. It also requires a reconfigured redistributive economic system that focuses on the interests of working people and addresses the glaring inequalities that prevent this country from being what it could be. These are among the challenges facing social work policy, practice and research as we career into the third decade of the 21st century.

■ Dr Ian Hyslop is a senior lecturer in the School of Counselling, Human Services and Social Work in the Faculty of Education and Social Work.



A Political History of Child Protection: Lessons for Reform from Aotearoa New Zealand
Ian Hyslop, Bristol University Press
Story: auckland.ac.nz/hyslop-book

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