Department of Anatomy
School of Biomedical Sciences

THE INSIDE STORY

Issue 46, June 2022

Dr Latika Samalia (centre) with past and present Heads of Anatomy (from left) Professor Helen Nicholson, Professor Christine Jasoni, Professor Lisa Matisoo-Smith and Professor Neil Gemmell. *PHOTO: Sean Flaherty*

Korowai presented at special event

Friends, family and colleagues of Dr Latika Samalia were finally able to gather in person recently to celebrate her great success at the 2021 National Tertiary Teaching Excellence Awards. Latika was awarded the Prime Minister's Supreme Award in August 2021, but the party had to be delayed until now due to Covid restrictions.

With the recent lifting of those restrictions, Ako Aotearoa were able to officially present Latika with Rauaroha, a korowai made especially to celebrate the Prime Minister's Supreme Award and the recipient honoured to wear it.

The korowai is a chiefly garment that recognises the mana of the supreme award and the person who receives it. It is made entirely of muka (flax fibre) and bird feathers and took Te Atiawa weaving expert Veranoa Hetet (Te Atiawa, Ngāti Tuwharetoa and Ngāti Maniapoto) six months to create. Veranoa says that korowai are made to last, and based on the longevity of similarly created Māori chiefly garments, Rauaroha will last for more than three hundred years.

This is the fifth time Rauaroha has come to Otago since it was created in 2015. Latika, and the Department of Anatomy, are now the kaitiaki (guardians) for Rauaroha until the next awards ceremony is held later in 2022.

From the HoDs desk


Professor Christine Jasoni

Kia ora koutou! It is my great pleasure to be in a position to be writing the HoD spot in our Departmental newsletter. A lot has happened since the last newsletter, including a change in HoD; so I wanted first to take this opportunity to send out a big thank you to Prof Lisa Matisoo-Smith for the amazing job she did as our leader for the prior four years. I think we can all be thankful for her unwavering support and solid leadership through very tough times. Ka pū te ruha, ka hao te rangatahi.

When I was about to take on this role I took a few months of sabbatical, in order to give myself the opportunity to reflect. I wanted to have some headspace to really think hard about how our already-successful Department could best move into our rapidly changing times. It was important to me to continue our tradition of success and support our staff and students, but also to recognise that we can't just keep doing what we've been doing without risking getting left behind in our core business. Despite our tradition of success, it will be our flexibility and willingess to break with some traditions that will allow us to usher in new ways of doing things and retain our success in our ever chaning world. Topmost of these is our shift to truly understanding, respecting, and upholding our obligations under Te Tiriti o Waitangi, which Anatomy will acheive, indeed often lead, by walking together on our journey of education and embrace of te ao Māori. I am also commited to improved recognition and celebration of diversity in our staff and student body, better recognition of and responsiveness to the changing needs and goals of our students and early career researchers, and to ensuring that we protect our ability to fund and carry out the world-class teaching, research, and research training on which we have built our enviable reputation. He kāhu ki te rangi, he moho ki te koropuku.

This newsletter is a perfect example of just how awesome Anatomy is. I am honoured to have the opportunity to lead us, and so proud of our staff and students across all appointment and study levels for their amazing array of activities and successes; and to everyone in the Anatomy family for your time and effort in making us the great place that we are. It is my goal as HoD to continue our tradition by leading us creatively through the upcoming challenges, and ensuring we can continue to successfully fill the world with new knowledge and our people.

He rangatira he hoa matenga mōu, kia kore koe e whakarērea.
Christine

Rōpū te mea Māori

Rōpū te mea Māori is a relaxed and fun group that aims to increase staff and student engagement with Te Ao Māori. Even though we've been meeting on Zoom to stay safe during Covid times, we've still been sharing whanaungatanga virtually every week. Alana has been teaching us conversational Te Reo, and our kete are becoming full of go-to waiata.

We're always keen for newcomers, so keep your eyes peeled for the rōpū emails and come along and join us! Or you can email Dr Charlotte King or Dr Alana Alexander.

Service to honour Donors

The Department of Anatomy will hold a Thanksgiving Service in September to honour those who have generously donated their body to the Department for medical science teaching and research. Family and friends of our donors will be invited to attend the service, along with University staff and students.

The service will be held in the Glenroy Auditorium at the Dunedin Town Hall complex, on the evening of Wednesday 14 September.

Anyone wishing to take part, or who would like to receive more information about the service is encouraged to contact the Body Bequest Liaison Officer.

News in brief

Chair of Rauika Māngai

Congratulations to Associate Professor Louise Parr-Brownlie (Ngāti Maniapoto and Te Arawa) who has been appointed the new Chair of Rauika Māngai (assembly of representatives). Rauika Māngai is an organisation of Māori scientists, research leaders and programme managers focused on the wellbeing of whānau, hapū, iwi and Māori communities.

Visit the Otago Bulletin to learn more.

2021 Supervisor of the Year

Congratulations to Dr Charlotte King who was presented with a 2021 Divisional Award for Health Sciences and the 2021 Overall Supervisor of the Year Award at the joint OUSA and Graduate Research School awards held in December last year.

All Otago thesis candidates are invited to nominate a supervisor for the awards, and more than 230 nominations were received for 2021. Well done Charlotte!

Director-at-Large

Professor Siân Halcrow has been appointed Director-at-Large (Student Liaison) for the Paleopathology Association. Founded in 1974, the Association is a global community of researchers and students with a background in anthropology, archaeology, medicine, biology and zoology. Their motto is "The dead teach the living".

Associate Dean (Pacific)

Dr Latika Samalia has been named one of three new Associate Deans Pacific for the School of Biomedical Sciences.

Latika says she is excited to have the opportunity to advocate for more academic opportunities for Pacific students studying within the School.

The other two Associate Deans Pacific are Dr Allamanda Faatoese (Department of Medicine, Christchurch) and Dr Htin Aung (Microbiology and Immunology).

2021 student prizes

Congratulations to Brooke Willoughby, Andrew Stewart, Victoria Sugrue and Emma Sudron who received recognition last December for their outstanding work throughout 2021. Usually the recipients would be congratulated at a special morning tea but sadly Covid limited our ability to gather everyone in one place for a celebration.

2021 Associate Professor Gina Forster Prize

This award is presented to the postgraudate student who gains the highest overall grades in 400-level Anatomy and Biological Anthropology papers.

The inaugural winner of this award is Emma Sudron. Emma completed a BA(Hons) degree in Anthropology in 2021.

The award is named in memory of Associate Professor Gina Forster, an outstanding Neuroscientist, teacher, researcher and mentor in the Department of Anatomy.

2021 Postgraduate Paper Prize

PhD candidate Victoria Sugrue was awarded the Postgraduate Paper Prize for her article published on eLife which showed that castration can delay epigenetic aging in sheep. An interesting topic indeed! You can learn more about Victoria's research by watching a video she posted on YouTube which summarises her paper nicely.

2021 Dr Elspeth Gold Prize

Brooke Willoughby was awarded the Dr Elspeth Gold Prize for best ANAT major student at 300-level.

This award is named in memory of Dr Elspeth Gold, a highly respected prostate cancer researcher, valued mentor and friend of many in the Department of Anatomy.

2021 Gareth Jones Prize (BSc)

Andrew Stewart was awarded the Gareth Jones Prize for the best student at 200-level. Andrew is a Neuroscience major.

This award carries the name of Emeritus Professor Gareth Jones, Head of Department from 1983-2003. Gareth has had a distinguished career in anatomy and more recently the ethics of body donation. He continues to be a prolific publisher and is Chair of the Anatomy Body Ethics Committee.

BMS Pacific Postgraduate Scholarship

Congratulations to Ilaisaane (Saane) Fakapulia who has been awarded a Pacific Postgraduate Scholarship from the School of Biomedical Sciences (BMS).

BMS Scholarship recipient Ilaisaane Fakapulia

Saane is this year completing a Postgraduate Diploma in Science with Dr Erik Wibowo and Dr Latika Samalia. Her research project takes an in-depth look at the educational experiences of Pasifika students as they complete their studies in Anatomy.

It is felt that Pacific students' learning needs have generally not been well recognised by tertiary institutions. Academic "success" in Western culture emphasizes objectivity and individualism, whereas the Pasifika culture appreciates subjectivity and holistic approaches. These differences lead to Pasifika students struggling to adapt their thinking and learning styles, resulting in academic stress and disparities in academic performance.

Saane's Diploma research project will build on the findings from her recent Summer research project undertaken with the support of Dr Wibowo and Dr Samalia.

Results from that project found that 30% of participants exhibited social anxiety as an ethnic minority and avoided engaging with the ethnic majority (which includes the majority of staff here at Otago) and 73% of participants experienced some level of insomnia symptoms.

She hopes her research will identify crucial information gaps and barriers for Pasifika students to achieve adequate academic outcomes and success. She believes her research is also relevant to the educational experiences of Māori students as both Māori and Pasifika have shared cultural backgrounds, obligations, processes and ideas.

Saane says she is deeply grateful and honoured to have been chosen as a recipient for the BMS Pacific Postgraduate Scholarship, and she gives all glory to God.

"Receiving this scholarship has emboldened and encouraged me to fulfill all that I aim to accomplish this year, as well as contribute to something greater than myself. So I am so thankful to the panel for granting me this award."

Pasifika visit to Anatomy Museum

In January Pasifika students from high schools around New Zealand visited the University of Otago as part of a programme to introduce them to University life and the range of subjects available for study.

While visiting the Deparment of Anatomy they spent time in the W.D. Trotter Anatomy Museum learning about the different systems of the human body.

Toward the end of their visit Anatomy postgraduate student Cam Young spoke to the group about his pathway to University. He urged the students that if you have a dream, you have the power to achieve that dream.

Postgraduate Profile - Cam Young

Living his ancestor's wildest dreams!

Cam Young came to the University of Otago to study medicine but had his mind blown by science! We catch up with him as he embarks on a fourth-year Honours Science programme in the Department of Anatomy, and discover what life-changing event expanded his view of the world.

Tell us a little bit about yourself. Where did you grow up?

Kia orana! I am the youngest of six children, born in the sunny Hawke's Bay. My Cook Islands/Sāmoan mother raised us by herself and is the most important person in my life – my real-life superhero. Mum instilled strong aspirations in all us kids, reminding us to elevate ourselves and uphold the 'Young' name with pride. I am now the third in my family to study at Otago; my brother graduated Commerce in 2020 and my sister graduated Pharmacy in 2021. Last year, I also graduated with a Bachelor of Science in Anatomy (major) and Pacific Island Studies (minor).

Why did you decide to do an undergrad degree in Anatomy?

In 2019, I moved to Dunedin to study Health Sciences First Year, where I stayed at Arana College. Like many students, the transition to tertiary study was challenging. There was a lot of content to learn and it was my first time living away from home – sadly, I couldn't rely on my mum to get me out of bed anymore.

Although I came down with the intention of studying medicine, I wasn't offered a place in my second year. Like many students, this was devastating – however, it has been the most important thing to happen to me. I had to choose a different undergrad degree, so I chose a BSc in Anatomy because I enjoyed the HUBS and CELS papers earlier that year. I also distinctly remember the amazing Anatomy teaching staff – people like Dr Rebecca Bird and Dr Brad Hurren – who were always kind and welcoming in their labs. I felt like I belonged in Anatomy then and, four years later, I still feel the same way.

> *"I distinctly remember the Anatomy teaching staff … who were always kind and welcoming in their labs"*

You also did a Minor in Pacific Island Studies. What did you learn about yourself/ your culture?

I am grateful Otago offers flexible degrees, as I was able to take Pacific Island Studies as a minor for my degree. This dip into the humanities broadened my perspectives of science and helped me appreciate the richness gained from interdisciplinary study. Additionally, in these papers I learnt about my Pacific heritage and cultural identity. I was able to orientate my place at the university and feel like I truly belonged here as a Pacific student, like it was my place in the world.

When you were a first or second year student, what did you think you would end up doing at the end of your degree? Was postgrad research ever in your focus?

Before university, I didn't even know what research was. Even in my first few years, I thought it was just for crazy people who exploded chemicals in conical flasks. It wasn't until I needed to do something over the summer to keep me busy, that I thought about doing a summer research project. I was apprehensive at first, but that summer blew my mind at how diverse research can be. Within the Department of Anatomy alone, there's multiple research groups – neuroscience, reproduction and development, biological anthropology, clinical anatomy, and education research.

So what was the pull for you to go on to do an Honours degree?

I've had the privilege of completing two summers of research projects. In the 2020-2021 summer, I investigated Pacific students' knowledge of sexuality and reproduction, with the amazing supervisors Dr Rebecca Bird, A/Prof Jane Girling, A/Prof Mele Taumoepeau, and A/Prof Bryndl Hohmann-Marriott. In the summer just been, I constructed identity profiles of skeletons in the Anatomy Museum with the incredible Professor Siân Halcrow.

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Both projects were life-changing and expanded my understanding of science and research. Research underpins our entire society – it can influence government policies, medical practices, teaching environments and family households. I've found that it can be a tool to influence the world around me to be a friendlier place for my communities.

How did you decide what area of research you wanted to be in?

Over the years, I've been lucky to dabble in many diverse areas of science research. The thread connecting them together is that they all attempt to improve the quality of life for Indigenous peoples, particularly in health and education. I didn't necessarily "fall" into this area – I've been incredibly lucky to have supervisors who consider my interests and shape projects to suit it.

Tell us about your research. What is your project about?

This year, I have the privilege of being supervised by Dr Sharon Ladyman and Professor Dave Grattan – two experts in neuroendocrine research. We are interested in a gene variant found in Polynesians that protects them from developing diabetes during pregnancy. This gene variant influences different hormones in the body, so I will be focusing on how two of these hormones (prolactin and placental lactogen) change throughout pregnancy.

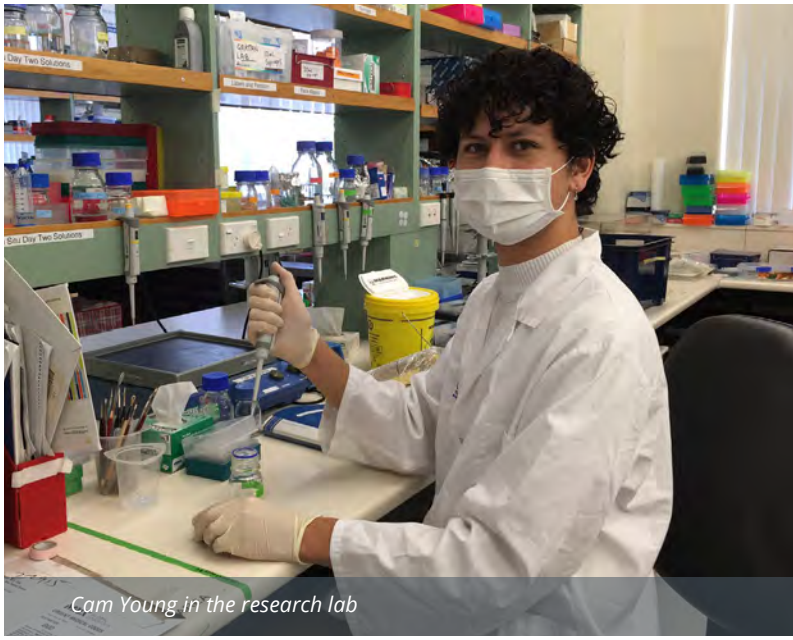
What are you enjoying most about postgrad life?

Nothing beats the friendships made during postgrad. There are only ten of us from Anatomy, so we've bonded and spend a lot of time together, in and out of studies. It's like I'm going through a challenge no one else in the world understands except for nine others. We laugh, we stress and we cry – but we always do it together!

Of ten students, four of us are Pacific Islanders. This is the largest number of 400-level Pacific students the Department of Anatomy has ever had. There are also five other Pacific postgraduates in the department – the largest number of Pacific postgrads! This is so encouraging and shows how inclusive Anatomy is becoming for diverse learners. It is a space that supports your culture as integral to your identity as a budding researcher.

What are the biggest differences from being an undergrad?

Postgrad is a huge step up from undergrad, but you're supported every step of the way. You aren't treated like a kid, but you aren't expected to know everything just yet. Sometimes your supervisors won't know all the answers, either! That is the beauty of postgrad; you are constantly on the precipice of new knowledge and new understandings of the world around us.



Cam Young in the research lab

What does a typical day in the Department look like for you?

I'm an early riser, so usually head to our 400-level office to get work done before the morning rush. Depending on the day, I'll attend classes, seminars or lab meetings. Some days, I'll watch other postgrads or researchers present data, and it's great to celebrate their successes and findings. Rest assured, there's always time for lunch, and I usually go out with a classmate or friend for a coffee break.

What does the future hold for you?

I came to Dunedin to study medicine and would still like to achieve that goal, so intend to apply for entry next year. However, research is definitely 'my space' where I've grown and thrived. I'd love to pursue research during the medical degree, with a focus on maternal health and pregnancy. It has been a longer journey than most, but I know I needed this detour to build my personal identity and to appreciate how important every job and person is in building a healthier, more inclusive Aotearoa New Zealand.

Do you have any advice for students contemplating their options for next year?

To our finalist undergrad students – try to find joy in where you are now, rather than craving for the future to come. We are often caught up in grinding out assignments and studying for our degree that we forget to look around us and appreciate where we are. Remember how far you've come and who helped you get where you are. You are living your ancestors' wildest dreams.

Anatomy in the News ...

Pūrākau science (translating science)

Dr Alana Alexander (Te Hikutu, Ngāpui) is translating the language of the science she does into the language of Te Ao Māori to help communities gain a better understanding of the science world. She will work with Kaitiaki (guardians) to help tell the story of some of Aotearoa's most precious taonga (treasures), the endangered Hector's and Māui dolphins.

You can read more about Alana's story and her research by visiting the Otago Bulletin Board.

Alana received a five-year Rutherford Discovery Fellowship from the Royal Society Te Apārangi of New Zealand in 2021 and was one of the scientists selected for the *100 women, 100 words ... infinite possibilities* exhibition at the Otago Museum last year.

Novel drug-system could be life-changing

Professor John Reynolds' research into a drug-release system for epilepsy featured recently in the Otago Daily Times. Professor Reynolds and colleagues from the Okinawa Institute of Science and Technology Graduate University in Japan are working on a model that would provide an on-demand release of medication directly to the patient's brain.

Professor Reynolds is hopeful this new system could be life-changing for those who live with neurological disorders such as epilepsy.

Visit the Otago Daily Times site to learn more about this fascinating ground-breaking research.

Laying the past to rest

Members of the department's Biological Anthropoogy team were part of a 300-strong crowd to farewell an old gold miner in Cromwell recently. The miner's remains were discovered in 1983 near Cromwell during the archaeological dig as part of preparations for the construction of the Clyde Dam.

On closer inspection it became evident the grave had previously been disturbed, likely by grave robbers, shortly after the miner was originally laid to rest. His skeletal remains, and his leather boots, were removed from the site and relocated to the Biological Anthropology lab in the Department of Anatomy.

The funeral procession and service followed Victorian era traditions. The miner was laid in a pine casket with rope handles and placed on a horse-drawn cart. The funeral procession, featuring walkers and horse riders dressed in Victorian clothing, travelled through the old streets of Cromwell before arriving at the Cromwell cemetery for a traditional 19th century service and burial. Professor Hallie Buckley, one of the bio-archaeologists to undertake the study of the miner's remains, acted as a pallbearer.

Prof Lisa Matisoo-Smith (far right) places dirt on the coffin of the old gold miner

Very little was known about the miner when he arrived in the Department. But through bioarchaeology analysis it was discovered the miner, a male, was aged between 30 and 50 years, was 189cm tall (unusually tall for the time), and originated either from central or southern England, northern France or Denmark.

With the study complete and little more to learn from the remains, it was time for the miner to again be laid to rest in a manner that reflected the era in which he had lived and the traditions he would have known.

Visit the Otago Daily Times website to read more stories about the goldminer.

More Anatomy in the News ...

A marker for the early detection of Alzheimer's

Researchers led by Scientific Officer Diane Guevremont and Associate Professor Joanna Williams may have found a vital clue to the early detection of Alzheimer's disease.

Diane Guevremont

A/P Joanna Williams

Their research has detected molecules in the blood called microRNA which change as the symptoms of the disease progress. It is hoped that, in time, a blood test will be developed that will identify those at risk of developing Alzheimer's allowing for early intervention.

Around 70,000 people in New Zealand are living with dementia. This number is expected to rise to 170,000 by 2050 and is likely to cost the country around $5.9b.

Visit the Otago Daily Times website to read more about Diane and Joanna's research.

May Graduation celebrations

It seemed the whole city of Dunedin was in party-mode throughout May with graduands, whānau and friends flocking to the city for long awaited graduation celebrations.

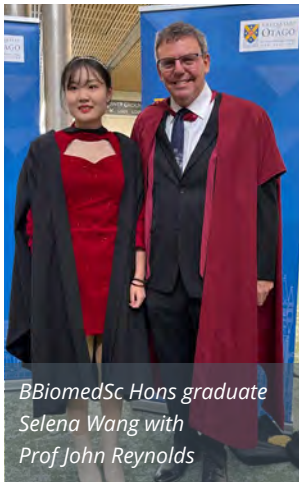
The University held six Graduation Ceremonies across three Saturday's, including an Acknowledgement Ceremony for those who had previously been unable to graduate in person when ceremonies planned for 2021 were cancelled.

We caught up with some of our Anatomy graduands before the graduation parade, include four of our newest PhDs ... Dr Deanna Barwick, Dr Josh Houlton, Dr Sindy Luu and Dr Jessy Zhang.

Congratulations to all our amazing graduates. What a fantastic achievement!

Jessy Zhang with Prof Ping Liu

Congratulations to Drs Sindy Luu, Josh Houlton, Deanna Barwick and Jessy Zhang



BBiomedSc Hons graduate Selena Wang with Prof John Reynolds

Sindy Luu with Prof Lisa Matisoo-Smith

Professor Siân Halcrow

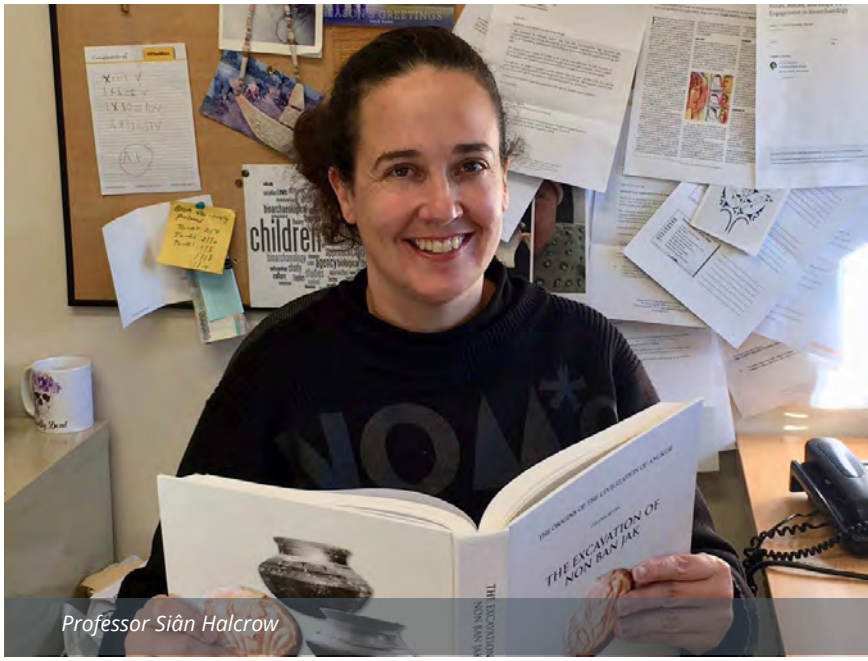
Working for a positive change

Being promoted to full Professor was a nice surprise for Siân Halcrow, but she is quick to deflect the spotlight on to those around her who have provided support and mentorship to help her get to where she is today.

"It is nice for my team's research contributions to the discipline to be recognised by the University" she says.

What she doesn't mention are the challenges and obstacles she has had to overcome to grow and develop her academic research career whilst also raising her two children.

Siân came to Otago after she had initially begun a BA/BSc in Anthropology and Biology at the University of Auckland. *"Although I love social theory, it was the practical hands-on work and learning here in the Department of Anatomy Museum that really piqued my interest in human osteology and then ultimately bioarchaeology."*



Professor Siân Halcrow

At the end of her BSc Honours year, Dr Nancy Tayles (then a Senior Lecturer in the Department of Anatomy) invited her to be part of an excavation of a prehistoric site in Thailand. She perhaps didn't know it then, but this was the beginning of a strong connection with bioarchaeology projects in South East Asia.

She has had the opportunity to deveop her work in Thailand visiting many times over the past 20 years, and her children have also joined her there and had the chance to go to school and learn about a new culture and language.

Siân says she was fortunate to have Dr Nancy Tayles as a role model in the early stages of her career. *"Nancy was an amazing support as a student and then later as a mentor."*

"I now try to act with that integrity and be approachable to students and create a learning environment they feel safe and welcome in." she says.

Her research interests lie in understanding major human transitions in the past through the experiences of the most vulnerable people in any populaton, infants and children. She also convenes and teaches into a range of BIOA and ANAT papers.

> *"I try to make tauira feel a sense of belonging in classes ... I want them to feel at ease"*

Although the past couple of years have been very challenging and draining for teachers and students, she says she always feels invigorated when she sees students engaging and learning. Her main goal is to be a strong and encouraging support for her students.

"I try to make tauira (students) feel a sense of belonging in classes in the Department and to get them involved as active learners. I want them to feel at ease in the class. I remember as a student being very unsure of my abilities and fearing making mistakes in the lab, so I think it is important to not confuse anxiety, cultural perceptions, feeling unsafe or simply being an introvert as being unwilling to engage."

Siân's research has blossomed since that first trip to Thailand back in 2001/2.

She has gained more than $5.6 million in external research funding from national and international funding bodies. Her other achievements, citations and awards are too numerous to include here, but her own personal highlights include being elected a Fellow of the Society of Antiquities (London), receiving the University of Otago Rowheath Trust Award and Carl Smith Research Medal, and the New Zealand Association of Scientists Hill Tinsley Medal in 2018.

In 2019 she was invited to write a commentary piece for Nature on a publication describing evidence for Early Europeans bottle-feeding babies with animal milk. Her research was covered extensively by international media outlets including Science, Nature, the New York Times, Science Daily, the Daily Mail and the BBC.

A co-edited book, The Mother-Infant Nexus in the Past: Small beginnings, significant outcomes (Springer, 2020) also received international recognition, and is up-held by the Department of Archaeology (4th highest ranked worldwide) at Durham University for its Research Excellence Framework. It is also the most downloaded book of the series per annum, and has sold more than 10,000 copies.

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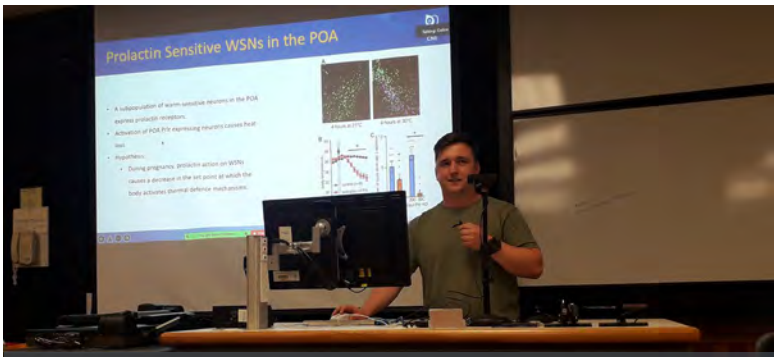
Emerging Researchers news

The Emerging Researchers Group (ERG) kicked off 2022 with a "speed dating" session. A lovely way to catch up with everyone after Summer, and meet our newest emerging researchers in the Department. Such a great turn out of both new and familiar faces!

In other sessions we had presentations from four new postgraduate students in the Department. A shout out to the speakers Rebecca Lord, Courteney Westlake, Matt Gillett (pictured right) and Pani Papaioannou, for sharing their research with the rest of us.



PhD student Matt Gillett gives his presentation to the ERG group

Dr Rob Wass from the University's Higher Education Development Centre joined us for a writing workshop where he discussed how to form and maintain a writing group and develop a habit of writing. A very informative session packed with tips and tricks, and some great discussions amongst members.

So far it has been an interesting year with both in person and online options for people to join sessions, which we're hoping to keep up for the remainder of the year.

ERG sessions are held fortnightly on Tuesdays at 1pm in the D'Ath lecture theatre. Recent session have been on 'Careers outside academia' (May 10), a workshop on 'Productivity and Wellbeing' (May 24), and more student research talks (June 7). So keep an eye out for our emails!

Summer Student wins Speakers Award


Harriet Spoelstra *Photo: Courteney Westlake*

Harriet Spoelstra, a summer research student in Associate Professor Joanna William's lab, was awarded first place at the Otago Medical School Research Society's 2022 Summer Student Speaker Awards in May. Harriet spent the summer months working in the William's lab on a project that focused on the relationship between secreted amyloid precursor protein alpha (sAPPα) and the cell surface expression of NMDA glutamate receptors.

Harriet says the project is relevant to Alzheimer's disease as the molecule sAPPα is memory-enhancing and neuroprotective. She says that understanding the mechanisms behind which sAPPα exerts these effects may prove useful when developing new and much-needed treatments for Alzheimer's.

Her project specifically focussed on sAPPα's effects on a type of glutamate neuronal receptor, the NMDA receptor, known to be involved in learning and memory. She used cell culture and immunohistochemistry to assess the effect of sAPPα treatment on the cell surface and synaptic expression of NMDARs.

She hypothesised sAPPα would increase NMDA expression, however she unexpectedly found the opposite! An explanation could be that the results may show a mechanism through which sAPPα exerts its neuroprotective effects, specifically removing NMDA receptors from the cell surface at two hours could prevent calcium neurotoxicity (i.e. too much calcium entering through NMDARs or other receptor types).

Harriet's talk included many immunohistochemistry images of neurons which she had made herself during her summer studentship, and she says getting the opportunity to make her own images was a highlight of her studentship.

She was very nervous throughout the presentation as she was the last student to present, but was delighted and very excited to have won. She is super grateful for the support of her mentors (special shout out to Courteney Westlake) and colleagues in the lab.

Harriet completed a BSc in Neuroscience (with a Minor in Genetics) in 2021, and is now completing a Neuroscience Honours year with Associate Professor Joanna Williams.

Graduate profile - Katie Galvin BSc(Hons)

Using her degree to master a new career

It wasn't until she found herself working with cancer patients as part of her 400-level Honours research project that Katie decided she wanted to work in an area that was people focused. She is now in her second year of a Master of Nursing Science and is looking forward to being able to support people through their own journeys in life.

Katie says she didn't really know what she wanted to do when she left school so decided to take general science papers in her first year of study at the University of Otago.

"The Anatomy content of the HUBS papers interested me the most so I decided to pick Anatomy as my major for my BSc degree" she says.

During her 300-level studies she got a part-time Research Assistant job with the Department of Anatomy's Dr Erik Wibowo working on a research project investigating the quality of sleep experienced by people with prostate cancer. Katie says she really enjoyed working with people rather than being in a lab environment, and it was Erik who suggested she take an Honour's year to continue working with the project and to expand her research skills.

"Erik was a fantastic supervisor and gave me great opportunities to push myself by presenting at conferences and publishing articles. That really helped to boost my confidence in my academic ability, and the degree gave me good skills in concise writing and analytical thinking which are useful in any area."

Katie found the classes to be more collaborative at 400-level, and she enjoyed the smaller class sizes and the chance to get to know the lecturers better.

"Nursing seemed like a great fit to apply my academic knowledge ... from my Anatomy degree into something more person-centered"

The research project gave her the opportunity to be involved in recruiting and meeting prostate cancer patients and their spouses. Through this work she found people opened up to her not just about their health but also about their lives. It was then she decided she wanted to do something where she could learn more about health and help support people through their journeys.

"I have always enjoyed working with people and nursing seemed like a great fit to apply my academic knowledge of the body gained from my Anatomy degree into something more person-centered."

While the Master of Nursing Science is quite intensive, Katie is loving her new career choice. She has found her previous studies in Anatomy have been really useful when completing the required science papers and research project.

Katie Galvin is forging a new career for herself with the help of the skills gained through her studies in Anatomy

"Having done a dissertation in 4th year, I've found the ability to use a scientific writing style really useful and the fact that I have experience using statistics for research has been so helpful."

"We also did a lot of presentations in 4th year so I have been able to develop my own presenting style. This has been really useful when writing nursing presentations over the last two years."

Katie has also been able to apply her anatomical knowledge to the pathologies she sees in her clinical experience. *"I've studied what normal structure is, so seeing how this plays out in pathology is really interesting."*

She is really looking forward to getting underway with her nursing career, possibly overseas once she has established her nursing skillset here in New Zealand. *"There are so many avenues and areas in nursing so I am looking forward to finding my niche, but also to work in different disciplines and wards and establish a broad nursing knowledge."*

And she has some advice for those contemplating their study options ... *"Find something to study that makes you want to get stuck in. If you're not passionate, it's a lot harder to get motivated to do the work."*

"Three years flies by, so if you're like me and at the end of it still don't know exactly what you want to do then don't stress. I would recommend both an Honours year and the Master of Nursing Science courses. I am glad I took the time to study more and to mature before doing nursing as I feel I am in better stead to deal with some of the more challenging situations I may face in the future."

A century of service acknowledged

Over the past months the Department has farewelled four long-serving staff members who together have contributed more than one hundred years of service to the University and the Department. We can't let them go without saying one last goodbye and a very big thank you to each of htem.

Associate Professor Jo-Ann Stanton

Research Associate Professor Jo-Ann Stanton has achieved a lot in her 26 years working in the Wellcome Building at the University of Otago, 24 of those years with the Department of Anatomy. Her career has ranged from nitrogen fixation, high energy biophysics for cancer and space research, motor neuron disease, regeneration, embryology and point-of-care diagnostics.

Jo says as a list, it looks very disjointed but each project was an evolution out of a previous challenge. *"It has been heaps of fun and never boring"* she says.

Jo was born and grew up in Australia. Science was her favourite subject at school. She was a Guest Scientist at the GSI Darmstadt Particle Accelerator in Germany, and then returned home to Australia to complete her PhD at the University of Western Australia.

On coming to New Zealand she had short stints in the Department of Physiology and AgResearch before joining the Department of Anatomy in 1998 – all three positions saw her housed in the Wellcome Building!

> *"Anatomy was ... very welcoming, organised and effective at both teaching and research"*

"Anatomy was a tight-knit community, very welcoming, organised and effective at both teaching and research. It was a fun place to work. 'Collegiality' is a good word to describe the early Anatomy Department."

While her list of achievements may seem disjointed to the lay-person, Jo and her team have achieved astounding success with their projects.

Two commercial platforms have spun out of their work – Ubiquitome's Liberty16 and Freedom4 instruments; and MicroGEM's Sal6830 COVID detection sample-to-answer device.

Work on both platforms will continue in a commercial setting and will diversify into areas beyond human disease diagnosis. *"Watch this space"* she says.

A memorable highlight was working with East African scientists and farmers in Kenya, Uganda and Tanzania. Using a hand-held machine capable of undertaking complex molecular diagnostics in the field, Jo helped screen for viruses in cassava crops, a root vegetable that provides a primary food source for over 800 million people worldwide. The health and wellbeing of many villagers and the economy of their communities is heavily dependent on a good crop harvest and yield.

All of the farms visited were either owned or farmed by subsistence cassava growers, mainly women, working to feed and provide an income for their families.

"I will always remember trying to extract DNA on a blanket under a mango tree while the whole village played African drums and cooked us cassava. It was magic" Jo said when she returned to her bench work in Dunedin.

For now, Jo is taking a bit of time off to explore her options. *"I will still keep my hand in research, but first I'm going to have a holiday!"*

Brian Fitzpatrick, Physical Resource Manager

Brian has been an integral cog in the running of the Anatomy Department for 27 years. For most of those years he has been the go-to man who could either fix, request or answer questions like "Brian how do I ...", "Brian where can I get ..." "Brian this doesn't work", "Brian do you know if ..." and "OMG Brian there's water everywhere!"

So who better to give a run-down on his life in the Department than the man himself, in his own words ...

I've lived in Dunedin all my life, attended Wakari School, then Kaikorai Valley High. Started work as a trainee Telegraph Technician at the Post Office which became Telecom in later years. I took voluntary severance from there in 1989 which luckily cleaned up my mortgage and gave me a couple of trips overseas. Redundancies were very generous in those days!

In 1990 I started with a local firm, Fletcher Electronics as an Instrumentation Technician working on industrial equipment around the South Island. Everything from asphalt and concrete plants to weighbridges and fishing boats. I was there for five years before being made redundant when the firm closed because of the owner's death.

Started with the Uni in February 1995 and the rest is history. Many thanks to Fieke Neuman and Gareth Jones who took a huge punt on hiring me!

"The Department was a very friendly place to work"

The Department was a very friendly place to work at. People were kind with their time in explaining what and where things were. I was responsible for the Gowland and Scott Lecture Theatres and had to be around to set things up for the next lecture. So my life revolved around setting up gear for lectures, classes in the HCR, Scott 115 etc. Because we had limited equipment I often had to rush video players, large heavy monitors, microscopes, slide projectors etc from one venue to another in a short time. Computers were few and far between. I never got one for some years.

But there was a great social feel about at the time. There was a lot of respect for everyone and people genuinely felt privileged to work for the University and always helped each other. How times have changed. Crickey, Academics even used to come to the tea room for a cuppa! There were more social events within the department, some particularly feral nights in the old Medical Café in the Scott, complete with many 50 litre kegs! Great quiz nights, the infamous "Technicians Xmas parties" etc etc. Now there is nothing at all, pity.

Some people will still remember Malcolm Mannering who was everything to all people. A legend. In 1999 and the upcoming Y2K crisis, Malcolm took it upon himself to prepare the Department (and other departments) for the power outages and the end of civilisation as we knew it, at midnight Dec 31, 1999. We, including myself, put everything else on hold while preparations were made. Many meetings were held with whiteboards, emails, strategies, lots of earnest head nodding etc. Hours spent on this. The pressure took a toll on Malcolm unfortunately and he was hospitalised. He even discharged himself because no one else was taking it seriously enough. All electronic gear was checked for possible failures when the clock struck midnight. Dozens of extension leads were run around the department to provide emergency power. I was out partying that evening, and Malcolm was sitting in the tea room waiting for Armageddon. Midnight arrived, and nothing happened! Everything kept running as it should. He was inconsolable.

An alternative use was found for one of the University's new rubbish "pods" - a special gift to Brian from those who will miss him around the tea table.

What am I doing in retirement? Any bloody thing I like! I have a few, not too many, jobs to do around the house. A bit of deferred maintenance. A backyard patio that needs extending. Re-organise the vegetable garden. Undertake a major rebuild on my 1946 Ford Coupe Hot Rod. Probably travel to Auckland to see my son and new grandson as often as I can. Follow and attend sporting events around the country as much as I can. Possibly go on another overseas trip. Rugby World Cup in France looks good! The rest of the time I'll sit on my backside socialising with my many friends and family. Might have time to pop in for a cuppa occasionally.

Had a great 27 years at Anatomy, met many really neat people, been involved with some interesting projects. I have been involved with the refurbishment of each of the 250-odd rooms we have, except the old IT space.

Miss you all, will keep in contact with the close ones, they'll know who they are.
Cheers, Brian

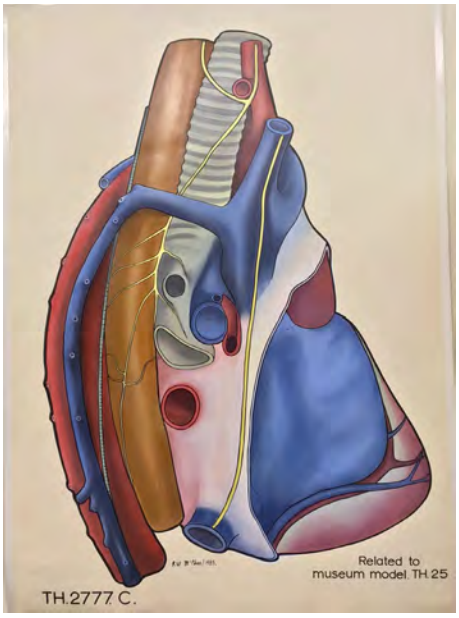
Robbie McPhee, Graphic Artist

Mr Robbie McPhee retired at the end of 2021 after 45 years service to the University of Otago, thirty-seven of these in the role of Medical Illustrator in the Department of Anatomy.

After gaining an Arts degree with the Otago Polytechnic School of Art, Robbie joined the University on a one-year contract as a medical artist with the Medical Illustrations Unit. In those very early days he sat at a drafting board and used ink pens, stencils and letraset to create detailed gross-anatomical illustrations of the human body for lecturers to pin up on blackboards as teaching aids.

Of course the days of hand-drawn illustrations are now long gone, replaced by desktop publishing software. Although he says he initially found it a steep learning curve to adapt his skills to 'drawing with a computer', Robbie quickly became proficient in the evolving environment of desktop design. You could say that instead of sharpening a pencil each day, he re-sharpened his skills to work with a mouse and stylus pen.

Most of the computer images Robbie was creating were still focused on the gross anatomy of the human body for undergraduate medical and dental teaching.



As the Department's teaching syllabus grew to include more science-focused papers, and new research groups developed within the Department, he found he was called upon to again adapt his knowledge and skills to create illustrations that focused on the more diverse subjects of biological anthropology, neuroscience, reproductive and developmental anatomy, and genomics that the Department was growing.

Over the thirty-seven years Robbie has been in the Department, our researchers and postgraduate students have been incredibly fortunate to have Robbie's talents at their disposal to create illustrations for their teaching material, journal articles and research posters.

In 2008 one of Robbie's diagrams was published on the cover of the prestigious journal Clinical Anatomy (vol 21, Number 2, 2008). Another diagram was published in a special 40th edition of Gray's Anatomy (this edition also celebrated the 150th anniversary of Gray's Anatomy), and in 2021 many of his illustrations were published in a new medical textbook A Companion Guide to Last's Anatomy (Mirjalili & Fogg). Robbie even got his name on the front cover!

His talents haven't solely been focused on work-related illustrations. He has also produced his own works that have featured in exhibitions around Dunedin and the South Island.

While he may now be gone from the department's corridors, his talent can still be seen in the old anatomical illustrations – McPhee originals – that hang on the walls of the WD Trotter Anatomy Museum and in the Anatomy enquiries office (pictured above right).

And of course, now that he is retired he will have all the time in the world to continue his love of art. That is, when he's not tending to his garden, working on his house, visiting extended family in Owaka, or cycling around the streets of Dunedin!

We wish you a happy and relaxing retirement Robbie. And just maybe we will again see your name in lights and McPhee originals hanging on a wall to be enjoyed and appreciated.

Andrew McNaughton, Confocal Microscopy (Otago Micro and Nano-Scale Imaging)

Chances are, if you have ever spent time in the basement of the Lindo Ferguson Building you will have come across Andrew McNaughton. And his sense of humour.

Andrew joined the University's Electron Microscopy Unit in 1998 as a Confocal Microscopist. At that time the Unit came under the administrative umbrella of the Department of Anatomy. Time has since moved on and it is now part of Otago Micro and Nanoscale Imaging.

When Andrew arrived, the Confocal Unit consisted of just one confocal microscope, but this grew to include three advanced confocal microscopes, a micro CT scanner, an atomic force microscope, a high content imaging system, and providing image analysis support to the whole of the Division of Health Sciences, other Schools and external users – all under Andrew's watch.

While he was the sole Manager/Technician for the whole confocal area, Andrew had a close working relationship with the light microscopy and electron microscopists at the other end of the corridor.

Morning and afternoon tea breaks were often a good time to visit the basement as there would always be interesting discussions around the tea-table, and this was perhaps when Andrew's wit could be enjoyed the most. He was (and still is) a master of all intellectual forms of wit – quip, repartee and wisecracks!

This writer remembers many a conversation with Andrew that became a test of wits - the challenge was to get your best quip in before he did. Many times I walked away smiling, but not really knowing if I had "won" the verbal-duel, or not!

Life in the basement has been tough at times with several changes in management and management styles, and staff in the Unit having to fight at times to retain the irreplaceable services they provide for researchers within and external to the University.

Through all the craziness, Andrew has stayed grounded and his wit and sense of humour has helped preserve the sanity of those around him.

Andrew has said he enjoyed the work, but it was the people who made the job worthwhile.

Perhaps I'll leave the last word to Richard Easingwood from the Electron Microscopy Unit ... "We understand that this is a good time to leave the University and to try something new, and we wish you all the best for your new life. But don't think for a moment that you are forgiven for leaving!"

(My thanks to Richard Easingwood and Karen Reader for providing information for this story)

Professor Siân Halcrow

(continued from page 9)

More recently Sian co-led (from New Zealand) a symposium at the American Association of Biological Anthropologists meeting, the largest international body for the discipline. It was the main event for the conference, and was awarded the Presidential Choice special symposium.

Although Covid has put the breaks on recent travel, Siân continues to work on international bioarchaeology projects in China, South East Asia and Chile, and she hopes to spend some time in China and Chile next year ... *"Fingers crossed"*

She has also begun focusing on projects a bit closer to home due to travel restrictions and family commitments. She is finding these projects a challenge for her comfort zone in terms of research approaches, but they are still in keeping with her interests of anthropolgical approaches to the care of infants and childen in the past.
A project with Professor Angela Wanhalla of the University of Otago's Department of History and Art History focuses on the untold stories of mothers' experiences and infant feeding and health in Aotearoa from 1922 – 2022.

Siân says New Zealand boasted the world's lowest infant mortality rate in the early 20th century which was typically attributed to colonial care practices and the Plunket Society, however these narratives often omit the detrimental effects colonialism had on Māori infant health, and silenced marginalised voices.

Together they plan to develop a model of the evolution of motherhood and infant care advice and how this affected infant health. They hope an innovative approach melding a social transmission analysis of infant health books, coupled with community participation will uncover the hidden histories.

Her advice for young academics starting out is to get good supports around you and good mentors.

"Try to reframe 'failure' as an opportunity to move forward. Realise that you don't have to mimic speciifc styles of leadership that you may see around you. Be real to yourself."

"And if you want to have children, you don't have to put your life on hold for academia."

And the last words go to ...

We asked two staff members to answer ten quick questions, and this is what they said ...

Chris Smith, Museum Curator

What is your role in the Dept?
My official title is Anatomy Museum Curator. In general, I look after the Museum 'stuff' and the space, working with teaching and support staff to make sure we have the right material in the right place for classes and assesments. The Museum team also try to keep on top of maintenance of this material and develop or purchase anything that we might need. Mind you, there's plenty of other things I'm doing to support people in their teaching and research :)

Whereabouts did you grow up?
(I'm not sure about 'growing up') Rangiora, North Canterbury.

Did you play sport or play a musical instrument?
I played a little bit of cricket, but my main commitment through to the end of High School was Ballet.

What are your hobbies and interests now?
I have a young family, so ... but try to get 'outdoors' with them as much as possible, either hiking, camping, canoeing, or biking. My main interest is to figure out how I can retire as early as possible so I can get back to having hobbies and interests :)

What book/movie can you recommend?
Three Men in a Boat by Jerome K. Jerome is the kind of light-hearted read we could all probably do with at the moment, and I highly recommend the audio book of it as read by Hugh Laurie - if anyone's interested I have it digitised ready for your iPod or phone or whatever, great for road trips. Kids should enjoy it too. Another great one for kids and those of us keen to reminisce about NZ holidaying and life in the 70s is Dunger by Joy Cowley - as we head into the cooler part of the year, dreaming of Summer in the Sounds and a simpler life helps one relax and warm up.

As for movie, something a bit different I guess, but Russian Ark is worth seeing, especially once you know that it was done in a single take. The planning for such, and the stamina of the camera-person in particular is astonishing.

What type of music do you like to listen to?
A little bit of everything, minus anything too heavy/thrashy or grungy. Jazz usually hits the spot as far as a genre goes, but I am a bit of a fan of Cowboy Junkies and Lyle Lovett in particular - I like the way they can mix things up with Blues, Country, Rock, Pop, Jazz etc. and a good dose of humour thrown in with LL. Bach can cover most bases classically.

Vegemite or Marmite?
Vegemite

Peanut butter ... crunchy or smooth?
Yuk!

Cat or dog?
DOG!!!

You're hosting a dinner party. Name three people (dead or alive) you would invite and why.
My wife and two kids, 'cos if I didn't invite them I'd be the one dead.
But if that is a given, then Sandi Toksvig - she seems like a very likeable person, I enjoy her intellect, humour, humanity, courage and strength etc. etc. She just happens to be someone who I have seen a lot of recently in various TV programmes I have watched and I have thought she would be someone I would actually like to meet in person, and I know the rest of the family would like to meet her too.

Leonardo da Vinci, because, well, it's LdV

Another that I guess is topical at the moment and someone whose first-hand telling of one of the most remarkable feats of survival in 'modern times' would be incredible to hear from, is Sir Ernest Shackleton, or really anyone from the team from that experience.

Jeremy McCallum-Loudeac, Teaching Fellow

What is your role in the Dept?
I am a Teaching Fellow, I started in this role at the beginning of 2021! While I was a postgrad student, I did plenty of demming - you might have seen me in ANAT241, ANAT243, ANAT331, ANAT333, ANAT334 and the HUBS papers!

Whereabouts did you grow up?
I've grown up all over the place! I was born in Thames, spent a few years in Wellington before jumping across the ditch to Sydney! After a few years there we made the move to live in France before coming back to Wellington!

Did you play sport or play a musical instrument?
I'm an avid swimmer! You'll see me most morning at Moana pool or braving the cold waters of Saint Clair Beach.

What are your hobbies and interests now?
I absolutely love cooking! I've recently gotten into film photography, with Dad's old camera and of course, I am passionate about teaching and learning anatomy!

What book/movie can you recommend?
I'm currently reading through the works of Louis de Bernières (he wrote Captain Corelli's Mandolin) and would thoroughly recommend any of his books.

What type of music do you like to listen to?
According to spotify it's predominantly alternative/indie/funk... something I can work to, cook to and relax to!

Vegemite or Marmite?
Vegemite all the way!

Peanut butter ... crunchy or smooth?
Crunchy... always has to be crunchy.

Cat or dog?
Dog.... Definitely a dog.

You're hosting a dinner party. Name three people (dead or alive) you would invite and why.
This is always a tough one!
David Attenborough - I think it would be fascinating to hear about some of the adventures he's been on and things he's seen.

Richard Branson - I've had a bit of a curious fascination with Branson and his empire... He seems to have done it all and lived many lives.

Albert Adrià - is it bad to make a guest cook for you? I'd love to know his creative process.

Now, whether they'd get on is an entirely different question!