

THE INSIDE STORY

Issue 34, May 2018



Department farewells long serving administrator

The Department recently bade a sad farewell to Departmental Administrator Sally-Ann Howard who has taken up the newly-established role of Manager Client Services within the University of Otago School of Biomedical Sciences. Emeritus Professor Gareth Jones takes a look back on her twenty-five years of service to the Department, and the changes she has seen along the way.

Sally-Ann has been in the Department since 1993; her initial title was Administrative Assistant, and was later changed to Departmental Administrator. Over that time the Department has grown dramatically in size and scope, from the largely teaching-based, medically-orientated department of the 1980s to the very broad multidisciplinary one of today, with its many research strengths, and large cohort of postgraduate students. When Sally-Ann joined the Department in 1993 this change was well underway, and so she became part of the revolution that was afoot.

It is interesting to reflect that she was the first person in the Department known as an administrator. There had been one prior to her but she was officially called a Secretary (mere departments were not allowed administrators in those days!). Over the years Sally-Ann has worked for seven Heads of Department's (HODs), and the size of the Department has more than quadrupled. In other words, she has been an integral part of this growth, both qualitatively and quantitatively, and while she has not directly contributed to either the teaching or research, she has been a major facilitator behind the scenes. It is no exaggeration to say that she has been the linchpin of the department. This is because efficient and foresighted administrative practices and policies are essential in enabling the flourishing of any department as a cohesive entity.

It is no secret that the personalities and ways of functioning of the different HODs have varied dramatically, so much so that Sally-Ann must have many tales of her own about the foibles of each of them! Her ability to cope with these differences and ensure that the Department has functioned well under each of them has been down to her proficiency and ever-expanding skills. It is no secret that the job of a HOD is made bearable (and occasionally delightful) by a well-informed and supportive Departmental Administrator. Sally-Ann has without doubt lifted the morale of the HODs even when she has had to correct one or more of their errors!

One secret of Sally-Ann's success has been her ability to change and adapt to the many changes within the Department and also within the University's policies. This is an intangible quality, built on patience and good humour, even when tested to the limit by misleading policy advice and lack of assistance by those in the higher echelons of the University who should know better.

The many administrative changes within the Department over the years have largely occurred on account of the skill and expertise of this one person. While others have played pivotal roles, the knowledge of University policies, and the ability to deal with large numbers of staff and postgraduate students, has fallen on Sally-Ann's shoulders. She has also become a mine of information, so essential when advising the large number of postdoctoral staff and other research funded staff, quite apart from the Teaching Fellows and Professional Practice Fellows. She has frequently been the first port of call for those with personnel concerns, whether with staff or students.

Sally-Ann demonstrates an encyclopaedic knowledge of University practices, and also those of Health Sciences (which frequently are in a world of their own). In dealing with many HR-related issues, she has acted as a stalwart back-up to each HOD, who have looked to her for guidance and advice on innumerable matters.

Her wise counsel has been appreciated by numerous people within the Department, in addition to which she has been consulted by an increasing number of staff and groups from outside the department. Inevitably, the Department will be a much poorer place without her, although we have every expectation that her new position as Manager Client Services within Biomedical Sciences, will mean that her contribution will now be a wider one than in the Department alone, and that others will benefit, directly or indirectly, from her new responsibilities.

We wish her well with these responsibilities and know that she will not be allowed to forget about Anatomy!

Gareth Jones



More students taking 400-level papers

An increase in student numbers at 400-level is very pleasing according to anatomy course advisor Dr Ruth Napper.

Thirty postgraduate students are enrolled in papers and/or research projects in the Department this year, in the major subject areas of Anatomy, Anthropology, Genetics, Biomedical Science, and Neuroscience.

Dr Napper believes the structure of the department's 400-level programme is a contributing factor to the population increase.

"Studying in such a large and diverse Department means the students will benefit greatly from the community atmosphere and research sharing within the Department."

"We have a core 400-level paper which means the students all get to know each other, and the shared student study space also helps them form a bond of collegiality."

The step up to independent learning is a challenge which Dr Napper believes the students are eager to embrace after their undergraduate study.

"The students realise they can gain a lot by working independently on their own project. There is a huge sense of achievement in doing something original," she says.

"Fourth year students make a unique contribution to the world. It is a hard year but if they can do this year they have a good chance of succeeding at whatever they want to do."



News in brief ...

Brain Research New Zealand

Over \$800,000 in funding was awarded at the end of 2017 to support five new research projects in the Department, in the areas of brain stimulation, Alzheimer's disease and Parkinson's disease.

Congratulations to:

- Associate Professor Ping Liu
- Dr Louise Parr-Brownlie (2 grants)
- Professor John Reynolds
- Dr Joanna Williams

Fellowships

Dr Mike Pankhurst was awarded a Hercus Fellowship from the Health Research Council. He will pursue new directions into how anti-Müllerian hormone (AMH) signalling operates in the ovary.

Dr Erica Todd was awarded a Postdoctoral Fellowship by the Royal Society Te Apārangi Rutherford Foundation Trust. She will study the genetic and environmental bases of natural sex change in fish.

Marsden Fund

Five researchers were awarded Marsden grants in the funding round held in late 2017.

Congratulations to Professor Greg Anderson, Dr Michael Knapp and Dr Megan Wilson who were awarded research project grants. Congratulations also to Dr Rosemary Brown and Dr Charlotte King who were awarded Fast Start grants to support their developing research.

Five minutes with Lisa Matisoo-Smith



On February 1 2018 Professor Lisa Matisoo-Smith became Head of the Department of Anatomy. We catch up with her in her new role, and ask the important question ... how are you feeling about the next three years?

How are you feeling about being Head of Department for the next three years?

Well, to be honest, I was very nervous and apprehensive leading up to the February 1st start date, but I have to say that as soon as I actually started doing the job, I have found it to be exciting though totally overwhelming. I am really enjoying getting to know people in the Department better and hearing more about what they do. I still have a lot of visits to undertake, as I do want to meet with all of the lab groups so that I better understand what people are doing and where they are doing it. I am constantly impressed by our staff and all of the amazing things people in this Department actually do. Mostly, I am incredibly thankful for the support I have received from so many people and for the excellent systems we have set up in this department.

How would you describe your leadership style?

I have never really thought much about leadership styles. I think everyone in the Department wants the same thing – we all care about research and teaching and doing the best we can at both of those things. I have always been involved in team sports and, in a way, I guess I see the Department kind of like a team, so perhaps my leadership style fits a combination of team and coaching leadership. We all have different jobs and different skills, but we are all working towards the same thing and have to work together to do that well – and I hope we can also have a bit of fun on the way.

Anatomy is such a large, diverse department. How can we generate a feeling of collegiality and belonging together?

I think things like our Thursday morning teas are a really good way to bring people together – celebrations are always a good thing (and chocolate always helps). I also think that doing some things outside of work hours can help make us feel more like a community. I am thinking that maybe bringing back a few social events like trivia nights or getting teams together to represent the Department and engage in community events like the Relay for Life or the Stadium to Surf runs might be fun (though we are a bit too late to do these this year) – watch out for Team Anatomy next year! These activities can help people to get to know each other outside of work roles and that is always a good thing, I think.

“We are all contributing to our common goal, to make this as strong a research and teaching department as possible”

I don't think we are too large – and I hope that others agree. We can break down into smaller groups that may focus on teaching or research or equipment use or for other reasons. But I hope that everyone feels that they are part of the larger entity of the Anatomy Department – and that we are all contributing to our common goal: to make this as strong a research and teaching department as possible and to enjoy our time doing that.

Behind the Scenes with the Highlanders

What do you see as the strengths of the department?

He tangata, he tangata, he tangata. The strength of Anatomy is our people, and those people have set up some really great systems that keep things on track – designed by the Department for the Department. Two other real strengths I see in the department are also two of our major challenges – our size and our diversity. We are such a strong department in both teaching and research and much of that is because of our size and our diversity – we are buffered, in a way, to changes in student numbers or variations in funding, much more than smaller and more homogenous departments.

What do you see as the challenges facing the Department in the coming years?

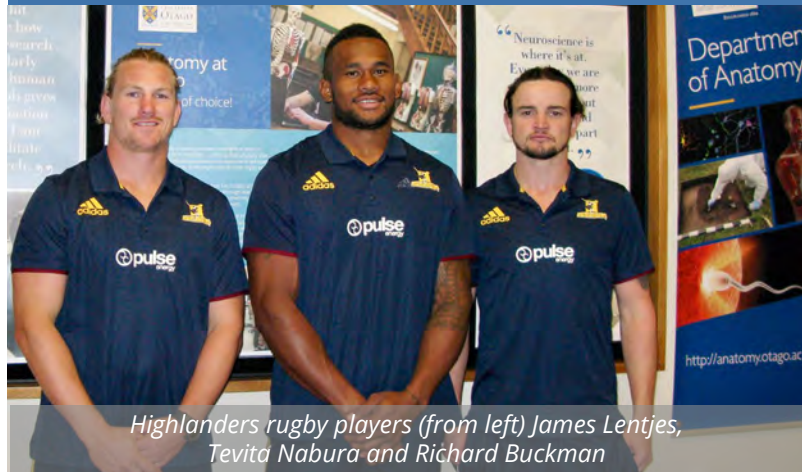
Clearly our biggest challenge in the next year is coming to terms with the changes in the Department that will happen with the Shared Services Review. But, I have every confidence in our people, so I am sure that we will get through this, and we will get through it together. I said at the first Department staff meeting, this is a time when we should all be doing what we can to support each other. Be kind to one another and to yourselves. There are also some positive challenges – we have six new academic staff members who have joined or are soon to be joining the Department, and they will also bring new staff and students. These new additions bring new challenges, for example relating to space or changes in familiar teaching roles. But they also bring new opportunities for research and teaching collaborations and should reduce some of the heavy teaching or admin loads some staff have been carrying. Our increase in staff is a signal of our success and we should celebrate this success!

Are there any specific things you hope to have achieved by the end of your tenure?

I already think I work in the best department in the best university in New Zealand. I am truly proud to be a member of the Department of Anatomy. I hope that we continue on the trajectory that we are on – Neil Gemmell and our other previous heads of department have put us in a really strong position. By the end of my tenure, I hope we can all say that we enjoy working in the best department in the best university in New Zealand and that each person knows that they are valued for their contribution to that.

Anything else you'd like to add?

I would just like people to know that I am open to any suggestions as to how we might make this well-oiled machine work better, if that is possible! I really would like to know what other people think.



Highlanders rugby players (from left) James Lentjes, Tevita Nabura and Richard Buckman

Highlanders rugby players Richard Buckman, James Lentjes and Tevita Nabura star in the Department's new student laboratory safety video.

All three feature as anatomy students who attend a practical laboratory class, showing the correct, and not so correct ways to behave in a practical class.

In the video they rush from rugby practice to the lab class, making sure they are wearing appropriate footwear and have their lab coats.

Two red cards had to be issued for indiscretions in the lab – one when Buckman was caught offside trying to sneak his cellphone into the lab, and the other to Nabura for a water bottle infringement.

When the final whistle blew the lads packed up, washed their hands and removed their lab coats before leaving the class.

We hope the entertaining video will be a game-changer and help reinforce the lab rules in students' minds.

Our thanks to everyone who helped with the production and filming of the video.



Academic staff promotions

The Department has welcomed the promotions of two academic staff to Professor, and two Senior Lecturers to Associate Professor. Here we learn a little more about what drives them in their careers.

Professor Greg Anderson

Greg credits the nurturing environment of the Centre for Neuroendocrinology for helping him get to where he is today. *"The Centre has been hugely influential by challenging me to incorporate cutting edge techniques into my research. Working amongst a large cluster of like-minded staff and students has definitely helped me maintain my enthusiasm and enjoyment."*



He has enjoyed the many challenges and highlights along the way. Teaching science students reproductive physiology at every level, first year through to fourth, and then getting to supervise some of them as postgraduate students have been particularly special for him.

His advice to young researchers starting out is to learn to switch off from work periodically. *"You need to love the teaching and the research but both will inevitably eat into your spare time. There is no point trying to find the bottom of a bottomless pit. You need to have time away from work."*

Greg has found the wide open spaces and patchy internet coverage of Central Otago perfect for doing just that.

Associate Professor Siân Halcrow

Having the support of the Department to apply for promotion to Associate Professor meant a lot to Siân. *"It was nice to know people in the Department recognised the hard work I've been doing. Their encouragement was very heart-warming."*



Siân runs a productive biological anthropology research lab, and contributes to teaching and outreach activities, all while juggling commitments of being a mum to her two children.

Her career highlights include seeing her students and postdoc fellows achieve success through their own publications, grants and outreach work.

She is very excited about new directions for her research. *"I have new opportunities to work with colleagues in China and Indonesia which will really complement my current work in Asia that has largely centred in Mainland Southeast Asia."*

Professor George Dias

George began his academic career when he moved to Dunedin from Sri Lanka to study for a PhD in Anatomy. Becoming a Professor has given him a wonderful sense of accomplishment.



He would like to acknowledge the help and support of Professor Gareth Jones who was his mentor while he was studying. *"I still seek his wise counsel whenever I encounter a challenging situation."*

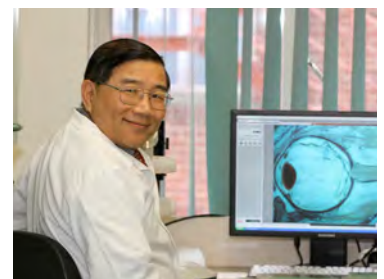
George is now the senior academic mentoring emerging researchers, and attracting postgraduate students to his research lab from around the world. He sees that his career has come full circle.

Having a deep understanding of a research area and its value to the scientific community is key to George's research and he thrives on the challenge of translating his clinical experience to his research. *"With my experience in the clinical setting as a maxillofacial surgeon, I want to impart the essence of clinical anatomy to future researchers and healthcare professionals."*

The positive responses he has received from his students have inspired him to work harder, and that is what he urges young researchers to do too. *"Putting in the hard yards and being collegial will enable you to go above and beyond in your academic career."*

Associate Professor Ming Zhang

Ming was delighted when he heard he had received promotion to Associate Professor. *"It is encouraging to receive this recognition for my research and my commitment to teaching clinical anatomy."*



Ming established a world leading novel technique which combines epoxy sheet plastination and confocal microscopy to show cadaveric structures undisturbed in their natural state.

He introduced sheet plastination and medical imaging to his third year medical teaching, and initiated the teaching of regional anatomy at 200/300-level anatomy science.

Close shave nothing to dread

It's going to be a cold winter for PhD student Josh Houlton as he gets used to life without his beloved dreadlocks and beard.

Having rolled and waxed his locks over the past three years, Josh decided it was time for a new look. What better way to part company with his dreads than to Shave for a Cure and raise money for Leukaemia & Blood Cancer New Zealand.

It was perhaps no surprise that his family, friends and work colleagues were in full support of his endeavour!

His initial fundraising target of \$720 (\$30 per dread - yes, he had 24 of them!) was quickly surpassed. At last count the amount raised had risen to \$2,223.

So, money raised, it was time to do the deed.

A crowd gathered in the foyer of the Lindo Ferguson Building as an enthusiastic Professor Greg Anderson stepped forward, hedge-clippers in hand. To everyone's delight the clippers were no match for the dreads, and an electric razor was quickly called for.

One by one the dreads hit the floor, accompanied by audible gasps of shock, horror and delight. Next to go were the beard and moustache.

Josh is now 500gms lighter. But he can walk tall knowing he has helped make a difference for the 6 New Zealanders who are diagnosed every day with a blood cancer or related condition.

If you would like to learn more about Shave for a Cure, visit the [Leukaemia & Blood Cancer New Zealand](#) website.

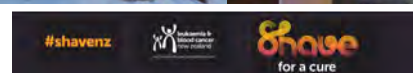
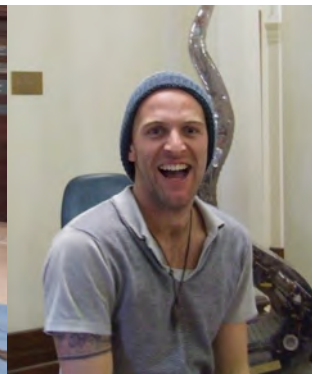
Before ...



After ...



The process ...



GENETICS THE KEY TO SCIENCE

Masters student Kathy Sircombe is the poster-girl for a new advertising campaign for Genetics at Otago.

Kathy has always been interested in how a person develops to become who they are. She built her undergraduate science degree around genetics papers offered at Otago, and is now in the final year of a Masters degree in the Department of Anatomy.

Her Masters research, with Dr Megan Wilson, focuses on the genetic expression of the gene *Lbx1* and how it may relate to scoliosis - a disease which causes curvature of the spine.

Learn more about Kathy's journey on the [University of Otago](#) website.

GO beyond with genetics

"Science changes so fast, you need skills that take you anywhere. Genetics gives you that."

Kathy Sircombe - MSc

Kathy was intrigued by how people develop. Now she's hunting the genes behind spinal deformities. Keen for high impact and translatable research? After a stronger step into the job market? Get there with [Postgraduate Genetics@Otago!](#) Discover your options at [otago.ac.nz/genetics](#)

Exceptional teaching recognised

Her passion for teaching, and commitment to provide an inclusive learning environment for students has seen Dr Rebecca Bird receive one of the University of Otago's top honours – a 2018 Teaching Excellence Award.

Rebecca is a Teaching Fellow in the Department of Anatomy. She teaches into two first year health science papers, second year science and second year physical education papers. She gives lectures, runs a multitude of practical labs and tutorial sessions for all these subjects, and will lecture into the ANAT 241 paper for the first time this year, which she is really excited about.

Rebecca also tutors at the Te Huka Mātauraka-Māori Centre, something she finds very rewarding as the students are all hard working and very keen to learn.

For Rebecca, the joy of teaching is all about the students. *"Anatomy is a wonderfully broad discipline, which means every day of teaching is varied and interesting, and it's great to be able to share that with the students."*

She loves the interaction she has with students, helping them find what interests them, what they're passionate about, and seeing them have those light-bulb moments when something they've been struggling to understand suddenly becomes clear.

"I love seeing students get excited about science ..."

Her love of learning doesn't end with her teaching career though. She has been doing her own study and recently graduated with a Masters degree in Higher Education, an experience she says has been useful for her own teaching.

Her studies have opened up a new avenue of educational research to her, which she is excited to pursue. She is especially keen to focus on better understanding the first year student experience and transition from high school learning.

When she's not teaching or studying, Rebecca gets involved in the many outreach activities in the Department, visiting primary schools and helping run activities such as Hands-on at Otago and Brain Bee. *"I love seeing students get excited about science long before they join us at University."*



Dr Rebecca Bird (centre) with Dr Brad Hurren and Professor Greg Anderson

One of her favourite times of the year is when the Department holds its whakawātea (clearing of the way) ceremonies in the dissection room as it's an opportunity for her to see students she has taught in first year, entering into a second year professional course or Anatomy science major.

"I love it when they stop and say hi and share how things have been going for them and I can see how excited they are for the year ahead."

Rebecca is grateful for all the teaching opportunities she's had in the Department, and is looking forward to new opportunities and challenges ahead. She is keen to integrate more Te Reo into her own teaching wherever possible.

"Recognition of hard work is always nice" she says. "I work very hard for my students and colleagues to have an enjoyable experience, so it is wonderful to have that acknowledged."

Rebecca notes that teaching is a team effort. *"I'm lucky to have an amazing group of colleagues - not only other wonderful teachers but also fantastic support staff without whom this job would be exponentially more difficult."*

[Rebecca's award continues a proud legacy of teaching excellence being recognised in the Department, with Dr Brad Hurren, Associate Professor Christine Jasoni and Professor John Reynolds having been awarded the same accolade in previous years.]



Non Ban Jak: a postgraduate experience

Exploring Health in Prehistoric Thailand: A report on 2018 archaeological excavations and research at Non Ban Jak

Non Ban Jak is a 5th-9th century CE (current era) archaeological site in Nakhon Ratchasima province in Northeast Thailand, rich in Iron Age history and mortuary activity. Postgraduate students Jessica Schallburg-Clayton and Nellissa Ling recently took part in on-going excavations at the site. They give us an insight into their experiences.

On a humid day in mid-January, we alighted from a local bus, stopping at the periphery of the Phi Mai evening market. With our luggage in tow, passing those who were busy procuring that evening's meal, we headed towards our accommodation. Our home for the month, aptly nicknamed "bone house," primarily functions as the storehouse for the Non Ban Jak skeletal collection. Phi Mai, about five hours journey north of Bangkok, is typically a single day visit for the average tourist, and is deep in rich cultural history which is often overlooked.

Five minutes away on foot from the house are the ruins of Prasat Phi Mai. A Khmer temple of cultural significance, Prasat Phi Mai was built in the 11th-12th century CE for Mahayana Buddhism. Not too far in the opposite direction sits a large banyan tree that began stretching its roots over 350 years ago. Positioned as such, we spent the next four weeks aiding in the excavations of nearby site Non Ban Jak and conducting research for our respective PhD projects.

Non Ban Jak: about the site

This year, excavations at Non Ban Jak took place from January to February. The site consists of two mounded areas, east and west, encircled by moating which is thought to be linked with the use of wet rice agriculture. This year's excavation opened up an additional section of the eastern mound. In total, 17 burials were uncovered, comprising predominantly infant jar burials, bringing the sample to 217 in total. This reflects the overall demography of the site,

which produced a proportionally large number of subadult individuals.

Non Ban Jak sits within a time period when small agricultural-based societies were transitioning towards a more centralized political era. The skeletons provide an opportunity to explore how socially transformative periods in prehistory may have impacted human health and diet.

Jessica's research

My PhD project investigates the relationship between the intensification of wet rice agriculture and the development of social inequality in the Upper Mun River Valley. I am looking at dietary differences and the migration of the population at Non Ban Jak.

In particular, I will be investigating diet through dental calculus, and calcified plaque on teeth, which often traps bits of plant matter and reflects food consumption. I will also be exploring diet differences between social status groups, the wealthy versus laboring classes, which can be distinguished through grave goods (e.g. bronze jewellery versus iron work tools). Disparity in subsistence between sex and age can also be telling of social organization.



Map : sourced from Geology.com

Main image: Jessica and Nellissa explore the historic temple of Prasat Phi Mai at sunrise

By visiting Non Ban Jak, I was able to begin the process of collecting dental samples from which I will determine isotope values. I now have a boots-on-the-ground understanding of the local geological, plant, and landscape variation, and a better frame of reference for the site.

Nellissa's research

My research investigates noncommunicable diseases in antiquity by exploring two pathological joint conditions observable on the skeleton: diffuse idiopathic skeletal hyperostosis (abnormal bony growth of or at the ligament; also known as DISH), and erosive diseases of the joint (arthropathies), such as gout. These joint conditions are associated with cardiovascular diseases and metabolic syndrome.

Skeletal examples of DISH and erosive lesions have not been systematically recorded in skeletal collections from Southeast Asia before. The Non Ban Jak skeletal collection provides a unique opportunity for me to explore their prevalence rates within a period of human history.

I will be investigating if the prevalence of these joint conditions correlate with selected body parameters (in this case, vertebral and femoral dimensions) as a factor for childhood stress. Exploring DISH and erosive arthropathies may provide clues on the effect of the environment (e.g. famine, differential access to food resources, cultural practices and restrictions) and potential genetic predisposition on human health. It will bring together past events and the potential consequences of these events in population health today, particularly for groups that are ancestrally linked. This is especially pertinent today as noncommunicable diseases have become the primary cause of deaths worldwide.

Both biocultural research projects at Non Ban Jak are part of the larger interdisciplinary research effort exploring

the prehistory of the Upper Mun Valley in Thailand. By visiting the site, not only were we able to begin work on our separate research projects, but also contextualize our subject of study.

Visiting Phi Mai meant cultural immersion, and we both quickly picked up some language useful for day-to-day life in a small town. Overall, conducting fieldwork in Thailand was a dynamic research experience, and we look forward to continuing our work towards reconstructing prehistoric life in the Upper Mun River Valley. We plan to travel back to Phi Mai at the end of this year to complete our research of the Non Ban Jak skeletal collection.



A Thai archaeologist excavates a burial at Non Ban Jak archaeological site.

We gratefully acknowledge the Thai Fine Arts Department, Thai National Research Council, Australian Research Council, Royal Society of New Zealand Marsden Fund, University of Otago Research Grant and University of Otago Doctoral scholarships for providing us this research opportunity.

[Jessica and Nellissa are both PhD candidates in the Department of Anatomy. Jessica is supervised by Professor Hallie Buckley, Dr Charlotte King and Associate Professor Siân Halcrow. Nellissa is supervised by Professor Hallie Buckley and Associate Professor Siân Halcrow.]

COPPER PLATES CREATE NEW ART

Fifty year old copper printing plates unearthed during a clean-up of the Anatomy Museum are being recycled into art.



The plates, which show electron microscope images, were created in Scotland in the 1960s and brought to the Department by visiting professor Dr George Wyburn in the mid 1970s.

Using a Vandercook printing press, Dunedin printmaker Lynn Taylor is using the plates to create beautiful works of art.

Visit the [University of Otago](https://www.otago.ac.nz/) website to learn more.

Anatomy Museum Curator Chris Smith with a copper plate and printed images.

OUTREACH IN THE PACIFIC

Repatriation of New Zealand Servicemen



Major James Hannah (kneeling at left), Dr Petchey, Dr Kinaston, Dr Scott, Lieutenant Colonel Charmaine Tate, and Dr Mark Salter (kneeling at right) at the grave site of Engineering Mechanic 1st Class Russell James Craig Moore in American Samoa.

Skilled bioanthropology researchers from the Department are joining forces with forensic scientists and members of the New Zealand Defence Force (NZDF) to help bring home the bodies of New Zealand service personnel buried overseas.

The repatriation is part of project Te Auraki (The Return), under which personnel buried overseas between 1955 and 1971 will be brought home to their families for reburial.

Professor Hallie Buckley, Dr Rebecca Kinaston and Dr Rachel Scott, together with Dr Peter Petchey from the Department of Anthropology, form part of a forensic team, led by a NZDF doctor, helping to identify and exhumate the remains.



Drs Rebecca Kinaston, Rachel Scott and Peter Petchey with Lieutenant Colonel Charmaine Tate
(Photos: NZDF)

They recently returned from American Samoa and Fiji where the remains of three servicemen were identified and readied for repatriation. Once identified, the remains are never left alone, with NZDF personnel providing a continuous vigil until they are handed over to their families.

Over the next six months the NZDF anticipates repatriating thirty seven personnel in four tranches from six countries: Fiji, American Samoa, Malaysia, Singapore, the United Kingdom, and the Republic of South Korea.

Visit the [NZDF](#) website to learn more about Te Auraki.

Teaching in the Pacific

Dr Latika Samalia visited the Fiji National University College of Medicine (FNU) in Suva recently as part of the Otago School of Medicine's outreach programme in the Pacific.

She gave lectures, tutorials and case-based presentations to about 80 – 95 second and third year medical students, as well as to a new lateral entry class for graduate students.

She was impressed with the enthusiasm and dedication of the students, particularly the graduate students who covered a lot of material in a compressed period of time. *"Their knowledge of anatomy was very good, and they were very keen to absorb everything"* she says.

Although teaching in Fiji may sound like a mini vacation, Latika says the reality was quite the opposite.

"Their lecture slots are two hours long and I was their guest lecturer for most days. I was struggling by the end of each day! The students even requested I go over material with them in the



Dr Latika Samalia (in pink) with some of the medical students

weekend! Some students had to travel 18 kilometres from their homes, catching buses to arrive at 8am."

"My last session lasted 2.5 hours. As I said my farewell to the students, they wouldn't leave. They started taking things out of their bags for a thank you morning tea. I just had no words to express my thanks to them. I was overwhelmed by their kindness."

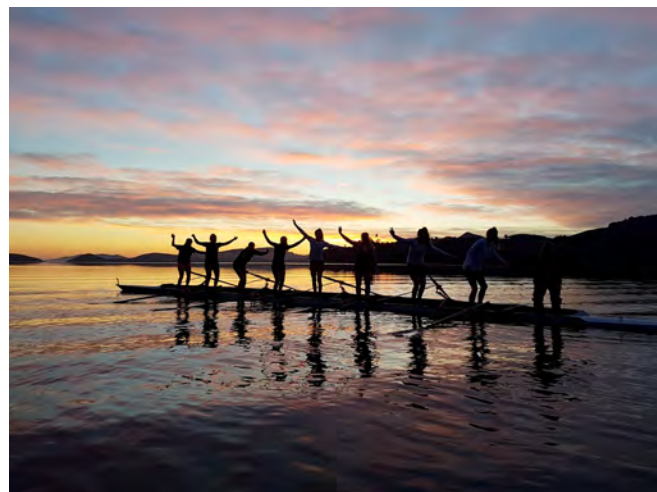
OUTREACH AT HOME

Supporting mental health

Staff and students provided a seemingly endless supply of muffins, cup cakes and scones throughout 2017 to raise funds for a variety of charities. One such charity was the Mental Health Foundation.

"Nature is key" was the theme for a Departmental photo competition to mark Mental Health Awareness week. Staff and postgrads were invited to submit their own photos that illustrated the things they do to stay healthy and happy and which promote positive mental health.

The supreme winner was Natalie Matheson for her pic of the Columba College rowing eight which she coaches. The caption for her photograph (right) read: "No matter what is going on in life, being able to have a laugh with a bunch of teenagers every day is great stress relief and I wouldn't have survived my PhD without coaching for work-life balance!"



Santa's Little Helper

The spirit of Christmas was alive and well in the Department in 2017. Staff and students donated a fabulous selection of toys, wrapping paper and money to the Santa's Little Helper fundraiser run in Dunedin by Santa's very-own little helper, Shane Waldron.

Shane and his helpers distributed the toys to deserving local families who were struggling to provide a joyous Christmas for their children.

Over \$340 was raised at a Department morning tea which went towards the purchase of more toys.

To learn more about Santa's Little Helper, check out the [TVNZ](#) website.



Santa's little Pixie Dr Natasha Flack with Shane Waldron

Anatomy at O-Week

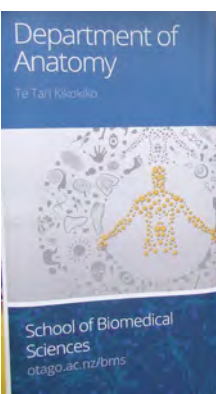
We're a hardy bunch in the South!

Undeterred by unseasonal rain and cool temperatures for February (thanks ex-tropical cyclone Gita!), it was all go at the University's O-Week Tent City where the department had a site to promote its papers to students.

Brave and fearless staff and postgraduate students pulled

on Department t-shirts and chatted merrily to the many students who stopped by to learn more about Anatomy.

Despite all tent sites having to be abandoned on the third day due to the rain, the Department managed to connect with many first year students. We hope we will see some of them in the department in the coming years as they complete science, arts, or biomedical science degrees.



Looking for Nessie ...

What do you do when your term as Head of Department comes to an end? You head for the hills for a bit of rest and relaxation of course. Unless you're Professor Neil Gemmell and you're looking for a mythical monster that lives in a very deep loch. Then you head for the Scottish Highlands with your fishing rod and a very large net. All in the name of science, of course!

Neil is currently on research and study leave following the completion of his four-year term as Head of Department.

His plans for the year ahead include writing-up a variety of projects, including a paper from the tuatara genome project and a major new review on sex changing fish.

In October he will take up the position of Fulbright Scholar at the Massachusetts Institute of Technology and the Broad Institute in Cambridge, USA, where he will be developing gene drives, new genetic tools that could be useful for controlling pest populations, such as mosquitos, wasps, rats, stoats and possums.

Neil says the labs he will be visiting are at the forefront of gene drive and genomic research. *"There is simply not a better place to visit for the work I am proposing."*

Using his expertise in reproductive biology, evolutionary biology and genomics, he hopes to design novel gene drive approaches that might achieve better solutions for pest control locally and globally. A key focus will be on systems for the control of rodent pests as part of New Zealand's ambitious Predator Free 2050 goal.

Neil will also travel to Loch Ness in Scotland to undertake the first ever environmental DNA survey of the waters of the loch. He plans to compare water samples taken from different locations in the loch, with samples taken from other lochs. The results may, or may not, provide evidence of a large species of fish living happily within the depths of Loch Ness.

Neil's contribution to the Department as Head of Department was recently acknowledged at a morning tea

where he was presented with gifts, including a Nessie t-shirt and a Nessie-themed cake.

He acknowledges the department was in an excellent position when he took over the role in 2014.



"I would like to think we are even stronger now."

"Particularly pleasing is the strong sense of collegiality, and the exceptional level of success we enjoy across all facets of what we do."

The pressures and demands of being Head of Department meant he was not always able to give as much attention to his family, and his own research group, as he would have liked. So the next few years will be about doing more with his family, and engaging more with his research group.

"I will try not to look too happy, but right now I am grinning like a Cheshire cat."

UPCOMING EVENT...

Thanksgiving Service

The 2018 Thanksgiving Service will be held at the Riccarton Park Function Centre in Christchurch on the evening of 11th September (starting at 7pm).

Family and friends of donors, along with Anatomy alumni and staff are warmly invited to attend.

For more information please contact the Department - anatomy@otago.ac.nz.

MAY GRADUATION

Acting Head of Department Professor Greg Anderson welcomed thirty five graduating students, their parents, families and friends to a special morning tea in the Department to celebrate May graduation.

He congratulated the students on completing their studies and reminded them that their futures aren't limited to the subjects they have studied. By graduating they have shown they can do anything they put their minds to.

Particular congratulations go to our postgraduate students who graduated either in person or in absentia (Majors are in ANAT unless otherwise stated):

PhD

Nadia Adotevi, Ben Aghoghovwia, Matthew Sykes

MSc

Michael Collins (GENE), Nikita Potemkin (NEUR)

PGDipSci

Jesse Bain (NEUR)

BSc (Hons)

George Connolly, Lewis Forrester, Maddie McIntyre Wilson,
Bryony Midgelow-Marsden (NEUR), Savana Woodcock



Front row: Savana Woodcock (BSc (Hons)), Tegan Dalton (BSc), Nadia Adotevi (PhD),
Dr Louise Parr-Brownlie, Abby Johnson (BSc (NEUR)), Sabian Wood (BSc (NEUR))
Second row: Isadore Hughes (BSc), Immanuel Hay (BSc), Emily Markman (BSc), Michael
Collins (MSc (GENE))
Third row: Maddie McIntyre Wilson (BSc (Hons)), Matthew Sykes (PhD), Dr Beulah Leitch
Back row: Lewis Forrester (BSc (Hons)), Prof Greg Anderson, Prof John Reynolds



UPCOMING EVENT ...

An International Science Festival event:

Anatomy: Going beyond what you might think!

Monday 9 July, 5:30pm - 7:00pm, Wall Street Mall, Dunedin

Come along and listen to some of our top academic researchers talk about their research. Find out what they're doing, how they're doing it, and why they're doing it!

Professor Hallie Buckley – Bioarchaeologist investigating the health of 19th century goldminers and early settlers in Otago.

Professor George Dias – Developing biodegradable bone graft substitutes for orthopaedic and maxilla facial surgery.

Dr Tim Hore – Epigenetics: understanding the instruction manual for life.

Associate Professor Christine Jasoni – Can a mother's health during pregnancy affect the formation of her offspring's brain?

Dr Michael Knapp – TB or not TB: How did tuberculosis reach New Zealand?

Professor John Reynolds – Stimulating the brain: understanding the effect of natural brain cell activity on the normal and disordered brain.

Dr Helen Taylor – Studs or duds? Inbreeding and sperm quality in our native birds.

And, if conditions are right, we hope *Professor Neil Gemmell* will join us via satellite so he can explain why he is sitting in a boat in the middle of Loch Ness!



This is a free event, but keep an eye on the [International Science Festival](http://www.scifest.org.nz) website for ticket details.



OUTSTANDING ACHIEVEMENTS

Contribution to Genetics recognised

Professor Neil Gemmell has been awarded the MJD White Medal by the Genetics Society of AustralAsia (GSA) for his outstanding contribution to genetics research.

Neil's research blends genomics with ecology, population, conservation and evolutionary biology and his group examines a range of interesting and fundamental questions in organisms ranging from invertebrates to mammals.

Current major research projects focus on exploring the effects of mtDNA mutations on male fertility, and their utility in biocontrol; investigating the molecular basis of sex reversal in fish; comparative genomic studies to understand the cognitive ability of crows and the molecular mechanisms through which parasites alter host behaviour; and establishment of new approaches to measure and monitor biodiversity.

Neil said he is *"particularly honoured to receive this award because GSA was the first professional society I ever joined and this is an award held previously by my mentors and many others I admire."* He will be presented with the medal in July, at the annual meeting of the Genetics Society of AustralAsia to be held in Canberra and will deliver the MJD White lecture during the conference.



Summer research project highly commended

Aini Su's Summer Scholarship report has been awarded Highly Commended by the School of Biomedical Sciences.



Her research project entitled "Altered neurotransmitter levels in stargazer mice model of absence epilepsy" looked at changes to inhibitory GABA neurotransmitter levels in the thalamus, which could contribute to the abnormal cortico-thalamo-cortical network observed in the stargazer model of absence epilepsy. Aini's project was supervised by Associate Professor Beulah Leitch.

In his commendation, the Dean of the School of Biomedical Sciences noted that the School had reviewed over 50 reports so Aini's achievement was quite significant.

Aini graduated with a BSc in Neuroscience at a May graduation ceremony. She is now studying medicine at the University of Auckland.

School of Biomedical Sciences awards

Seven members of staff were honoured for their outstanding contribution to research and teaching at the School of Biomedical Sciences awards held in December 2017. The awards acknowledge the success and achievements of staff in all five departments of the School.

Anatomy picked up seven of the thirteen awards offered.

Congratulations to the following on their success:

- Dr Rebecca Bird (Distinguished Teaching Fellow/PPF Science)
- Prof George Dias (Commercialisation Researcher)
- Assoc Prof Niels Hammer (Emerging Researcher)
- Dr Ilona Kokay (Research Support Focused Contribution)
- Andrew McNaughton (Research Support Distinguished Contribution)
- Prof Lisa Matisoo-Smith (Kaupapa Māori Research)
- Dr Jo-Ann Stanton (Pasifika Research)



Jo-Ann Stanton, George Dias, Andrew McNaughton and Rebecca Bird

Student research finds important nerve variation

The results from a summer research project completed by medical student Brennan Carne has revealed that New Zealanders may be more likely to damage the chorda tympani branch of facial nerve than Turkish or French populations. The findings could have implications for Kiwis involved in trauma or undergoing mandibular surgery.

Brennan's project investigated the connection of the chorda tympani branch of facial nerve (which carries taste messages from the tongue taste buds to the brainstem) to the lingual nerve, which is the sensory nerve of the tongue.

The position of the connection of chorda tympani and lingual nerve is clinically important as mandibular fracture, anaesthesia and surgery can result in damage to the chorda tympani nerve, resulting in a loss of taste sensation.

Current literature shows that the connection of the nerves has been found to occur 1-2cm below the skull base, and sometimes lower.

Brennan's research found that in New Zealander cadavers, the chorda tympani nerve joins the lingual nerve lower down in relation to the skull base.

The main implication is that New Zealanders may be at higher risk of chorda tympani nerve damage resulting in taste loss or disturbance following mandibular fracture, inferior alveolar nerve block, or other surgery or trauma to the area.



Brennan Carne traces the pathway of the chorda tympani nerve with Dr Peter Hurst

This research is particularly important when we consider the high incidence of mandibular fracture in New Zealand – in part due to our high ratio of sports injuries.

Brennan has only been able to find a few published reports of taste disturbance following infratemporal trauma which could indicate that this phenomenon may in fact be going under-diagnosed or misdiagnosed in New Zealand.

He hopes his results will contribute valuable data to the limited published information available in this field.

Brennan's project was supervised by Professor George Dias, and he received the Peter Hurst Summer Studentship Scholarship. He is continuing his medical studies as a fourth year student at Christchurch Hospital.

History of gold-rush cemeteries revealed

Researchers from the Department have been involved in the archaeological dig of two cemetery sites in the old Otago gold-rush town of Lawrence. The project, part of The Otago Historic Cemeteries Bioarchaeology Project, involved the excavation and analysis of burial sites in the original Lawrence cemetery and the Chinese section of the newer town cemetery.

The old cemetery was closed in 1867 and existing graves exhumed. However, local legend said one person had been left behind. The researchers found the remains of not one, but eight people at the site, including two infants.

At the town cemetery, researchers hoped to find the unmarked graves of Chinese miners and to establish whether the area contained the graves of other marginalised people from that time.

Visit the [University of Otago](https://www.otago.ac.nz/research) website for more information about this project.



Busy workers: Researchers Dr Charlotte King and Dr Nancy Tayles (at rear) and postgraduate students Anna Claire Barker (middle), Tori Duxfield (foreground) and Nellissa Ling (right)

Anatomy t-shirts... Just \$20!



Two style options:

Mali women's shaped tee in grey marle



Staple men's/unisex tee in grey marle



Printed on high quality AS
Colour t-shirts.

Tees come with a small
identifier on the front and the
larger design on the back.
There is also a small University
of Otago patch on the sleeve.

If you are interested in purchasing a t-shirt then please email t-shirts@anatomy.otago.ac.nz. For out-of-town purchasers there will be an additional charge on top of the \$20 to cover the cost of postage. Alternatively you can send a courier bag with your payment. For information on t-shirt sizes, go to <http://www.ascolour.co.nz/>.

www.otago.ac.nz/anatomy