

UNIVERSITY OF OTAGO

MAGAZINE

OCTOBER 2017

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Te Whare Wānanga o Ōtāgo
NEW ZEALAND

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It is hard to read a newspaper, a magazine or a website without encountering claims about Millennials. According to the standard definition, Millennials are people born between 1980 and 2000. These folks now range in age from 17–37. Most of the current students at Otago are Millennials, as are many of our recent graduates.

The popular press often describes Millennials in less than positive terms. They have been referred to as fragile, narcissistic, selfish and apathetic. But, in my experience, opinion is cheap and often wrong, so at the University of Otago we have taken the opportunity to collect some data to help us understand what makes our Millennials tick.

In 2011, the eight New Zealand Universities launched the Graduate Longitudinal Study (GLSNZ) which is a comprehensive study of the graduating cohort of that year – a 21-year-old graduating with their first degree in 2011 would have been born in 1990 which is right in the middle of Millennial range. More than 6,100 graduates completed the most recent follow-up to the initial baseline survey and we will continue to follow their progress over the next few years.

Among other things, the survey asked our graduates – two years after completing their studies – how important various goals and aspirations were to them. In order, their most important goals were:

1. *Being in good health*
2. *Having a family-friendly work/life balance*
3. *Working ethically*
4. *Having a life-long partner*
5. *Having children and a career*
6. *Making a difference*
7. *Travelling*
8. *Contributing to environmental sustainability*
9. *Being culturally responsive*
10. *Being unselfish.*

This list doesn't look like it was generated by a narcissistic, selfish or

apathetic generation. In fact, it's quite the contrary. This list looks like it was generated by people who consider relationships to be an important factor in their life – by people who value ethics, people, family and culture. In short, these goals reflect a strong desire to be connected to the world and a desire to make a difference.

There were many other questions in the study. For example, graduates were asked to list the top three factors that were important to them when choosing a job. In order, the five most important factors were:

1. *Job satisfaction*
2. *Financial security*
3. *A good work/life balance*
4. *Intellectual challenge and stimulation*
5. *The opportunity to make a contribution/difference.*

These data have important implications for current changes in New Zealand. Right now, we are undergoing a major reorganisation in the way in which we provide careers advice to young people. In the past, considerable time has been spent providing information about the salaries associated with different professions, but on the basis of what graduates have told us, this is not the most important information that Millennials will use to choose a career.

Although earning enough money (i.e. financial security) is number two on the list, it comes below job satisfaction. Importantly, earning big money (i.e. earning potential) does not even make the top five (coming in at number eight), falling well behind other non-monetary factors like work/life balance, intellectual challenge and the opportunity to make a difference. Government should be mindful of these data when providing information to young people.

Among all the things that have been said about them, Millennials do appear to be somewhat more fragile than the generations that preceded them. Levels of



anxiety, in particular, are rising on university campuses around the world and my colleagues in the secondary school sector have observed a similar trend. Perhaps this fragility reflects the number and size of the goals that Millennials have set for themselves. Perhaps the high level of connection afforded by social media has provided endless opportunities for comparison and self-doubt. Whatever the cause, the solution is staring us in the face. On the basis of the data collected through the GLSNZ, we know that Millennials thrive on human connections. At Otago, we will be using those data to shape the way we help our students as they take their final steps to adulthood.

In closing, the results of the GLSNZ didn't surprise me. I have been working with Millennials for the duration of my professional career and I have had the great privilege of raising two of my own. What I have learned from this generation is that they are far more (not less) prepared to enter the workforce than we were. They see a big picture that many of us didn't see until we were well into our 30–40s. At their best, these Millennials look after each other. They call out prejudice and injustice when they see it. They spend their money on experiences rather than things because they have a clear appreciation that life is for living.

In addition to learning from us, those of us who are not Millennials would do well to learn something from them.

Harlene Hayne
Professor Harlene Hayne
 Vice-Chancellor, University of Otago

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Study enters new stAGE

The internationally recognised Dunedin study has informed health, education and social policy for more than 40 years. Now it is turning its attention to how we age.

The world-leading Dunedin Multidisciplinary Health and Development Study is breaking new ground with its greatest challenge yet.

After unprecedented and extremely detailed research into the whole lives of more than a thousand babies born in Dunedin between 1972 and 1973, the study is ramping up and entering its most exciting phase in the 45 years it has been running.

“This will be the biggest, most complex, most detailed assessment phase ever, by quite some margin,” says director Professor Richie Poulton.

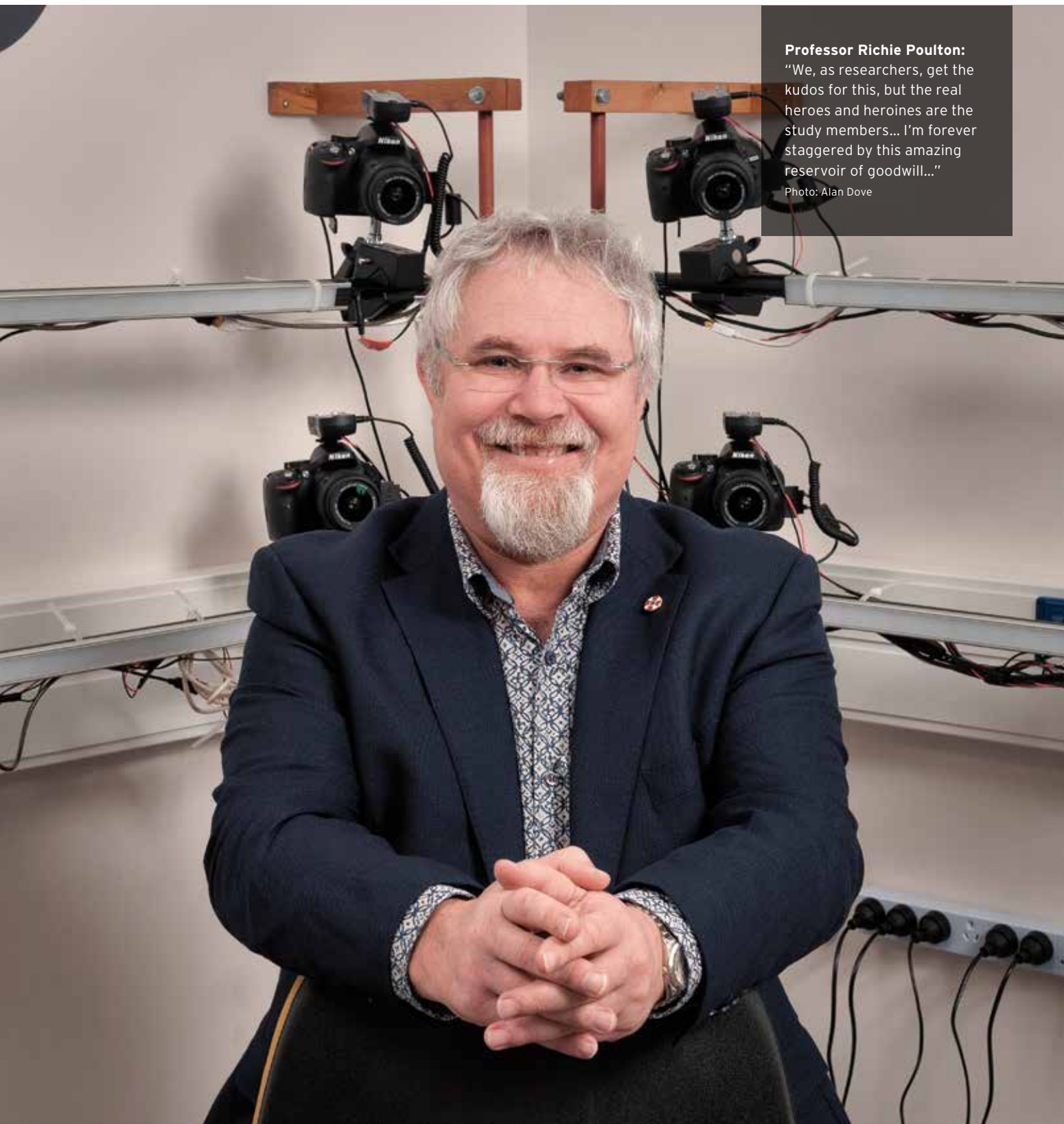
As study participants enter middle age, the focus is shifting from gathering

information about their growth and early development to using that data to gain insights into the inevitable human condition of getting older.

“The big-picture purpose of the study is to obtain a better understanding of the ageing process by studying the health and development of people in early mid-life. Surprisingly, not much is known about people in their mid-40s, in this country or overseas, so what we find out will be used to help policymakers and help plan better services around the world.”

The world has been following Otago’s lead for four decades, using the more than 1,200 research papers, books, book chapters and reports generated by the





Professor Richie Poulton:

"We, as researchers, get the kudos for this, but the real heroes and heroines are the study members.... I'm forever staggered by this amazing reservoir of goodwill..."

Photo: Alan Dove

“So now we have developed a whole new suite of research measures to look at variables and predictors for ageing, and we’re setting up to study the second half of our members’ lives over the next 30 to 40 years.”

study to revolutionise understanding of human development and inform a wide range of policies in vital areas such as health, education and social services.

Participation by study members has been exceptional, returning to Otago to take part in research phases held every few years since they were born. Although 38 of the original 1,037 members have died, an astounding 95 per cent of the remainder are still in the study.

“I’m not aware of any other long-running study of our type with this kind of retention rate. We, as researchers, get the kudos for this and, yes, we work our butts off, but the real heroes and heroines are the study members. They just keep giving because they believe it might help others. I’m forever staggered by this amazing reservoir of goodwill.”

Research has shed light on such topics as the nature versus nurture debate; how social and psychological factors “get under the skin” to cause physical diseases; what explains premature ageing; and how and why people differ so much from each other in some respects, yet there are so many universal truths.

All the measurements painstakingly gathered for the first half of participants’ lives now take on a new value, giving researchers a unique platform from which to study how the members progress over the second half of their lives.

“We know that the ageing process starts right from the beginning of life and our people are at a critical point in their life course. They’ve now reached that point where they are starting to go down the ageing pathway. We want to figure out what lies ahead, because this is one race you don’t want to win.

“For those who are ageing quickly, we want to know why. And we want to

know if ageing rapidly is predictable from what we already know about our study members. If we can identify what’s happening, can we modify environments or behaviours so we can slow down the ageing process?

“For every decade that passes, another two years are being added to life expectancy. We’re living longer than ever before, but there’s no point in living until you’re 90 if your last 10 years are not good years.

“So now we have developed a whole new suite of research measures to look at variables and predictors for ageing, and we’re setting up to study the second half of our members’ lives over the next 30 to 40 years.”

Success builds on success, and recent accolades and awards have gone a long way to supporting the new direction for the study.

This year the Dunedin Multidisciplinary Health and Development Research Unit (DMHDRU) was recognised with the prestigious Prime Minister’s Science Prize, the most valuable science award in New Zealand. The majority of the \$500,000 prize has already been invested in equipment specifically for the current phase of research, adding to \$140,000 worth of new technology funded by the University’s Department of Psychology.

The DMHDRU is also welcoming study members into its new headquarters, a purpose-built home near the Forsyth Barr Stadium. It’s a giant leap forward from the challenging conditions the study has worked in over the years.

Poulton’s contribution was acknowledged with his appointment as chief scientific advisor to the Ministry of Social Development and, this year, being

made a Companion of the New Zealand Order of Merit in the Queen’s Birthday Honours.

“In this game, all honours won by individuals reflect the amazing contributions of many, but, in particular, research colleagues and the study members and their families and friends.

“Boiled down, the study is built on a special partnership which, of course, is all about relationships. It’s a very gritty, real human endeavour that critically depends on high levels of trust and respect between the researchers and the study participants. I’m really proud that we’ve earned and continue to maintain their trust.”

It has been a big year for the DMHDRU, but the way its future is shaping is likely to be bigger still.

Most ageing research has been done on the elderly and little is known about biological ageing in young humans, so the study aims to fill the gap.

It’s timely. People are generally living longer and many are also staying healthier longer; however, increasing numbers are living extra years with age-related conditions such as heart disease, diabetes, stroke, pulmonary disease and dementia.

These major diseases causing morbidity and mortality have one root cause in common – ageing – so if that process could be slowed down, it might be possible to delay all age-related diseases simultaneously, rather than treating them one at a time.

Existing research indicates that the pace of ageing may be influenced by early life experience, differences in lifestyle and genetic endowment. The Dunedin Study is now exploring its new list of research questions to see if it can find

out how to slow ageing and substantially improve the quality of later life.

“This time around we’ve re-introduced studies of hearing and sight, not done since childhood. These will help lay an important mid-life baseline for monitoring changes in these important senses as people age. We’re lucky to have some top notch New Zealand researchers and practitioners leading these new assessments, including Auckland hearing and speech experts Professors Peter Thorne and Suzanne Purdy and Gisborne ophthalmologist Dr Graham Wilson.”

The study has also launched for the first time four new programmes of

research headed by leading University of Otago investigators, each involving larger teams and up-and-coming younger researchers in the formative stages of their careers, a natural and healthy progression for the evolving study.

Professor David Baxter, director of the Otago-based Ageing Well National Science Challenge, is focusing on musculoskeletal health, including pain and body composition. Dr Lisa Te Morenga (Human Nutrition) is looking at dietary biomarkers. Professor Mark Hampton (Centre for Free Radical Research, Christchurch campus) is investigating oxidative stress and cellular

health, and Professor Rob Walker (Medicine) is researching chronic kidney injury.

The study is also embarking upon ambitious new brain imaging research with partners at Pacific Radiology, the Brain Research Institute of New Zealand and the centre of research excellence Brain Research New Zealand – Rangahau Roro Aotearoa. It is led by long-time Dunedin Study researcher and associate director Professor Terrie Moffitt and a new team member, international functional brain expert Professor Ahmad Hariri, both from Duke University, North Carolina.

“If we can identify what’s happening, can we modify environments or behaviours so we can slow down the ageing process?”

The Dunedin Study members who this year received the Prime Minister’s Science Prize.

Photo: Alan Dove



“When you look at all these new initiatives together they represent the greatest expansion at a single assessment point in the history of the Dunedin Study,” says Poulton. “We’re aiming to position the study well now to make important contributions for decades to come.”

The latest phase of assessments and the new topics are also a timely injection of new blood, involving many younger researchers whom Poulton hopes will

take the study on into the future.

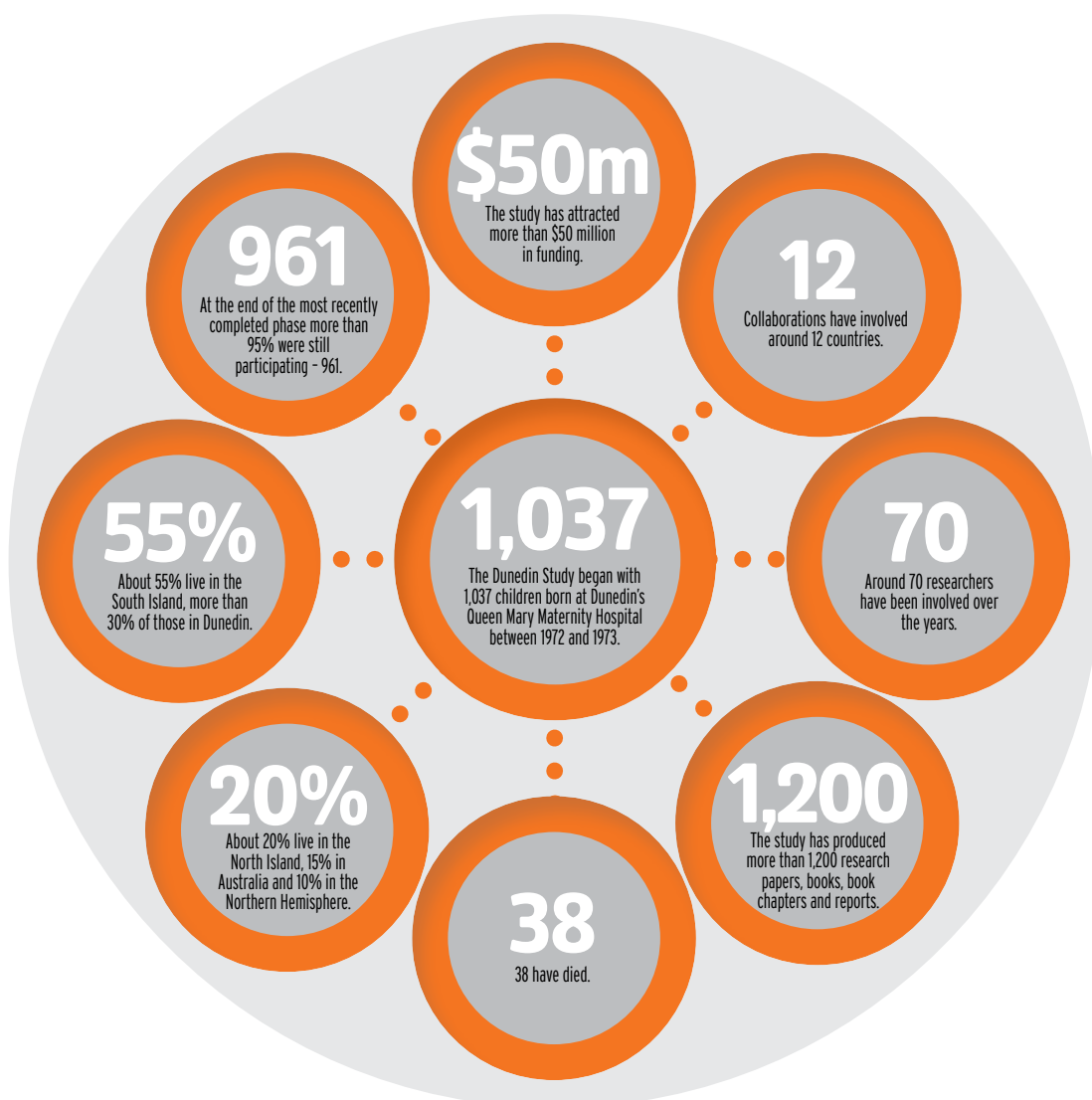
“We are just starting to look for indicators of rapid ageing in this latest phase. I hope we’ll find some success first time round, and that the new, younger researchers will taste that success and continue it well into their careers. There comes a time when the old guard needs to start to hand over some responsibility because, in 20 years, they’ll still be around, but we won’t.

“Despite all we have achieved to date, my sense is that we’re about to embark on a new wave of important scientific discoveries, especially as we’re going into uncharted territory in some areas. This makes coming in to work a pleasure, and promises some real excitement not too far down the track.”

NIGEL ZEGA



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Scientific measures

From humble beginnings as an Otago master's project, ADInstruments is now developing equipment that is being used worldwide, from the lab, to Everest Base Camp and the very edges of outer space.

The history of specialist electronics company ADInstruments is never far away for its creator, Otago physics and computer science alumnus Michael Macknight.

Artefacts on display at ADI's Dunedin headquarters chart the company's evolution; clunky "first generation" electronic devices bearing the serial number 001001 (first used at Otago in 1987) sit alongside smaller refined instruments. The corridors are lined with recent posters showing the integration of software products into a business model geared for growth. The future, it seems, is "in the cloud".

Macknight says the company's equipment is now used "just about anywhere signals varying over time need to be measured". In real terms, this means its products are commonplace in more than 10,000 universities, polytechnics, hospitals, and contract and private sector industry laboratories worldwide.

It is no exaggeration to say the company – and Macknight's story – started "from humble beginnings". In a very unassuming way, he reflects on how a global company that now employs more than 200 staff (70 of whom are based in Dunedin) and has offices in 12 countries,

had its genesis in his mid-1980s master's project.

"My father was head of Physiology at Otago and I'd seen students in labs measuring signals from nerves with old, expensive equipment. I needed a master's project and thought about ways of saving money and getting more functionality. I built a box that plugged into a Mac, which had come out the year before, and wrote software that converted data into a more easily manipulated format."

The innovative system's potential for academic research applications became apparent when "we noticed the gear seemed to be making its way from the teaching labs to the research labs when the students were on holiday".

"In combination with other technologies, our products allowed for more powerful analysis. Researchers didn't want to use old, expensive chart recorders once they'd seen what was possible. Previously, there were hilarious scenes with researchers unrolling chart paper down the hallway that was metres long, or using scissors to cut out waveforms then weighing the paper to get an area under the curve."

Findings from this master's "MacLab" project – supervised by Brian Cox and Don Warrington – underpinned a

presentation at a world trade exhibition in Washington and more interest followed.

These early realisations also informed an enduring company ethos – research and education are "built in to ADI's structure".

These twin priorities are reflected in its sales figures: about 50 per cent of sales go to teaching facilities, while research laboratories absorb the remainder of ADI's instrument and software lines.

Another early realisation was that the way to maximise profits and stand out in the marketplace was to package products from various places together so sales people could advise on tech "bundles".

"We didn't want our products to be marketed or sold as part of a catalogue that contained our competitors' offerings so, fairly early on, we flipped the whole thing and developed our own sales force and distribution processes. The centre of sale remains the hardware and software, but we also offer advice, training and installation – the whole service."

The company has kept its business core – its programmers, sales and finance management, and education writers – in Dunedin, which Macknight says solves many problems, apart from geographical isolation from its major markets.

“The boxes we make will always be important, but our core IP is the software and, with that, there’s no limit, except for your imagination.”

“We’ve often been asked ‘why stay in Dunedin?’ I’d say ‘why not?’ We are a global company with 13 offices around the world so we’re going to be a long way from most of our customers wherever we are. The group we have built up is as good as you’d find anywhere, plus the cost base is lower. Most of the people here are local graduates – in fact, some employees used the equipment when they were studying – and they like the lifestyle, so we have a settled workforce.”

ADI’s Dunedin offices also have a special connection with Macknight’s family. Housed over several floors of an historic wool store in the city’s increasingly trendy warehouse precinct, the building was refurbished in collaboration with his wife and brother, who runs a heritage restoration company responsible for several inner-city projects.

Macknight also counts close links with the University of Otago and Otago Polytechnic as a great asset.

He likes that students and secondary school pupils can visit ADI to gain insights into real-world applications of their studies. Software engineering classes from Otago regularly come to ADI “to see what the workplace is like, how we do things and what a future in science can look like”.

Ease of use is a key value with ADI’s offerings, and customer expectation and requirements often dictate product development. Engaging with students and pupils provides valuable insights into what “end-users” want – aside from being very computer-literate, young people are “very, very honest about what works, and what doesn’t,” he says.

The rise of cloud-based computing represents the most recent challenge.

“It certainly raises issues around data security and privacy, but you can’t stop

technology and cloud systems are where things are headed so development and staying relevant in multiple markets becomes a question of managing disadvantages.”

New directions in IT are also changing the way people learn, although Macknight remains a firm believer in the practicalities and less tangible benefits of physical laboratories and learning environments.

“There’s no doubt that ‘e-campus’ learning affords some great opportunities to prepare for lectures or review findings, but I still think physical campuses are essential for science. Beyond obvious reasons, like the need to house a range of equipment and safety, I think interaction with the staff is crucial.”

Students in “well-run, sensible labs” learn about using equipment and patient sensitivity and, occasionally, a lot more about their own physiology.

“Nursing students using the wrong cuff can see how this leads to erroneous blood pressure results, but we’ve also seen students discover a heart condition or subtle colour blindness, so it’s great to see them using our instruments to learn more about how variability and physiology are important.”

Macknight also enthuses about seeing ADI’s measuring equipment used in ground-breaking research. Austrian skydiver Felix Baumgartner leapt from the edge of space wearing technology that collected high quality data on his physiological changes and state as he sped towards earth. Similarly, in 2016 cardio-respiratory researcher Trevor Day, Associate Professor of Physiology at Mt Royal University, Canada, took ADI equipment on a 120 kilometre trek to the Everest Base Camp. His results yielded important information on the effects and causes of acute mountain sickness.

Macknight is equally enthused by the science behind recent Dental School research, which uses video capture software to analyse chewing muscles and forces on teeth, and another project involving the company’s products that tests the efficacy of a preliminary drug administered immediately after a heart attack.

ADI’s continuing growth is immensely rewarding, but Macknight seems more pleased by the fact that its success is driven by the company’s ability to adapt to meet a need to improve life sciences data measurement and collection equipment and software. And, as he pores over the internals of an “ancient” prototype, more than a trace of a boyish fascination with gadgets and how to make them work more efficiently is evident.

“Technology and science change all the time, and so do the requirements of life-sciences-related analysis and our users’ expectations. I think it’s worked for us because our twist is taking ideas that others may have pioneered and making stuff simple; you don’t need to know how your TV or car work to operate them – and that’s what we aim to achieve.

“We’ve always been expanding, but with online platforms there are a lot of places we can take it. The boxes we make will always be important, but our core IP is the software and, with that, there’s no limit, except for your imagination.”

SAM STEVENS



Michael Macknight:

"We've often been asked
'why stay in Dunedin?'
I'd say 'why not?'..."

Photo: Alan Dove

Professor Angela McCarthy: "People often have entrenched views about migration and it is important to understand and explain how and why those views arise."

Photo: Alan Dove



On the move

Otago's new Centre for Global Migrations research theme is taking a multidisciplinary - and timely - look at the many issues surrounding mass movements of people, with the aim of informing policy and public debate.

Myths and misunderstandings muddy our views on modern migrations, says Professor Angela McCarthy, director of the University of Otago's new Centre for Global Migrations research theme.

The topic makes news around the world, especially across the Americas, Europe, Africa, the Middle East and the Asia-Pacific region, but there's little depth in the information behind the headlines.

So the new centre's research into the realities surrounding mass movements of people, along with their goods, ideas and material culture, is important and timely.

Studying migrations shines a light on difficult questions facing society worldwide, including climate change, inequalities surrounding health and education, human rights and racism.

"With immigrants targeted as part of election campaigns here in New Zealand as well as in the United States and Europe, we can see that global migration is, for many, a deeply contentious, even toxic, issue," says McCarthy.

"It is clearly vital to consider where we are coming from to know where we are going. We can develop a more acute understanding of migration today if it is

seen in the context of past experiences. An eye to the past also helps identify issues of continuity and change.

"From a New Zealand vantage point, it is important to remember our migration history from early Māori migrations through to the arrival of Europeans, Asians and others. Today, 25 per cent of our population was born outside New Zealand and we have more than 200 different ethnic groups living here."

The idea for the multidisciplinary research theme grew from McCarthy's resolve that the University of Otago would be an ideal laboratory to explore the issue of global migrations through a collaborative framework.

She and Otago colleagues gathered sufficient support from a dynamic and diverse group of researchers to apply for funding — and the University agreed to establish the Centre for Global Migrations.

The current core group of Otago researchers comprises 30 staff and postgraduate students from the Humanities, Commerce and Health Sciences, and is seeking wider participation. "We're developing connections with affiliated researchers

from all spheres of the community who wish to organise events and conduct research with us, both individually and collectively."

One of the group's three main aims is to create an internationally-recognised research community encompassing academics, policymakers, heritage professionals, community workers, and cultural and arts groups.

Another key aim is to facilitate national and international interdisciplinary collaborations, brainstorming new methods and frameworks for migrations research so as to be able to inform public debate and policy.

An inclusive, listening environment is important, says McCarthy. "We need to connect across the disciplinary divide. The study of migration is undeniably a multidisciplinary endeavour, but the disciplines often speak past one another.

"By bringing disciplines and other researchers and practitioners together we are better placed to tackle key concerns and produce richer and more convincing answers to key aspects of migration."

Uniting the disciplines to explore past and present migrations across the globe is a new and exciting prospect, she

“The scale of today’s international migration is not unprecedented as some would claim, though the origins of migrants are more varied — as is the temporary character of much of this mobility.”

says. “Many of our members’ research spans not only recent migrant flows, but prehistoric migrations of people and material culture.

“We are still in our infancy, but the centre itself is already breaking new ground. Many similar research centres worldwide are limited in terms of their disciplinary connections, focus on contemporary migration without an eye to the past, or are geographically narrow in their endeavours.”

The primary aim is to understand and communicate knowledge about the diverse causes, consequences and legacies of migration.

“This enables us to also engage with the myths and misunderstandings that occur about migration. People often have entrenched views about migration and it is important to understand and explain how and why those views arise.”

Past migrations give perspective to today’s “refugee crisis”. The UN Refugee Agency estimates that currently there are around 65.6 million forcibly displaced people worldwide, of whom refugees comprise around 22.5 million. Yet global population displacement during the Second World War and its aftermath may have reached about 165 million.

“Aside from statistics, reactions to today’s migrant flows also have eerie and troubling resonance with previous mobility. Donald Trump’s efforts to restrict migration to the US from certain countries recalls early laws that tried to exclude groups like the Chinese, restrictions that New Zealand also once pursued.

“Migrants also continue to encounter moral panic about their cultures and beliefs, as in the past. Anti-Islamic

rhetoric, for instance, has parallels with the enmity that Irish Catholics encountered in previous times,” says McCarthy.

Today’s migrant numbers need to be considered as part of a wider picture. Currently, only 3.3 per cent of the world’s population lives outside the country of their birth for more than a year — a statistic that has remained the same for the last 60 years.

“The proportion of migrants worldwide who cross borders is remarkably consistent, even if absolute numbers have increased. The scale of today’s international migration, then, is not unprecedented as some would claim, though the origins of migrants are more varied — as is the temporary character of much of this mobility.”

Location is also a vital factor in migrations. “While New Zealand differs from other parts of the world, Dunedin’s experiences of migration vary, for instance, from those in Auckland.”

Listening to migrants’ personal stories is one of three key research clusters for the group.

“Too often when we study migration we look at broad statistics and patterns without considering the thrills and horrors or the adventure and exile that accompany human mobility. How do migrants conceptualise their migration experiences and how do they and migration researchers represent these accounts? And what stories do objects and ideas tell us? Narratives and representations of migration go far beyond statistics.

“Our second key cluster examines migration and education. International students are a significant cohort among those who migrate.

“The third key research cluster looks at migration, health and well-being and genetics. This theme engages not only with the physical and mental health and well-being of migrants, but also the challenges facing those in the health sector who work with migrants.”

The centre will bring together the work of many individual group members, showcasing and championing the depth and range of their research strengths and supporting their endeavours through opportunities to organise and host events, develop group research, and provide small amounts of research funding, says McCarthy.

Initiatives this year have included developing a range of local, national and international collaborations and arranging workshops and public talks.

The Global Migrations team has strong support from academics Professor Sir Tom Devine (Edinburgh), the leading historian of Scotland and its diaspora; prominent New Zealand migration social scientists Professor Paul Spoonley (Massey) and Professor Richard Bedford (AUT); former Governor-General Sir Anand Satyanand; members of Dunedin’s community and international experts who work on migration issues.

“The strength and diversity of this esteemed steering group will, we hope, act as a critical sounding board as we develop a plan to ensure the longevity of the centre.”

NIGEL ZEGA

Detecting Success

Photonic Innovations Ltd, a company established to commercialise laser gas-sensing technology developed in Otago's Department of Physics, is now making significant headway into the New Zealand market.

Physics labs and lasers might seem light worlds away from mines and meat processing plants, but an ever-growing push for health and safety – particularly in the area of gas detection – has brought these two seemingly separate spheres together.

Photonics Innovations Ltd has grown out of research led by former University of Otago (Physics) staff member Professor Andrew Wilson, who headed a team working at the Jack Dodd Centre, a precursor of the Dodd-Walls Centre for Quantum and Photonic Technologies. Having realised they could detect gases using laser spectroscopy, they initially looked to commercialise the discovery by developing gas detectors suitable for use in mines. After several years of the project lying dormant, private investment group PowerHouse Ventures came

into the picture in 2014 and set about turning the technology into a marketable product.

Photonics Innovations CEO Dr Ojas Mahapatra* says that rather than having a large detector designed to pick up four gases, they decided to focus on creating smaller units which sit on the wall and detect one gas at a time. Their first target was ammonia.

"Ammonia is used as a refrigerant in cold stores and food processing companies. Obviously, when you look at the gas detection universe, the biggest gas detection users are oil and gas, mining and metal making. The temptation is to go to that market, but you will find big giants like Honeywell, MSA and Dräger already there, so we decided to find a niche where our products would have unique advantages.

"When we were scoping out the market we found around 50 per cent of cold stores and food processors were not using any ammonia detectors at all. Ammonia is a deadly gas. It can cause food contamination worth hundreds of thousands of dollars and, in the worst cases, people can die."

The main reason for the low compliance was that existing chemical sensors were unreliable. They can deplete, require monthly calibration, and regular false alarms mean lost production time.

Mahapatra says Photonic Innovations' laser detectors have inherent advantages, including accuracy, reliability and much lower maintenance costs.

Photonic Innovations executive chair and PowerHouse investment manager Steve Silvey, a key player in the commercialisation push, says recent

* Dr Ojas Mahapatra has recently been named as one of 14 New Zealand CEOs to be awarded a Prime Minister's Business Scholarship to attend the London Business School's senior executive programme this month (October). CEOs from around the world are expected to be part of the month-long course at the prestigious school.



Dr Ojas Mahapatra: “We have the ability to do methane, hydrogen sulphide, carbon monoxide – most industrial gases. Every new gas opens up a new industry and revenue stream. So it’s a good, scalable platform.”

Photo: Alan Dove

changes in health and safety regulations are a big driver, putting responsibility fairly and squarely on company directors and senior management.

“At the same time, standards around managing ammonia have been published, mandating detectors. All of a sudden our target market was going, ‘gosh, we need to respond to this and do something about it’. So we are in a good position to take advantage of that.”

Photonic Innovations detectors are now being used by major New Zealand companies such as Silver Fern Farms, Alliance, Ovation, Sealord and Fonterra.

Currently the company is operating out of the Otago’s Centre for Innovation and Mahapatra is keen to remain on campus and keep the jobs created there in the region. The enclosure and multi-

pass cell are made in Christchurch while the electronic board is made in Dunedin, where the unit is also assembled, calibrated and tested.

“Ammonia is just a stepping stone into the market. The beauty of the technology is we just replace the laser in the device and put in a different laser for a different gas,” says Mahapatra.

“We have the ability to do methane, hydrogen sulphide, carbon monoxide – most industrial gases. Every new gas opens up a new industry and revenue stream. So it’s a good, scalable platform.”

Although the Otago research group was not the first to show that lasers could identify gases, Silvey says the clever part has been the ability to provide a detector in a shoe-box-sized package.

“Usually, if you wanted to detect ammonia at 50ppm [parts per million], which is alarm threshold, you need to shine a laser across a path length of about 30 metres. But a lot of the pump rooms and places where ammonia is stored are much smaller.

“So the real smarts in the University were about being able to bounce lasers across mirrors to achieve the same path length within a 10cm distance, leaving us with a compact unit that does the same job as a detector spanning 30 metres,” he says.

“There are only three or four places in the world that can do this stuff – and one of them is NASA. But we are the first to bring this to commercial use at an affordable price.”

One of the keys has been the ability to bring down the production cost of the

“There are only three or four places in the world that can do this stuff – and one of them is NASA. But we are the first to bring this to commercial use at an affordable price.”

multi-pass mirror cell, so they can sell the unit for \$6,000 to \$10,000. There are cheaper chemical sensors available, but they require expensive maintenance, whereas the laser sensors do not.

Photonic Innovations can also add value through web connectivity – meaning the units are self-testing and can send back health and status reports to a computer dashboard, showing the health of the device and the site. Chemical sensors, by comparison, have to be checked physically.

Silvey sees Photonic Innovations as just a beginning. PowerHouse is already working with Otago Innovation Limited (OIL) to commercialise other intellectual property (IP) and develop a portfolio of businesses.

He values the symbiotic relationship between R&D being done in a world-leading academic environment and feeding into companies that are addressing global problems from Dunedin.

“What we’re finding, even from a commercial point of view, is that it is better to have a strong research relationship – almost as part of the company’s DNA – so that we’ve always got new knowledge and new opportunities to bring to market. That’s something you’re not going to get if you cut the umbilical cord and disappear offshore.”

At some point Photonic Innovations may be floated but, Silvey says, that is still some time away.

“The fundamental milestone with any start up is when you start selling product. That’s validation that you’ve got something of value. There are a lot of science commercialisation projects that don’t get that far.”

They have recently signed distributors for both New Zealand and Australia and the plan now is to increase volume and get more presence in the market.

MARK WRIGHT



otago.ac.nz/otagomagazine



Professor Richard Blaikie, Deputy Vice-Chancellor (Research and Enterprise) was a contemporary of Dr Andrew Wilson (above, photographed in the *Otago Magazine* issue 13, 2006) as an undergraduate student at the University of Otago in the 1980s.

“Andrew was innovative and inquisitive in his research, gaining fame as the leader of the first team outside the USA or Europe to achieve Bose-Einstein condensation in a cloud of ultra-cold atoms – a new state of matter previously unobserved.

“Andrew’s commercial acumen always sat equally alongside his world-leading experimental skills, so it is no surprise to see the application of the same lasers he used to trap and cool ultra-cold atoms being applied to detect ultra-low quantities of trace gases in cool stores.

“Seeing this work flourish through Photonic Innovations now is wonderful, showing the need to bring the strong commercial and financial skills of Ojas, Steve and the PowerHouse investors to bear to bring a revolutionary product like this to market.”

Sustainability in action

The University of Otago is taking a bold approach to sustainability, integrating sustainable principles and practices across all campuses and all activities.

Sustainability is not new to Otago, but with the official launch of the Sustainability Strategic Framework: 2017–2021 earlier this year, the University is clearly outlining its objectives for the future and how it plans to achieve them.

The framework is the culmination of a rigorous planning, consultation and negotiation process that has taken place over several years, with input from many groups and individuals – including staff and students.

Manager of the Office of Sustainability Dr Hilary Phipps says this buy-in now gives Otago an opportunity to become an Australasian leader in sustainability practice and research.

“As a research-led university with an unwavering commitment to excellence – and an emphasis on meaningful actions over empty words – we can work together to achieve our goals.

“By treating our campuses as ‘living laboratories’ of sustainability practice, research and teaching we will be able to address our own sustainability challenges and equip our students

with sustainability skills they can take out into the world.”

Cutting the University’s carbon footprint is a priority. “We hope to halve the University’s energy-related greenhouse gas emissions and cut our carbon footprint by one third within the next three years by changing the fuel supply of the boiler that heats about 40 per cent of the Dunedin campus from coal to locally-sourced wood,” she says.

A website otago.ac.nz/sustainability has been created to highlight progress and a “green team” network has been established throughout the University to provide help and support in sustainability practice.

“We want to make it as easy as possible for staff and students to work with us,” Phipps says. “A points system will reward sustainability actions, so that workplaces and residential colleges can be recognised as supporting sustainable practices. Every little thing counts. Even something as simple as turning off the light when leaving a room makes a difference.”



Sustainability Manager **Dr Hilary Phipps** and Chief Operating Officer **Stephen Willis** at the launch of the University’s Sustainability Strategic Framework: 2017–2021 in May.

Photo: Sharron Bennett

The Sustainability Framework is an evolving document, articulating 22 strategies within six themes (below), enabling sustainability to be embedded within the core ethos at Otago. It builds on initiatives already underway, challenges the implementation of new sustainability practices, and encourages the celebration of progress and success.

Apply a whole systems approach

Sustainability will be integrated throughout all activities, from administration and operations, to research, teaching and community engagement.

Lead by example through our operations

Otago will raise the bar by pursuing a low carbon future, promoting sustainability in its built environment and in the procurement of goods, encouraging sustainable transport, minimising water consumption, pursuing a goal of zero waste and supporting sustainable food systems.

Nurture a culture of sustainability

Staff and students will be encouraged to actively engage in collaborative sustainability programmes so that this becomes the new norm.

Enhance sustainability research

Sustainability-related research and sustainable research practices will be encouraged, with the University used as a “living laboratory”.

Support education for sustainability

All students will have the opportunity to be engaged with sustainability issues regardless of their programme of study, equipping them to make a positive contribution to sustainability throughout their lives.

Collaborate and be a catalyst for change

Collaborative relationships with other institutions and the wider community will enable the University to advocate for sustainability in New Zealand and beyond.

With no time to waste, a number of priority sustainability actions are already underway.

Operational sustainability targets are set (measured against a 2012 baseline):

33%

Total greenhouse gas emissions reduced by 33% by 2020

20%

Energy efficiency improved by at least 20% by 2025 ...

100%

... with the university's energy needs becoming 100% renewable by 2030

50%

Waste to landfill reduced by 50% by 2021

Transition from coal to biomass as the source of steam (heat) to the Dunedin campus.



A voluntary “green team” network provides sustainability support, advice and resources in departments and residential colleges.

The University will become a “living lab” of sustainability practice, research and teaching.



Working with the Energy Efficiency and Conservation Authority, a targeting and monitoring programme will improve energy efficiency and reduces costs.

A stocktake of sustainability-related research and teaching will be undertaken to identify strengths as well as areas that need future development.



A revolving “green fund” will support efficiency projects.

An effective communications strategy will provide transparency.



Green building standards are to be finalised and implemented.

Certified Emissions Management and Reduction Scheme (CEMARS) accreditation.

Tourism on the

New Zealand tourism is under pressure. With growing numbers and rising prices, how can we add real value to this important industry?

New Zealand is experiencing a boom in tourist numbers, no doubt, with some 3.6 million tourists annually and double-digit growth rates for the last two years: tourists added 5.6 per cent – or \$12.9 billion – to GDP, and employed 188,136 people – or 7.5 per cent – of the workforce. As resources are stretched, there are calls to target value rather than tourist numbers.

Years of tourists' positive word-of-mouth have created a ground-swell of good will and more airlines fly into the country to harvest the windfall: both create a strong pulling power. We will likely see a further increase of between 12-15 per cent in visitor numbers yet, as prices climb and with barely sufficient accommodation available, how can New Zealand keep delivering value?

Even the shoulder seasons are beginning to flatten, particularly in the South Island where the accommodation sector booked a 10 per cent growth rate in 2016 compared to the previous year. The Lions' Tour in June [2017] brought some 25,000 additional visitors and an \$85 million windfall. Yet these tourists found it difficult to get a place to sleep, with freedom campers continuously maligned and price gouging not uncommon.

The tourism sector now looks forward to the America's Cup in 2021. Four years

away, it will take place during the peak season, putting even more pressure on the accommodation sector and likely to lead to a drop-off in domestic tourism. Feeling squeezed out of their own backyard, Kiwis will find it cheaper and more convenient to go overseas.

The cracks are beginning to show: prices for accommodation, entertainment and activities are at an all-time high – and New Zealanders are beginning to complain. Lacking proper social impact studies, it is local newspapers that are highlighting increasing protests about too many freedom campers, steep hut fees and crowding. They signal the end of Kiwis' love affair with overseas tourists. Soon international tourists, too, will note that New Zealand is pricing itself off the market as it provides less rather than more value for those coming from far away.

Comparing prices in major cities across the globe in 2015, the Swiss corporate and financial service organisation UBS reports that the prices of goods and services in Auckland (excluding rent) are surprisingly similar to those in Tokyo, Chicago and London, and not far behind the most expensive cities of Zurich, Geneva and New York. The price for a three-course evening meal in a good restaurant in Auckland, for example, is right up there with the

most expensive cities in the world, even without alcohol. While Tokyo charges double, Zurich asks for only \$40 and Geneva for \$30 more than Auckland, and London is a bargain with \$50 less per three-course meal.

The same UBS study further reports that, so far, the handful of Auckland five-star hotels charged approximately half of what their competitors charge overseas, while the more prevalent three-star hotels are now no longer far behind prices in expensive cities around the world. So, how likely is it that "the highest value-segments" Tourism New Zealand seeks to target will spend more while staying longer?

In truth? Unlikely, because we are simply not prepared for further increases in tourism numbers as New Zealand's value-for-money ratio is declining rapidly.

Firstly, it is unlikely the New Zealand government will provide timely research and strategic assistance to identify pressure points, and assist communities to deal with the outfall of tourism bursting at the seams. The government's neo-liberal ideology does not provide for resource protection. Worse, we cannot expect either of the main political parties to provide sustainable tourism policy. They don't have the capacity, like the Greens or other minor parties, and they all have been putting their trust into a handful of economists with little specialist knowledge at an ever-shrinking "ministry".

Secondly, productivity and value-added is measured only in dollar terms, but not in well-being. This short-sighted

"Feeling squeezed out of their own backyard, Kiwis will find it cheaper and more convenient to go overseas."

verge

view has been the reason for the demise of destinations overseas. Like at the Costa Brava, Rimini or the Caribbean, the common trend has been low wages, lack of career paths, increasingly disgruntled locals and the demise of the resource.

So, what can be done?

Communities need to wake up and push for change. In order to harness more value from tourists, higher value needs to be created first. Communities need to push for a redistribution of tourism revenues to the places where tourism is consumed and – after years of neglect – they need to catch up. They need to provide more and better facilities for domestic and international tourists, and to decentralise demand.

City councillors need to upskill. Rather than letting the entrepreneurs fight it out, they need to educate themselves and include locals so they may realise tourism's benefits together. They must create the ground for tourism businesses to help build and extend the local brand. By empowering themselves and others through collaboration, they can create value sustainably. This value comes not only through “hard” measures like better infrastructure, but also through “soft” measures such as unique local service attributes. These need to be supported by locals and “lived” by committed staff – not a transient, foreign workforce that dilutes value.

Tourism destination brands are the harbingers of value-added, but they run opposite to neo-liberal ideology, which favours resource exploitation and asset stripping.

Professor Juergen Gnoth
Department of Marketing

Professor Juergen Gnoth: “Communities need to push for a redistribution of tourism revenues to the places where tourism is consumed and – after years of neglect – they need to catch up.”

Photo: Alan Dove



Law of the land


Māori storytelling and a deep affiliation with the land have helped define Jacinta Ruru's already distinguished career as New Zealand's first Māori Professor of Law.

For Māori the land, sea, rivers, forests and all that lies within and stems from them came into being when Papatūānuku (Earth mother) was separated from Ranginui (the Sky) by Tāne Mahuta. Their parting let in light, and Papatūānuku became cloaked in rich and diverse life. It is this korowai (cloak) which has sustained and continues to sustain us all.

The Māori creation story is the foundation for tikanga Māori and establishes the relationship between people and whenua, the land. In te ao Māori – the Māori worldview – people do not necessarily own land or sea in the way Pākehā think of ownership; rather their responsibilities arise from longstanding association with a place. This may include the right to enjoy its bounty, but this, in turn, creates obligations to care for and manage the land.

Rights and responsibilities in relation to land are near to Jacinta Ruru's heart, although – ironically – the seeds of this passion were sown deep in the forested heart of a landscape that was not of her own people. Her tribal affiliations – Raukawa, Ngāti Ranginui and Ngāti Maniapoto – are North Island, but she grew up in Glenorchy, at the head of Lake Wakatipu. Here her father trapped possums, hunted deer and mined for scheelite. The land provided for her family and the adjacent national park became her playground.

Ngāi Tahu country is where Ruru, now 20 years into a distinguished career at the University of Otago, remains. Her appointment in 1999 made her the University's first permanent Māori staff member in the Faculty of

A portrait of Professor Jacinta Ruru, a woman with dark hair, smiling slightly. She is wearing a traditional Māori cloak (haka) with intricate black and white patterns and brown tassels. The cloak is worn over a blue top and a black jacket. She is standing in front of a wooden structure with traditional Māori carvings (whakairo).

Professor Jacinta Ruru:
"I've realised that all
my research is around
indigenous people's
rights, responsibilities and
opportunities to own, manage
and govern land and water."

Photo: Alan Dove



Winner of the 2016 Prime Minister's Supreme Award for Teaching Excellence, **Professor Jacinta Ruru** believes "all law students coming through now must have an understanding of tikanga Māori to practise law in New Zealand".

Photo: Alan Dove

Law, and she remains the only Māori permanently on staff to this day. In many ways, however, this is an anomaly that belies the considerable progress for Māori to which she has made a significant contribution through both her teaching and research, a contribution recognised in 2016 by the Prime Minister's Supreme Award for Teaching Excellence, election as one of two first Māori women as fellows of the Royal Society Te Apārangi, and her appointment to a professorship which made her the country's first Māori law professor.

As you might imagine, 1,500 words can't do justice to the story of how Ruru got from Glenorchy to this point, although it seems appropriate nonetheless to use some of them to acknowledge Māori storytelling. It is these stories, after all, that have helped Ruru get to where she is today and have shaped her groundbreaking approach to legal research and education.

At 15 years of age Ruru was introduced by the greatest of gifts – a

good teacher – to the writing of Patricia Grace and Witi Ihimaera. It was, she says, "a real change moment" in which she realised the power and value of the Māori voice and she determined to find her own way to express it.

At first Ruru thought documentary film-making would be her way of doing this, and she took herself off to study Politics and Māori. However, in the course of her first undergraduate degree she encountered the Treaty of Waitangi in a legal context thanks to a fellow student. A light came on. Ruru recalls "seeing the potential in law to contribute to change in a system".

Ruru completed her LLB at Otago at a seminal moment in history with the passing of the Ngāi Tahu Claims Settlement Act 1998.

"That statute was unique and groundbreaking in many ways," says Ruru, "but for me it was the schedule, which included Ngāi Tahu stories about their land and places like Mount Earnslaw Pikirakatahi that I knew well,

that was incredibly moving. I could see the power of law to tell those stories, and I began to think about law in an entirely new way that's much more respectful of Māori relationships with land."

Her master's thesis, begun in 1999, investigated how – or, perhaps more accurately, whether – the management of New Zealand's conservation estate was giving effect to the principles of the Treaty of Waitangi as stipulated under the terms of its governing statute, the Conservation Act 1987. Then, in 2006, Ruru embarked on her doctoral project, a comparative study exploring indigenous peoples' relationship with national parks in New Zealand and Canada. In this she was supervised by the distinguished First Nations scholar Professor John Borrows, whose own use of indigenous storytelling in law had inspired Ruru.

Ruru's research since then – and there is a significant body of it, with more than 90 publications to date – has encompassed subjects such as rights to fresh water; comparative studies

of indigenous rights in New Zealand, Canada, Australia and Scandinavia; and a re-evaluation of the Common Law Doctrine of Discovery. Current research interests include a collaborative legal analysis of the experience of Ngā Rauru in relation to proposed extractive industries, a survey of Māori approaches to caring for Tāne Mahuta (forests) and a study of the legal issues associated with building residential housing on Māori land. She is also involved in a review of the Wildlife Act 1953, exploring how it might better enable Māori to have a relationship with species that are integral to their cultural survival and identity.

“In my early-career years I felt I was being pulled in different directions,” she recalls, “but more recently I’ve realised that all my research is around indigenous people’s rights, responsibilities and opportunities to own, manage and govern land and water.”

Ruru describes being the only Māori academic staff member in the Faculty of Law as a privilege, in that it gives her the opportunity to work with and mentor Māori students (taura). In 2015 she established a programme called Te Īhaka: Building Māori Leaders in Law, named after esteemed alumnus Chief Judge Wilson Isaac. The programme has been instrumental in supporting taura Māori to succeed in law. Ruru points to an encouraging increase in the taura Māori cohort – numbers have doubled over the last few years – and improvement in the level of achievement. In 2016 the top mark in Laws 101 was achieved by a Māori student, while recent graduates have gone on to undertake postgraduate study in Ivy League colleges and clerk for New Zealand’s Supreme Court.

Part of the idea for Te Īhaka came from a casual conversation between Ruru and a University of Auckland colleague at a Māori research hui in which the engineering lecturer, Dr Kepa Morgan, shared stories about a “boot camp” aimed at supporting Māori engineering students. Ruru was inspired to develop Te Īhaka and, in turn, others now build on her ideas to develop similar programmes in other disciplines. She says that such networking helps Māori academic staff overcome the isolation associated with being a minority in most disciplines and sparks interdisciplinary research opportunities.

Ruru is co-chair of Te Poutama Māori, a caucus for the 70-plus Māori academic staff members who are spread across Otago’s three campuses, and co-director of Poutama Ara Rau, the University’s research theme dedicated to Māori research and teaching excellence.

At the national level she is co-director of Ngā Pae o te Māramatanga New Zealand’s Maori Centre of Research Excellence, one of the country’s top 10 centres of research excellence. The centre has 21 partner research entities, including universities, polytechnics, wānanga and Crown Research Institutes, inspiring and enabling significant new Māori-led student and scholar research.

Ruru describes Ngā Pae o te Māramatanga as “a powerful network of Māori researchers who want to make a difference by doing useful research that will help further transform Māori communities and the nation”.

“Our vision is Māori leading New Zealand into the future,” she explains, “because we believe that Māori innovation will enable us to find many

of the solutions our country needs going forward.”

This passion for the potential of tikanga Māori is reflected in Ruru’s teaching practice. She teaches papers in Māori Land Law and Law and Indigenous Peoples, and also the first-year law paper that all intending law students tackle. In all her courses Ruru introduces students to some of the stories that inspired her, including those embedded in the Ngāi Tahu Settlement Act, which she sees as particularly relevant given the University’s location.

“I find story an engaging way to connect with students and excite them about the possibilities they may have in the law. I think, as a profession, we’re on the cusp of appreciating the wealth of knowledge that Māori can bring to our legal system and realising that all law students coming through now must have an understanding of tikanga Māori to practise law in New Zealand.”

Ruru tells her own stories of students, both Māori and Pākehā, who have expressed appreciation to her for helping them see the world in new ways – something she believes is the role of university teachers. She also sees the new affirming influence of tikanga Māori on New Zealand law – she cites the 2003 conclusive over-ruling of the historic Wi Parata decision, which ruled the Treaty of Waitangi as a “simple nullity”, and a 2012 Supreme Court decision recognising tikanga Māori as part of our common law – as an opportunity for everyone.

“Māori law sits differently to Western law – there are some fundamental belief differences. One is values-based, while the other is more rights-based. But it’s not that one is better than the other; there are just different ways. As a country let’s look for the best of the solutions and opportunities for all of us.”

REBECCA TANSLEY

“We believe that Māori innovation will enable us to find many of the solutions our country needs going forward.”

Play on

Theatre Studies students gain first-hand experience of professional theatre - on and off the stage - in a Fortune Theatre production of Shakespeare's *Twelfth Night*.

The Theatre Studies programme and the Fortune Theatre have lowered the curtain on another successful collaboration, this time involving a modern take on Shakespeare's *Twelfth Night*.

The collaboration, which offered 11 Theatre 454 students the chance to take part in the recent Fortune production, was an invaluable experience, says fourth-year student Orion Carey-Clark.

"Being given the opportunity to perform in a professional production meant that I was surrounded by professional actors and directors who are all fantastic at what they do. Often I found myself just listening and watching when I wasn't being rehearsed because the conversations taking place were so informative and helpful."

Theatre 454 - taught by Department of Music head Professor Stuart Young, senior lecturer Hilary Halba, and theatre manager and professional practice fellow Martyn Roberts - is an honours paper offered every two years. It was first offered in 2015, when nine students were

involved in the Fortune's production of *Punk Rock*.

This year's class comprises 11 third- and fourth-year students, the maximum spaces available, says Young. "There'd be a danger if there were too many students. It's about being able to provide proper mentoring and supervision for them. And giving them a meaningful project and experience."

Twelfth Night saw the students working in every department throughout the theatre, from the design and construction of the set, costumes and lighting, through to education and marketing. Third-year Nina Mullane designed one of the key costumes - Olivia's black dress - and fourth-year Zoe Connor took on the important role of assistant director.

"After spending so many years studying the theatre in an academic context, it was fantastic to have the hands-on experience to go with that," says Connor.

"The mentors were amazing. They welcomed us into the cast and crew

family and provided us with infinite learning opportunities, while always being supportive and helpful."

Third-year Shaun Swain was one of three students who successfully auditioned for an acting role, ultimately playing three characters - Valentine, a maid and a priest.

"Regardless of what the audition is for and for whom, there is always this strange mix of nervousness, excitement and questions of whether I'm worrying too much or being too complacent. But, in the end, it's always important to breathe and let myself be myself: to slow down, think, and take things as they come," says Swain.

"It's been an intensive and rewarding course being surrounded by people with so much experience and ability to the point that every single day was full of discovery and learning. In addition to the learning experience, I was also given the opportunity to act in the accompanying children's show, *What You Will*, which was rehearsed and performed during the days of the *Twelfth Night* show - which,

"Being given the opportunity to perform in a professional production meant that I was surrounded by professional actors and directors who are all fantastic at what they do. Often I found myself just listening and watching ..."



University of Otago *Twelfth Night* students. Back row (from left): Shaun Swain (actor), Zoe Connor (director), Nina Murnane (costume), Ariana Robertson (lighting), Dominic Houlihan (set), Amy Wright (theatre management). Front row: Orion Carey-Clark (actor), Kate Johnstone (actor), Beth Waite (stage management), Shannon van Rooijen (set), Sam Farr (education).

Photo: George Wallace

while tiring, was incredibly worthwhile.”

For Carey-Clark, who played Antonio in *Twelfth Night*, the experience has confirmed for him that acting is something he wants to continue with.

“It’s also opened my eyes to the level of skill and practice needed to perform as a professional. I was challenged by a professional director, Ben Henson, who pushed me in terms of the performance I needed to give. And it was certainly different rehearsing full time. But it was great because it just immerses you in it way more. It’s a much more dedicated approach.”

Young describes the collaboration between the Fortune and the University as “a real privilege”, as well as a stepping stone for a number of students, such as Jordan Dickson who was assistant director for the *Punk Rock* production in 2015 and who is now the Fortune’s marketing and front of house co-ordinator.

“It’s great the way the Fortune empowers these young people,” says

Young. “It really crystallises what they want to do.”

The collaboration also benefits the Fortune too as it allows them to aspire to bigger-scale productions, Fortune’s Theatre director Jonathon Hendry says.

“It’s also valuable for us to work with students as, through their enquiry, you can reassess your habits and re-evaluate processes as you share them. By imparting knowledge – teaching – you invariably learn new things from those you’re working with. All the students, on and off stage, contributed a great deal to the life of the theatre over the period.”

Hendry is happy to see that the relationships are still developing, with students continuing to offer to participate.

“That, to me, is the real joy in this collaboration. To forge and develop relationships and break barriers to enable opportunities for young practitioners to get involved in the rich collaboration that is professional theatre.”

LAURA HEWSON

“After spending so many years studying the theatre in an academic context, it was fantastic to have the hands-on experience to go with that.”

Managing land retreat

Help is on its way for local bodies wrestling with the prospect of retreating from land under threat from natural hazards.

Dr Ben France-Hudson (Faculty of Law) is a member of a research team that is investigating the legal and social implications of changing existing land use in order to achieve a managed retreat from land at high risk from threats such as sea level rise, coastal erosion and flooding.

France-Hudson says that they are particularly interested in the planning and legal barriers to managed retreats, and possible solutions.

He says that one of the problems under the current law is the conflict between the powers of regional councils, and of city and district councils; he says that private property rights add a further complication.

"We are interested in how you respond to a managed retreat from land in light of existing uses of private property, what works well and what not so well, and how decisions get made."

He says that the key to the research is talking with people directly affected – particularly local government representatives – rather than trying to impose a theoretical solution.

The team will produce a research report, along with articles, addresses and an online toolbox of relevant information.

The two-year research project is being led by a GSN Science planning specialist, Emily Grace, and also involves an independent social scientist, Dr Margaret Kilvington. It is being supported by the Ministry of Business, Innovation and Employment's National Science Challenges Fund.



Dr Ben France-Hudson: "We are interested in how you respond to a managed retreat from land in light of existing uses of private property ... and how decisions get made."

Seeing the light

One of those proverbial "light bulb moments" has won a University of Otago physicist an international contest.

Dr Harald Schwefel has taken out the inaugural Bright Ideas Competition, sponsored by the Optical Society of America Foundation and the international laser manufacturer, Quantel Laser.

Schwefel explains that his bright idea relates to tightly correlated photons, which are tiny quantum particles that make up light. He says that the idea is to use a high-powered, single-frequency, fibre laser to generate what are called "photon triplets".

"We want to make it possible in the laboratory to generate these photon triplets, which are a completely new quantum optical state of light and which has, so far, not been achieved."

Schwefel says that the research has the potential to enable the building of revolutionary quantum computers and to provide fundamentally secure communication channels.

Schwefel was one of four finalists – selected from 80 entrants from 23 countries – who pitched their bright ideas at the Conference on Lasers and Electro-Optics in San Jose in California. The other three finalists were from the United States.

Schwefel says that he is putting the US\$30,000 prize towards a custom-built laser that will further the research, in association with PhD student Luke Trainor. He says that the laser will also

be useful for other research projects within the Otago-directed Dodd-Walls Centre for Photonic and Quantum Technologies, a New Zealand Centre of Research Excellence.

"I think the award is great," Schwefel says, "and puts the spotlight on Otago and the great science that is possible here."



Dr Harald Schwefel: "The award ... puts the spotlight on Otago and the great science that is possible here."

Flu a major killer

Research by the University of Otago, Wellington, has found that influenza kills about 500 New Zealanders each year, making it probably New Zealand's biggest single infectious disease killer.

The study, published in the *Journal of Infection* based on work by Dr Trang Khieu as part of her PhD, found the risk of premature death is much higher for Māori, Pasifika, men and those living in relative poverty.

This is the first time in any country that the distribution of flu deaths has been estimated in relation to ethnicity and social deprivation (as well as gender and age group which have been looked at in previous studies).

The researchers used a series of quasi-poisson regression models to estimate flu deaths in each population group, because only a small proportion (about one in 23 in New Zealand) of flu deaths is recognised and recorded on death certificates. The largest numbers of flu deaths (37 per cent) are recorded as circulatory conditions such as heart attacks and strokes. In most instances, flu will not even be suspected as the cause, particularly in cases of sudden death.

The study by Trang, Professor Michael Baker and other public health researchers, was based on 15 years of data from 1994 to 2008, prior to the last influenza pandemic (2009-2010).

"We found striking inequalities in influenza deaths, showing that it's important to target flu vaccination and other interventions to the most vulnerable groups, particularly Māori and Pacific people, men aged 65-79, and those living in the most deprived areas," Baker says.



Professor Michael Baker, Dr Lucy Telfar-Barnard and Dr Trang Khieu: "We found striking inequalities in influenza deaths, showing that it's important to target flu vaccination and other interventions..."

Nature and ageing

An Otago study has emphasised the importance of an ongoing connection with nature for well-being in older adults.

The study is a collaboration between Professor Claire Freeman (Department of Geography), Associate Professor Yolanda van Heezik (Department of Zoology), Associate Professor Debra Waters (Department of Medicine/School of Physiotherapy), and health-care researcher Yvette Buttery.

They gathered information from 72 people, aged between 66 and 99, living in family homes, downsized homes and rest homes, on how their relationship with nature alters with changes in age, health and place of residence.

Freeman explains that nearly everyone interviewed said that nature was enormously important to them. "How they interact with nature may have changed as they aged, but remains an important contributor to their physical and mental well-being. For those less able-bodied, enjoyment of nature can come from something as simple as enjoying a view of a flower, a bird, the sea or the sky through a window."

Van Heezik says that gardens play a vital role. "Even if age has a negative impact on people's ability to access the great outdoors due to increasing physical fragility, older adults can enjoy their garden at any age."

She says that the results of the study have importance for town planning. "In terms of biodiversity benefits, large natural

areas support more native species but, in terms of benefits to individual people, it is important to have smaller green private or communal spaces that are immediately accessible and part of people's everyday lives."



Associate Professor Yolanda van Heezik, Yvette van Heezik, Mary van Heezik, Associate Professor Debra Waters and Professor Claire Freeman: Nearly every person interviewed said that nature was enormously important to them.

Sensing food

Is the old adage that someone's eyes are bigger than their stomach the real reason why some of us are more susceptible to over-eating than are the thinner people around us?

Dr Mei Peng (Department of Food Science) is researching how our five senses interact with our eating behaviour: the look, smell and taste of food, the feeling of food textures in our mouths, and even the sound food makes when we bite and chew it.

"At this stage, I am looking at normal eating behaviours," Peng explains. "I am interested in why someone eats more than others; why someone likes to snack more than others."

Peng, who has a background in experimental psychology, has been laboratory testing the sensitivity of community volunteers, one sense at a time.

"I have found significant differences among people in terms of their relative sensitivities across the senses. For instance, I have found that some people are more sensitive to smell than to visual stimuli, whereas in other people it is the opposite way around."

Peng is seeking funding for further research on the interaction between the senses and eating behaviour, but initial results suggest that the adage does have some validity.

"The preliminary finding comparing vision and smell is that people who rely more on vision are more likely to over-eat."

Peng says that better understanding of the interaction between the senses and human eating behaviour opens up the possibility of targeted intervention to help people with eating disorders.



Dr Mei Peng: "The preliminary finding comparing vision and smell is that people who rely more on vision are more likely to over-eat."

Prostate cancer breakthrough

University of Otago researchers have discovered a breakthrough in the fight against an advanced type of prostate cancer.

Professor Rhonda Rosengren (Department of Pharmacology and Toxicology) says that she and her research team have found that an existing drug, raloxifene, used to treat other conditions, is also effective in treating hormone-refractory prostate cancer.

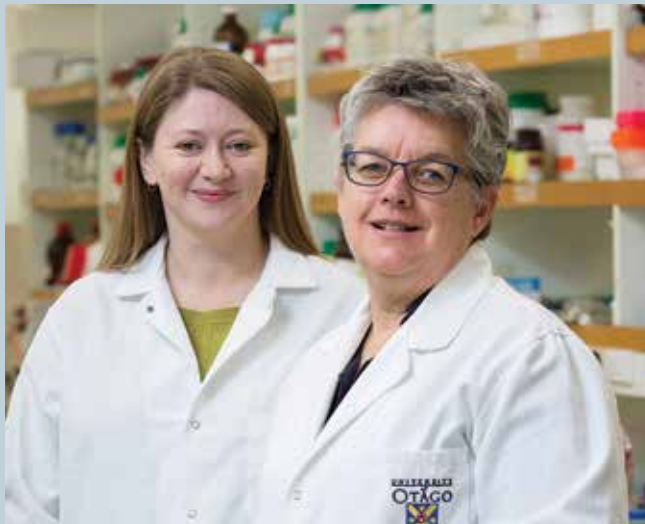
"Raloxifene is currently prescribed for post-menopausal women with osteoporosis and can also be used as a breast cancer preventative in high risk post-menopausal women.

"Because we were having good success in treating what is known as triple-negative breast cancer with raloxifene, and triple-negative breast cancer and hormone-refractory prostate cancer are quite similar, we thought that raloxifene might also have a good chance of working in the treatment of hormone-refractory prostate cancer."

Rosengren explains that, once men progress to hormone-refractory prostate cancer, it is very difficult to treat and the prognosis is not very good. However, experiments with laboratory mice show that raloxifene shrinks the tumours and decreases the spread of the cancer cells to other areas of the body.

Rosengren says that, because raloxifene is already a clinically-approved drug, there should be a much faster track to gaining approval to re-purpose it to treat hormone-refractory prostate cancer than there would be to get approval for a new, untested drug.

In this research Rosengren worked with the late Dr Elspeth Gold, research fellow Dr Sebastien Taurin, and assistant research fellow Mhairi Nimick, and obtained funding from the Otago Medical Research Foundation.



Mhairi Nimick and Professor Rhonda Rosengren: "Because we were having good success in treating triple-negative breast cancer with raloxifene ... we thought that raloxifene might also have a good chance of working in the treatment of hormone-refractory prostate cancer."

Early education advantages

Children who attend early childhood education will earn more than those who do not, research from the University's Christchurch Health and Development Study has shown.

The University of Otago, Christchurch-based longitudinal study has tracked the progress of more than 1,200 children born in the city in the late 1970s.

At age 30, study participants who attended some form of early childhood education, such as kindergarten, had higher incomes, better academic achievement and higher participation in paid employment than those who did not. These benefits were independent of their family's socio-economic situation and other factors associated with attendance at early childhood education.

Study director Associate Professor John Horwood says those with two to three years of early childhood education were earning on average \$50,200 a year by the age of 30, compared with \$43,000 for those with none and \$45,400 for those with less than one year of early education.

They had better verbal and maths skills than other children at school, were more likely to go to university, and had higher average academic achievement by the age of 30.

Horwood says those who attended early childhood care were also less likely to become a parent or commit a property or violent crime during their teens.

The better educational and income outcomes were likely the result of higher secondary school achievement of those who attended early childhood education, he says.



Associate Professor John Horwood: Those with two to three years of early childhood education were earning on average \$50,200 a year by the age of 30, compared with \$43,000 for those with none...

Healthy heating

Getting into hot water could result in significant health benefits for some people.

Associate Professor Jim Cotter and assistant research fellow Ashley Akerman (School of Physical Education, Sport and Exercise Sciences), and Dr Kate Thomas and Professor Andre van Rij (Department of Surgical Sciences) are researching the health benefits from heat - such as spa bathing - for people who suffer from peripheral arterial disease.

Cotter explains that sufferers struggle with physical activity because it causes muscle pain and fatigue in the legs, but this becomes a vicious circle as the lack of exercise leads to further deterioration.

He says that heat induced by physical activity is known to provide significant health benefits, and they want to determine the benefits of using heat from bathing as a stressor to improve health and physical capability.

The researchers are working with people who suffer mild to moderate disease. "They spend half an hour in a spa several times a week, get changed to keep warm and perform some resistance exercises," Akerman explains.

He says that tests of cardiovascular and metabolic health and some physical capability are performed before and after six and 12 weeks of the heat and exercise regime, to see how they fare compared with patients attending a walking-only group.

Thomas, who is also a vascular technologist, stresses that physical exercise is still the best medicine if people are able to undertake it because of the wider health benefits of exercise.

A Lottery Health Research grant is supporting the research.



Associate Professor Jim Cotter, Dr Kate Thomas and Ashley Akerman: They are looking at the benefits of using heat from bathing as a stressor to improve health and physical capability.

Climate finance silence

Climate change is a hotly discussed topic globally, but not, it appears, among leading finance journals.

Associate Professor Ivan Diaz-Rainey (Accountancy and Finance) recently published an article *Stranded research? Leading finance journals are silent on climate change*.

His investigation into how much finance journals had published climate change research, funded by the Tyndall Centre for Climate Change Research in the UK, found the leading publications had little on climate finance topics.

The article has attracted a lot of online interest: Altmetric scored it in the top five per cent of all research outputs.

Diaz-Rainey says it appears finance academics are doing little research in the area, largely because the top journals are unlikely to publish their work. This is despite the fact that climate change presents both substantial risks to the global financial system and opportunities for investors.

He says there are major current debates around stranded fossil fuel assets, divestment from carbon-intensive stocks, the direct impact of climate change on assets, carbon markets, green investing and development finance, risk management strategies including climate insurance and broader financial stability risks.

In particular, the risk to business caused by the agreement to keep the increase in global average temperature to well below 2°C needs robust investigation.

“The fact that this isn’t being researched robustly at present creates a gap in knowledge and it impacts on teaching, as universities have no research to draw on to inform current students before they go out into the industry.”

tyndall.ac.uk/news/stranded-research-leading-finance-journals-are-silent-climate-change



Associate Professor Ivan Diaz-Rainey: “The fact that this isn’t being researched robustly at present creates a gap in knowledge ...”

Drug resistance clue

A chance discovery by Faculty of Dentistry researchers has uncovered a piece of genetic sleight-of-hand that may be contributing to the global problem of multi-drug resistance.

Research leader Dr Erwin Lamping (Sir John Walsh Research Institute) says the basic process of gene mutation is the key.

“When a gene mutates, its original function is lost. However, organisms can adapt to this with gene duplication – if one copy mutates and changes its function, the organism still has the original gene with its original function. This allows organisms to develop a range of different functions or abilities.”

While investigating drug-resistance in yeast – a cause of many common human infections – the team discovered a gene encoding a protein that pumps drugs out of yeast cells. Right next to it was a seemingly identical, tandem-duplicated gene with only six short regions being different – the result of gene mutation.

“We carefully studied genes from seven yeast strains from different parts of the world and found 30 copies of the pump genes, all with the same pattern: they had large regions that were identical and six small regions that differed, enabling the pumping of different drugs,” he says.

“This repetition of almost identical genes, but with different functions, may have gone largely unnoticed in other organisms, including humans.”

He says it may help explain why cancer cells become multi-drug resistant, why people react differently to drugs and why some drugs do not work for some people, potentially leading to new ways to overcome drug resistance in humans.



Dr Erwin Lamping: “This repetition of almost identical genes, but with different functions, may have gone largely unnoticed in other organisms, including humans.”

Packaging a punch

We consumers are more susceptible to the look of food packaging than we might like to think.

Dr Rob Hamlin (Department of Marketing) has developed what he describes as a reliable, simple and easily administered test for measuring the impact of package graphic designs on consumer choice that replaces opinion with quantifiable output.

Hamlin explains that the experimental technique allows consumer groups to compare several proposed graphic designs for the same product, both with one another, and with their immediate competitors. He says that the key is not to ask people directly about the design.

"If you ask someone to report their feelings about a design, you will get a cognitive response that is different from the response to the design at the point of sale, which determines whether something is bought. It makes reported consumer response to a design useless."

He says that they, instead, keep showing consumer groups pairs of products and ask them which one they would buy, while subtly changing the designs, to find out which design is best.

Hamlin applied the technique to honey and to beer, but believes that it would also be valid for testing the graphic design of non-food product packaging.

He says that the test results show that graphic design has

a massive impact on consumer choice and can make or break a product: something he says the food industry, and graphic designers themselves, are slow to appreciate.

Hamlin's findings have been published in the *British Food Journal*.



Dr Rob Hamlin: His research shows that graphic design has a massive impact on consumer choice and can make or break a product.

Safer cancer treatment

A new technique with the potential to make modern cancer treatments safer has won the 2017 Otago Innovation Ltd Proof of Concept competition.

Microbiology and Immunology's Associate Professor Alex McLellan and Dr Yoshio Nakatani's ground-breaking proposal addresses the sometimes lethal "cytokine storm" which occurs in some patients undergoing immunotherapy.

"Immunotherapy has a very bright future, but some trials have been stopped due to fatalities caused by over-stimulation of the immune system," McLellan explains.

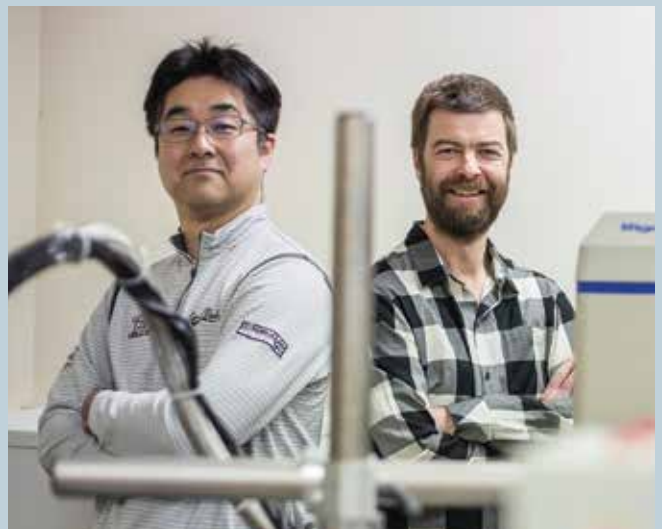
He says their proposal - a collaboration that came about after a "stairwell conversation" - will make this safer and has the potential to make a significant difference to cancer treatment worldwide.

McLellan, whose research skills are in immunotherapy, came up with the simple idea that forms the basis of their invention, but he could not initially tell if it was feasible. Nakatani, who is an expert in protein structure, was fascinated by the design, checked the structures and confirmed that the idea was feasible.

The annual Proof Of Concept contest is now in its 11th year with the aim of encouraging researchers to consider the commercial potential of their work. The \$60,000 first prize is awarded to help progress the winning concept to market.

McLellan and Nakatani say they feel privileged to have been chosen as this year's winner.

"With one third of us likely to develop cancer, the invention could have a wide utility," McLellan says. "This award signals that experts in commercialisation also see the idea as a valuable commodity and one that is likely to succeed."



Dr Yoshio Nakatani and Associate Professor Alex McLellan: Their proposal has the potential to make a significant difference to cancer treatment worldwide.

A place for all

New Otago Council member Carrie Hobson brings many skills to the table, not least a deep appreciation of the transformative powers of education.

Otago alumna and new University of Otago council member Carrie Hobson is used to appraising other people's CVs, but when asked to reflect on her own career path she notes both ironic twists and a pleasing symmetry.

A recurrent theme of her vocational journey has been gaining insights into what makes people better at what they do, and how employees' expertise, diversity and values drive success – both for individuals and the organisations they work for.

"I started out as an intensive care nurse, doing my thing, and then years later I'm on the board of Health Waikato and running my own executive search company – I often think 'how did that happen?' It's been an amazing journey."

Hobson's recent appointment to the University's Council will mean frequent visits from Auckland to the city where she grew up and first gained an appreciation of education's transformative potential.

After attending St Hilda's Collegiate in Dunedin, she was unsure of her next step – she laughs at the irony, given later career choices, of finding the prospect of working in a bank unappealing. The Otago Nursing School seemed a good option because it offered education, accommodation and income.

"I had no idea what being a nurse meant, but soon realised I was very fortunate. Nursing provided me with the community I needed at a young age and

it was hospital-based training with great teachers and colleagues. I loved it.

"Nursing also taught me about the importance of the human component in health care – about recognising the strengths of the people you are working with and what they bring to various high-pressure scenarios. This stood me in good stead throughout my career."

She graduated as a registered general and obstetric nurse in 1983 but, after several enjoyable years in neurosurgery and intensive care nursing, realised a degree was a prerequisite for progression in the health-care system.

Broad interests led her to Otago where she took papers in management, epidemiology and health promotion, maths, statistics and economics; and juggled study in the mornings and work (and later tutoring) at Dunedin's Public Hospital in the afternoons.

Many of the issues she studied in the late 1980s were being played out in real time as New Zealand transitioned from regulation and protectionist policies to a free-market economy; the context, in combination with her lecturers' expertise, added to her interest in the world of finance and economics.

"I was fortunate to have great lecturers and mentors in the Business School and my business, economics and health management papers were fascinating. I did well, somewhat to my surprise, and was thrilled to receive the J W Hayward Prize for Commerce, which enabled me

to do honours and be a tutor."

Hobson's 1989 dissertation used microeconomic and econometric frameworks to discuss life expectancy and infant mortality, and make broader observations on the impact of health reforms. It also consolidated her interest in health economics.

Following university, she decided to pursue a career in commerce and banking and joined the National Bank's Corporate Banking team, managing a corporate client portfolio worth more than \$500 million.

"I learnt a great deal of resilience, but I also liked the intensity and decision-making – it was like working in intensive care. Later, in corporate banking, I had the privilege of building relationships with corporate clients to help them with finances and project planning to turn visions and aspirations into viable businesses, many of which are still thriving today."

When her husband, Otago medical graduate, Associate Professor Malcolm Legget, accepted a postgraduate cardiology training position at Seattle's University of Washington, Hobson found employment at US Bank – the country's 20th largest bank – and "lucked out" by working in its most nationally successful corporate division, East King Country Corporate Banking.

Her experiences as a senior credit analyst reinforced her belief in the need for diversity in the workforce.



Carrie Hobson:

"I genuinely believe that if you can have an open, transparent and fair value-based conversation, then you will achieve very good outcomes."

Photo: Graham Warman

“Young people go to university to learn independence and, along the way, lecturers and others impart knowledge and values that make them better people ... and you only need to look at student volunteer groups to see young people are interested in ‘paying it forward’.”

“Initially I was retiring and aware of being a Kiwi and, as only the second woman appointed in that area, there was some pressure to compete with the guys. But these things were actually points of difference. Now I think corporate banking has since realised diversity matters, that different perspectives and skill sets are needed for constructive decision-making.”

At the completion of her husband’s studies – and despite good offers from US Bank to stay on – Hobson was pleased to return to New Zealand and corporate banking and governance duties in the health-care sector.

Before heading to the US she had served on the South Auckland Crown Health Enterprise Establishment Board and enjoyed acquiring professional expertise in areas such as the establishment of new hospital facilities and complex capital projects.

Her time on the board also highlighted the importance of communication between governance groups and clinical and executive teams.

“I remember listening to doctors at a meeting who had seen successive corporate structures and teams come and go, and being struck by how these people had kept on working and delivering. They were wary of change – and rightly so. I had huge sympathy for them because I’d worked in the health-care system and the business world. I could see the challenges of bringing them together – ultimately the process was about creating a culture of trust.”

These lessons proved invaluable during three years’ service on the Health Waikato board, and as chairperson and trustee on the Health Waikato Charitable Trust.

“I learned a great deal about how constructive debate is critical to strategy, and how board members shouldn’t be afraid to dig a bit deeper and ask questions because, ultimately, you have to understand and be responsible for an organisation’s activities.”

Another lesson was about the relationship between boards and executive teams.

“The valuable thing to remember is cohesion; the directors and the executive have to say ‘we are all in this together’ and make decisions that make the organisation successful. I genuinely believe that if you can have an open, transparent and fair value-based conversation, then you will achieve very good outcomes.”

The ability to engage in critical processes and be honest about how they “add value” is something Hobson looks for in candidates applying for executive positions through her executive HR company Hobson Leavy, which she and business partner Stephen Leavy founded 12 years ago.

“In corporate banking I learnt that determining if a business could deliver on plans often came down to assessing the skills and values of the people involved. It’s similar in HR because if someone says they are going to develop a new market I’ll ask ‘how are you going to do it?’ This often comes down to them being honest about their own potential, and valuing integrity.”

Hobson is “extremely engaged” with family and business and community commitments – such as fundraising for the Mercy Hospice (Auckland) and the Ballet Foundation – but is confident her expertise could benefit her alma mater.

“As a King’s College Foundation member I’ve found it’s very useful to ask questions like ‘what’s the purpose of education?’ or ‘what is it that parents want?’ I think we value education so highly because we want our children to gain skills and knowledge to become independent adults who are able to live the lives they want to lead and add value to their communities.”

Similarly, as a complex organisation operating in a competitive global market, Otago must deliver value for students so they can reach their potential as individuals and make a contribution in the global community, she says.

Serving on Otago’s Council fits with Hobson’s broader philanthropic interests, which have included fundraising initiatives for cancer research and the Heart Foundation.

“There are always people better and worse off than yourself and you have to ask ‘what can I do to give someone a hand-up?’ To my mind, that’s what education is about. Everyone has the right to a place. Young people go to university to learn independence and, along the way, lecturers and others impart knowledge and values that make them better people ... and you only need to look at student volunteer groups to see young people are interested in ‘paying it forward’.

“Otago makes an enormous contribution in so many areas and I feel incredibly fortunate to have attended the University, so it’s a great privilege to have the opportunity to give back and be part of the Council”.

SAM STEVENS

Photo: Sharron Bennett



Formalising the Harraway's donation. Back row, from left: Harraway's Board director Deans Hudson, Otago Council member Stuart McLachlan, Pro-Chancellor Dr Roydon Somerville and Harraway's Board director Ross Hudson. Front row, from left: Otago Chancellor John Ward, Vice-Chancellor Professor Harlene Hayne and Harraway's Chairman Dr Trevor Scott.

Harraway's gift

Dunedin breakfast cereal manufacturer Harraway & Son Ltd has made a \$100,000 donation to Otago's Department of Food Science in recognition of a long association with the University.

The gift was announced at Harraway's 150th anniversary celebrations in June and establishes the Harraway's 1867 Visiting Professorship for the Department of Food Science. It will be split into a yearly grant for five years, at \$20,000 for visiting professors.

Harraway's CEO Mr Stuart Hammer says the University has been an important resource for the company.

"The Department of Food Science has been invaluable in helping us develop new products and allowing us to tap into their knowledge and scientific expertise. We have been able to employ excellent graduates and, each year, we engage

undergraduate food science students to carry out projects that have generated great new ideas.

"In more recent years we have also enjoyed a strong relationship with staff and students in the Department of Marketing, drawing from their knowledge in areas such as digital marketing."

Mr Hammer says the Harraway's 1867 Visiting Professorship is about Harraway giving back and will bring added expertise into the country, helping the local community and New Zealand as a whole.

Otago Vice-Chancellor Professor Harlene Hayne, says this gift highlights the links Otago has developed with the business community, "strong, practical relationships which see us share expertise and provide talented, workplace-ready graduates in meaningful roles with successful companies".

Major health funding

University of Otago researchers from the Dunedin, Wellington and Christchurch campuses have been awarded more than \$24 million in new health research funding to support their world-class studies aimed at improving New Zealanders' health and well-being.

The Health Research Council of New Zealand's latest round of funding supported 19 Otago contracts, including a major multi-million, five-year programme which will examine ways of reducing the burden of stomach cancer in New Zealand. The other projects range from an implantable light stimulator to treat Parkinson's disease, to examining community exercise for long-term management of diabetes and multi-morbidity; from studies into fertility and antibiotic resistance in superbugs, to heart failure and the familial risks of ovarian and breast cancer.

Lead in genomics platform

The University of Otago is to lead a \$35 million project known as Genomics Aotearoa, a new science platform supporting advanced genomics research.

Led by Professor Peter Dearden at the University of Otago, Genomics Aotearoa is an alliance between the Universities of Auckland and Massey, Crown Research Institutes AgResearch, ESR, Landcare Research, and Plant and Food, and 32 associate organisations including researchers and end users of genomics and bioinformatics.

Funding will come from the Government's Strategic Science Investment Fund and follows a competitive two-stage application and assessment process managed by the Ministry of Business, Innovation and Employment.

Announcing the new platform, Science and Innovation Minister Hon Paul Goldsmith said: "Genomics Aotearoa presented a strong proposal that was comprehensive in scope

and ambition, and seeks to cement national collaboration between genomic researchers and end-users across all life sciences of relevance to New Zealand's economic, environmental and social well-being.

"This platform represents a new, strategic approach to Government investment in genomics that allows us to build on our existing research capability and remain agile to respond to future opportunities in technologies and approaches."

Centre for Translational Physiology

The Centre for Translational Physiology/Te Whaiaroaro Whakawhiti at the Wellington campus was officially opened in August.

University of Otago, Wellington Dean Professor Sunny Collings says the centre provides a platform to enhance collaborative research between scientists and clinical researchers, using unique facilities to address large clinical issues.

International rankings

The University was placed 151 in the latest QS World Rankings, an improvement of 18 places from last year. This reflects gains across a range of areas including academic and employer reputation, citations per academic staff member and the international faculty indicator in which Otago was placed 28th globally.

The University maintained its overall position in the 201-250 band of the Times Higher Education World University Rankings announced in September, confirming its position within the top echelon of the top two-to-three per cent of universities worldwide, and as one of New Zealand's top two universities.

Otago was also ranked 31st in the Times Higher Education Asia-Pacific Rankings, which analyse universities throughout 38 nations based on a range of performance indicators including teaching and learning environment, research, citations, international outlook and industry income.



An architect's impression of the new Department of Music, Theatre and Performing Arts building.

New Music facilities

The University has announced plans to build new - and update existing - facilities for the Department of Music, Theatre and Performing Arts Te Kāhui Tau.

The \$26 million project is expected to be completed by the start of the 2019 academic year. With purpose-built recording studios, flexible teaching areas and communal areas in which students can showcase their work, the facilities will foster collaboration between the department, college and the music community, potentially developing a research strength unique to Otago.

Research support facility

Construction of a new \$49.8 million facility to support Otago's animal-based research and teaching began in August.

The Research Support Facility will meet stringent animal welfare regulations as well as strict health and safety requirements.

Deputy Vice-Chancellor (Research and Enterprise) Professor Richard Blaikie says the new facility will be state-of-the-art in the Asia Pacific region and will future-proof Otago's status as a leading scientific institution.

New MSF launched

The University's Māori Strategic Framework (MSF) to 2022 was launched in June.

This builds on the inaugural 2007 framework, continuing to develop engagement with iwi and Māori entities; deepening the University's commitment to achieving equitable Māori participation and success rates in tertiary education; and pursuing ambitious goals around embedding mātauranga Māori within the University's core functions.

Success for rowers

The University of Otago's senior women's and senior men's eights rowing teams (right) have "won big" in China in the 2017 International Universities Rowing Regatta.

The Otago senior women's eight team took out the winning title in both Hangzhou and Changsha, beating teams from 10 international universities, including Yale, Oxford, Harvard, Chengdu University and Sydney University. It was the fifth successive year that the Otago women's team has been unbeaten in both domestic and international races.

The team comprises coxswain Molly Densem, manager Hannah Maher and coach Holly Fletcher, and winning crew Maysie Scott, Grace Shaw, Ella Simanu, Emma Weith, Huia Ackerman, Sydney Telfer, Kate Laracy and Kate Campbell.

The Otago men's team finished first in the 800-metre men's eight's race in Xinjin. The team is coxswain Kate Bolland, coach Scott Gullery and manager Kit Croxford, and winning crew Thomas Cummack, Scott Bezett, Ari Palsson, Bill Peereboon, Corey Lewis, Kyle Hughes, Todd Bezett, Riley Bruce and Caleb Dallow.

The rowers were competing in 41°C heat and credit their win, in part, to the training in the University of Otago environmental heat chamber, under the direction of School of Physical Education Associate Professor Jim Cotter. The rowers spent 50 to 70 minutes per day exercising in the heat chamber for five to seven days before their departure, in 40° temperatures.





General staff recognised

The 2017 University of Otago Award for Exceptional Performance by General Staff was jointly awarded to two women who work tirelessly to enhance the University and its contributions to the community - the co-ordinator of the University Volunteer Centre Sze-En Watts (left) and the director of the University's New Zealand Marine Studies Centre Sally Carson (right).

Sally Carson leads the University's New Zealand Marine Studies Centre (NZMSCS) at Portobello and, in addition to the schools and community education programmes offered by the centre, she is the driving force behind many other outreach initiatives including the creation of the New Zealand Shore Guides publications; the Marine Metre Squared (Mm²) project, a nationwide citizen science initiative that encourages long-term monitoring of the New Zealand seashore; and the new Marine Science Aquavan, a facility which can be used by researchers to transport marine specimens and bring the marine world to schools and communities.

The second reward recipient Sze-En Watts was employed in 2013 to co-ordinate the newly-created University Volunteer Centre (UVC) and has also been praised for performing well beyond expectations.

Her achievements include co-ordinating a community-wide project to send 600 boxes of crafts and learning materials to Vanuatu following Cyclone Pam; driving the country's first Student Volunteer Week in 2015; running the Dunedin Sleep Out; co-ordinating the University of Otago Student Leadership Award; and joining the Otago delegation to the Global Citizenship Workshop for the Matariki Network of Universities in Uppsala, Sweden.

The award, which was instituted in 2004, recognises and rewards members of the general staff who have made an outstanding contribution to the University of Otago. The winners receive a grant for a project or professional development initiative that benefits the University as well as the individual.

Emeritus Professors

The University Council awarded the following academics the status of Emeritus Professor: Professor **Robert Ballagh** (Physics); Professor **Hilary Radner** (History and Art History) and Professor **Kevin Dawkins** (Law).

Awards/Achievements

Leading cancer researcher Professor **Parry Guilford** (Biochemistry) is this year's recipient of the University's



Distinguished Research Medal, which recognises outstanding scholarly achievement. Professor Guilford's breakthrough genetic findings

have led to interventions that have saved the lives of many people with inherited stomach cancer and he continues to make important progress in developing innovative tests for detecting, and monitoring the progression of, other deadly cancers, such as bladder cancer.



The Otago Bacterial Energetics and Antimicrobial Resistance (OBEAR) Group, led by Professor **Gregory Cook** (Webster Centre for Infectious Diseases) was

awarded the 2017 University of Otago Research Group Award.

Internationally recognised philosopher of memory Dr **Kourken (Kirk) Michaelian** received Otago's Carl Smith Medal and Rowheath Trust Award which recognise outstanding research performance by early career staff.

Dr **Tilman Davies** (Mathematics and Statistics), Dr **Bill Hawkins** (Chemistry), Dr **Tobias Langlotz** (Information Science), Dr **James Scott** (Geology), Dr **Nic Rawlence** (Zoology), Dr **Jesse Wall** (Law), and Dr **Ting Wang** (Mathematics and Statistics) were recognised in the annual Early Career Awards for Distinction in Research.

University of Otago, Christchurch Gold Research Medals have been awarded

to rheumatologist Professor **Lisa Stamp**, gastroenterologist Professor **Andrew Day**, and deputy director of the Christchurch Longitudinal Study Associate Professor **Joe Boden**.



Former Vice-Chancellor Professor Sir **David Skegg** received an honorary doctorate from Queen's University in recognition of his global contribution

to health research and university leadership.

The contributions of three Otago teachers were honoured at the Tertiary Teaching Excellence Awards in August. Associate Professor **Ruth Fitzgerald** of Anthropology and Archaeology, Anatomy Teaching Fellow Dr **Brad Hurren** and Japanese teaching fellow in the Department of Languages and Cultures **Haruko Stuart** each received Sustained Excellence Awards for their dedication and passion in their respective fields.

Dr **Tamlin Conner** (Psychology) won the OUSA Supervisor of the Year Award, an award presented as part of the University's Graduate Research Festival. Dr **Gwyneth McIntyre** (Classics) won Best New Supervisor.



Professor **Sylvie Chetty** (Centre for Entrepreneurship) received an honorary doctorate from Sweden's Uppsala University, recognising her ongoing ties with that university since 1997.

Professor **Barbara Brookes** (History and Art History) won the Ockham Book Award in the illustrated non-fiction category for her book *A History of New Zealand Women*.

Otago Chemistry Professor **Sally Brooker** won the 28th Burrows Award from the Royal Australian Chemical Institute (RACI) Inorganic Chemistry Division.

Second-year Department of Psychology PhD student **Millie Johnston** has received the alumnus-funded Elman

Poole Travelling Scholarship to attend Ruhr University in Bochum, Germany to study avian brain function.

First-year student **Sisilia Laumanu** was awarded one of eight national \$25,000 Toloa Scholarships from the Ministry of Pacific Peoples for students studying in science, technology, engineering and mathematics subjects.



Dr **Damian Scarf** (Psychology) has received the New Zealand Psychological Society's Early Career Goddard Award - Research and Scholarship.

Dr **Garry Nixon**, Director of the Dunedin School of Medicine's Rural Postgraduate Programme, was awarded the Eric Elder Memorial Medal at the Royal New Zealand College of General Practitioners (RNZCGP) conference held in Dunedin.

Honorary degree

Internationally renowned physiotherapist Dr **Stanley Paris**



received an honorary degree of Doctor of Laws from the University of Otago in August. Dr Paris is a pioneer in manual and manipulative physiotherapy, an endurance athlete and noted philanthropist.

Queen's Birthday Honours

Alumni and staff recognised in the Queen's Birthday Honours include:

Companion of the New Zealand Order of Merit (CNZM): Professor **Richie Poulton**, for services to health and science research; Dr **George Salmond**, for services to health.

Officer of the New Zealand Order of Merit (ONZM): Professor **Anne Victoria (Vicki) Cameron**, for services to health; Mr **William (Bill) Dunbar**, for services to health and the community; Professor **Hamid Ikram**, for services

to cardiology and education; Dr **Zafer Khouri**, for services to odontology; Mr **Simon O'Neill**, for services to opera; Mrs **Lynda Reid**, for services to education; Dr **Geoffrey Robinson**, for services to medicine; Mrs **Frances Wilson-Fitzgerald**, for services to opera.

Member of the Order of Merit (MNZM): Mrs **Janis Ballantyne**, for services to education and the community; Ms **Jacqueline (Jackie) Barron**, for services to sports governance and education; Professor **Sally Brooker**, for services to science; Mr **Hamish Crooks**, for services to the Pacific community; Mr **Graham Kennedy**, for services to business; Dr **Jill McIlraith**, for services to health and women; Dr **Fiona Pardington**, for services to photography.

Queen's Service Medal (QSM): Mr **Bruce Didham**, for services to the New Zealand Fire Service; Mr **Brian Dodds**, for services to health care and the community; Mr **Richard Madden**, for services to music; Dr **Claire Reilly**, for services to people with motor neurone disease.

Obituaries

Professor **Jae Song**, a Korea-born University of Otago academic known for his dedication to linguistics and determination to cope with the post-polio syndrome he developed as a child in post-war Korea. He came to the University of Otago in 1992.

Mr **Murray Goldfinch**, a University strategic architect whose projects included the new building for the Dunedin Multidisciplinary Health and Development Study, Te Rangi Hiroa College, the Marsh Study Centre and the Staff Club upgrade.

Elizabeth Kerr, a University of Otago Design Studies tutor, private heritage consultant and former New Zealand Historic Places Trust Otago committee chairwoman.

For more University news: otago.ac.nz/news/newsroom

In 2019 the University of Otago celebrates its 150th anniversary. As this milestone approaches, the *University of Otago Magazine* is looking back over the years, drawing on photographs from the Hocken Collections. In this issue we focus on the Dunedin campus.

1878

The newly constructed Clocktower (without a clock) 1878, Burton Brothers photograph, Box-093-002.



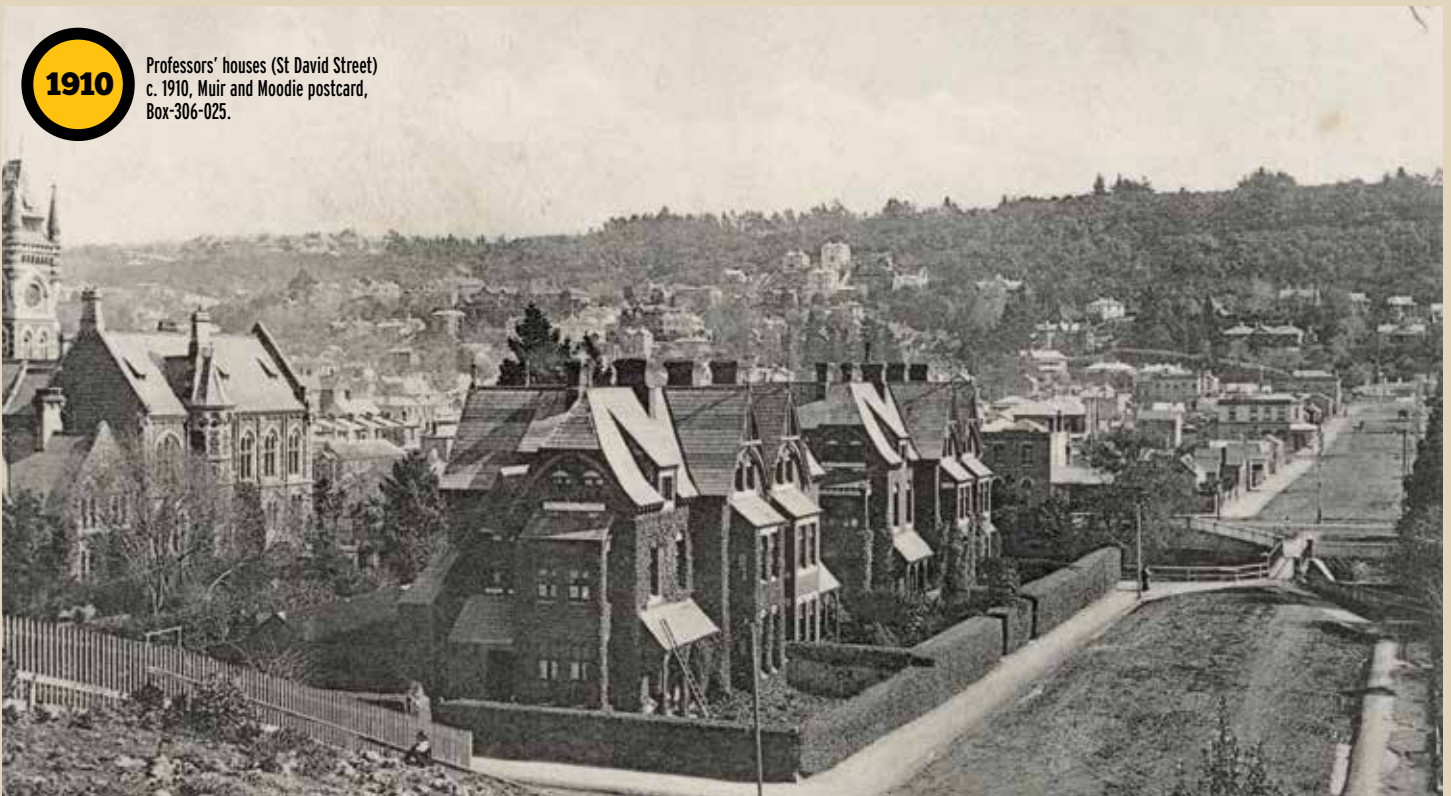
1914

School of Mines and Students' Building c. 1914, Guy Morris photograph, Box-141-002.



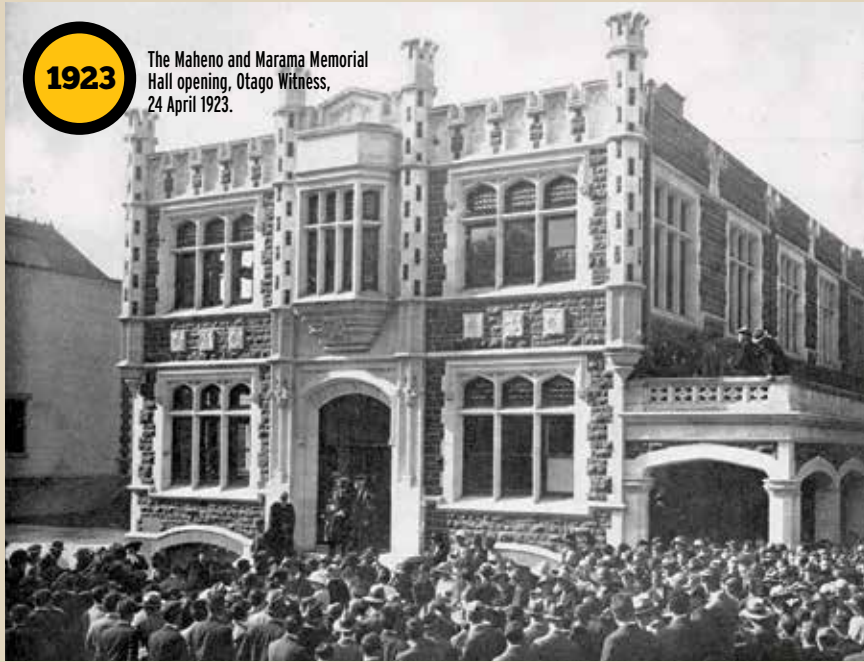
1910

Professors' houses (St David Street) c. 1910, Muir and Moodie postcard, Box-306-025.



1923

The Maheno and Marama Memorial
Hall opening, Otago Witness,
24 April 1923.



1925

Medical School (Great King
Street) c. 1925, Frank Duncan
& Co postcard, Box-305-005.



1931

The University buildings 1931,
showing the new clock donated by
Chancellor Sir Thomas Sidey, E.A.
Philips photograph, Box-237-004.





Foundations of the Arts Library
(now Richardson) Building, 1975,
Otago Daily Times, P1998-028/04-004.

1975



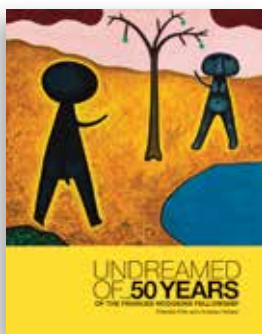
1960

Student Union Building,
1960s, Otago Daily Times,
P1998-028/12-005.



Archway Lecture theatres, c.1975,
University of Otago Photographic Unit,
Box-199-001.

1975



UNDREAMED OF ...

50 years of the Frances Hodgkins Fellowship

Priscilla Pitts and Andrea Hotere

In 1966 Michael Illingworth, whose oil painting *Adam and Eve* appears on the cover of this book, was awarded the inaugural Frances Hodgkins Fellowship.

For the first time in New Zealand a practising artist was given a studio and paid a salary to make art for a whole year. Such support, as Frances Hodgkins herself wrote from her own experience, was capable of “yielding up riches - undreamed of”.

This book brings together the art and the stories of half a century of Frances Hodgkins fellows. Arts commentator Priscilla Pitts writes about their work, while journalist Andrea Hotere interviews the artists about their lives and sources of inspiration.

The result is a vibrant celebration of the talent fostered through New Zealand's foremost visual arts residency, showing how the artistic wealth created has flowed back into the culture of the small country that nurtured it.



Disobedient Teaching:

Surviving and Creating Change in Education

Welby Ings

This book is about disobedience; positive disobedience as a kind of professional behaviour. It shows how teachers can survive - and even influence - an education system that damages potential. More importantly, it is an arm around the shoulder of “disobedient” teachers who transform people's lives, not by climbing promotion ladders, but by operating at the grassroots.

This book shows how the essence of what makes a great teacher is the ability to change

educational practices that have been shaped by anxiety, ritual and convention.

Until the age of 15, author Welby Ings could neither read nor write. He was considered “slow” at school and was eventually expelled. He is now an award-winning academic, designer, filmmaker and playwright and, in 2001, was awarded the Prime Minister's inaugural Supreme Award for Tertiary Teaching Excellence.

For further information: Otago University Press | otago.ac.nz/press | university.press@otago.ac.nz

Books by Otago alumni

Sir John Walsh and His Legacy to the Dental Profession, by Harvey Brown, NZ Dental Association and Sir John Walsh Biography Trust, July 2017.

Adrift Among the Stars, by John Dickey, JoSara MeDia, Tomball (Texas), February 2017.

The BDS Class of 1966: 50 Years On, edited by Alastair Goss, Snap Medindie Printing (Adelaide), 2017.

Lifestyle Sports and Public Policy, by Sandro Carnicelli and Daniel Turner, Routledge, 2017.

Astride a Fierce Wind, by Huberta Hellendoorn, Mākaro Press, May 2017.

Hebrews and the Temple: Attitudes to the Temple in Second Temple Judaism and in Hebrews, NovTSup 171, by Philip Church, Leiden: Brill, 2017.

Leadership Material: How Personal Experience Shapes Executive Presence, by Diana Jones, Nicholas Brieley (Boston, London), Hachette (New Zealand, Australia).

Smart Yoga: Apply the Alexander Technique to Enhance Your Practice, Prevent Injury, and Increase Body Awareness, by David Moore, North Atlantic Books (USA) June 2017.

Global Health: An Introduction to Current and Future Trends (2nd edition), by Kevin McCracken and David R. Phillips, Routledge, (London, New York), June 2017.

Parliamentary Practice in New Zealand (4th edition), edited by Mary Harris and David Wilson.

Flags of the Commonwealth, by A. W. (Wyn) Beasley, Winter Productions, March 2016.

Pushing Boundaries: New Zealand Protestants and Overseas Missions 1827-1939, by Hugh Morrison, Otago University Press, 2016.

The FIGO Textbook of Pregnancy Hypertension, edited by Laura A. Magee, Peter von Dadelszen, William Stones and Matthews Mathai, Global Library of Women's Medicine (London), 2016.

A Mother's Memoirs: Travels of a New Zealander in 1929, by Margaret Jessie Munro, Balboa Press, 2015.

Zeal & Honour: The Life and Times of Bernard Freyberg, by A. W. (Wyn) Beasley, Winter Productions, April 2015.

Run Your Business Better, by Stephen Barnes, Major Street Publishing, June 2017.

Marine Conservation, by P. Keith Probert, Cambridge University Press, July 2017.

Creating Religious Childhoods in Anglo-World and British Colonial Contexts, 1800-1950, editors Hugh Morrison and Mary Clare Martin, Routledge (London and New York) 2017.

Alumni:

If you have recently published a book email mag.editor@otago.ac.nz

SHAPING THE FUTURE

together

We are pleased to announce that, thanks to the overwhelming generosity of our alumni and supporters, our 2017 Annual Appeal is close to reaching its \$140,000 target. With a little more help the appeal's seven partner projects - which range from cancer and Alzheimer's research, to student exchange and mentoring programmes for primary school children - will be able to continue their great work. Your contributions - both large and small - help us translate academic endeavour into real-world solutions for better and healthier lives. We thank you for your ongoing support.



Global Student Exchange Programme

This programme enables students to spend one or two semesters at one of the University's 100-plus international exchange partners as part of their Otago degree, giving them life-changing experiences, new connections, lifetime friendships and personal growth.



Aquavan for marine conservation

Led by marine educators and scientists, the Aquavan programme will engage schools, teachers and community groups in the diversity of New Zealand's marine flora and fauna, enabling a better understanding of the wider ecosystem and how land and freshwater management affects our coastal environment.



Blood tests to detect Alzheimer's

With improved health care and better nutrition, people are living longer and enjoying healthier lives. Yet with longer life comes an increased risk of Alzheimer's disease. This disabling condition requires better means of early detection - a recent discovery by the Brain Health Research Centre may address this.



Advances in child cancer research

Every week, three New Zealand children are diagnosed with cancer. These children often undergo intensive treatment for prolonged periods of time. Te Aho Matatū, the Centre for Translational Cancer Research (CTCR) is aware of the need to personalise these treatments as closely as possible to each patient's disease. Working with Healthier Lives and REACH Child Cancer, CTCR is extending its research on personalised cancer markers to include child cancer.



Aspire programme for youth confidence

The Aspire Programme is a student-led community initiative in which Year 8 pupils from low-decile Dunedin schools are hosted on the Dunedin campus by University of Otago student volunteer coaches. Using interactive learning activities, the coaches spend their Friday afternoons working alongside the school students, helping them to develop greater confidence, better relationships and unlock learning through fun and engaging experiences - and demystifying the University environment.



Legal services mapping project

Around one in three New Zealanders experience a problem that may require legal services each year. Finding help can be difficult. One problem is the lack of a centralised source of information. The Legal Services Mapping Project will provide vital resources about the accessibility of legal services in New Zealand.



Undergraduate entrance scholarships

Every year a new group of young, gifted students emerge with exceptional academic potential, but also real financial barriers to attending university. Course and tuition fees, residential college costs and living expenses quickly add up. These scholarships aim to directly address this issue.

SHAPING THE FUTURE

together

Yes!

I would like to support the University of Otago and its ongoing programmes.

Your gift can be directed to any one of the following areas:

- ☐ Alzheimer's Research Project
- ☐ Aquavan Marine Conservation Project
- ☐ Childhood Cancer Research Project
- ☐ Global Student Exchange Programme
- ☐ Legal Services Mapping Project
- ☐ Student Volunteer Aspire Programme
- ☐ Undergraduate Entrance Scholarships
- ☐ Other _____

Amount of gift

☐ \$50 ☐ \$100 ☐ \$250 ☐ \$500 ☐ \$1000

or my choice is \$

Payment options:

1. Make a one-off donation or set up a monthly donation using our secure giving page at: alumni.otago.ac.nz/annual-appeal-donate

2. Charge my credit card: ☐ Visa ☐ Mastercard

Card number

Expiry date / CVC#

Cardholder's name

Signature

3. Pay by cheque

☐ I enclose a cheque payable to "The University Foundation Trust"

For residents in the UK, please send this form and your donation to:

Chapel & York
PO Box 50
Lingfield RH76FT
United Kingdom

For residents in the USA who wish to make a tax deductible donation, please visit:

Alumniuoa.com

Or email, Mr Neil Matheson neil.matheson@hhealth.com

For residents in New Zealand and Rest of the World, please send this form and your donation to:

Development & Alumni Relations Office
University of Otago
PO Box 56
Dunedin 9054
New Zealand

Should you require any further information please follow this link:

otago.ac.nz/alumni/donate/annual-appeal
or contact us at email: development@otago.ac.nz

Name

Address

Email

Thank you for your support.

Reunions+Events

2017

Medical class of 1977

20-22 October, Wellington

Pharmacy reunions

The 07s: 1967, 1977, 1987, 1997, 2007

18 November, Dunedin

Dental class of 1967

21-23 November, Dunedin

Medical class of 1992

1-3 December, Nelson

Medical class of 1967

4-8 December, Dunedin

2018

Medical class of 1986

3-4 February, Queenstown

Medical class of 1962

6-9 March, Auckland

Medical class of 1963

6-8 March, Hawkes Bay

Medical class of 1978

9-11 March, Queenstown

Medical class of 1987

16-18 March, Auckland

Medical class of 1966

21-23 March, Wellington

Medical class of 1964

22-25 March, Tongariro National Park

Dental class of 1968

22-25 March, Dunedin

Selwyn College 125th anniversary

23-25 March, Dunedin

Medical class of 1983

23-25 March, Hawkes Bay

Medical class of 1980

23-25 March, Wellington

Medical class of 1998

4-6 May, Dunedin

Medical class of 2003

2-4 June, Dunedin

Dental class of 1998

2-4 June, Dunedin

Medical class of 1968

27-29 November, Dunedin

Surveying class of 1968

3-7 October, Dunedin

Teachers College class of 1968

Date tbc, Dunedin

2019

University of Otago

150th anniversary celebrations

Unicol 50th anniversary

November, Dunedin

For more information

Visit: otago.ac.nz/alumni/events

For reunions, email: reunions.alumni@otago.ac.nz

For events, email: functions.alumni@otago.ac.nz

Tel: +64 3 479 4516

London, 10 May 2017



Upcoming events

Alumni reception: 21 October, San Francisco, USA

Matariki Network Universities alumni function: 24 October, Boston, USA

Alumni reception: 26 October, New York, USA

Book launch/150th anniversary celebration launch: 28 November, Auckland



WHERE IN THE WORLD ARE YOU?

We want to stay in contact with you wherever you are.
Email database.alumni@otago.ac.nz

Frankfurt, 13 May 2017



Auckland, 13 July 2017



Suva, 20 July 2017



@otagoalumni email address

Unfortunately, due to circumstances beyond our control, the alumni email forwarding service provided via Development and Alumni Relations' Your Otago Link has been discontinued. Access to Your Otago Link is not affected.

If you have created and used an @otagoalumni.ac.nz email forwarding address, please let your contacts know an alternative address. If you have any questions, please email database.alumni@otago.ac.nz

Alumni benefits

The University of Otago offers a number of benefits and services for alumni. Find out more at otago.ac.nz/alumni/benefits

Working for Otago

Alumni of the University of Otago in America, Inc.

The Alumni of the University of Otago in America (AUOA) is committed to supporting and promoting the University, its students, graduates and former students through initiatives that benefit Otago and grow alumni networks in the US.

The group recently provided more than NZ\$90,000 for programmes at Otago, including the annual AUOA Student Exchange, the Master of International Studies and the Oceans of Potential programmes. It has previously supported the Otago Medical School's Medical Artefacts Digital Archive project, the Charles Farthing Memorial Scholarships Endowment, the Bob Carter Memorial Fieldwork project, and the digitisation of the Department of Botany's Herbarium collection.

Neil Matheson, President, (DipPE, 1979)



With a background in the pharmaceutical industry, Neil relocated to the US in 1989. He founded AXIS Healthcare Communications in 1999 – which he sold in 2007 – and was global CEO of Huntsworth Health until July 2017. He has worked with NZ Trade and Industry assisting New Zealand health-care technology companies in the US market. Neil was a founding member of the Board that established AUOA in 2008.

Dr AnnMarie Oien, Vice-President, (PhD, 1996)



In 1996 AnnMarie became the second woman to graduate from Otago with a PhD in Physics. In 1997 she joined Lockheed Martin Corporation as a research scientist and, after 20 years, joined Harris Corporation as a senior systems engineer. She has received numerous awards for her work, leading programmes on process improvement and problem solving.

Jonathon Wong, Secretary, (BCom (Hons) 2005)



Jono is the head of Strategy and Operations for Global Product Partnerships at Google, driving the development and execution of business strategy, product partnerships and operational initiatives. He previously worked at Deloitte Consulting's strategy and operations practice in Wellington, Washington DC, New York and San Francisco.

John Crowe, Treasurer, (BCom (Hons), 1992, LLB 1993)



John spent 17 years as a finance executive at JP Morgan in London and New York. He currently leads the finance team for the investment bank's sales organisations. He is a member of Chartered Accountants Australia and New Zealand and is a barrister and solicitor of the High Court of New Zealand.

Dr Geoff Nichol, (BMedSc, MB ChB, 1979)



Geoff is a fellow of the Royal Australasian College of Physicians and has had a distinguished career in clinical therapeutic development and senior management for pharmaceutical companies. He is currently Chief Medical Officer at BioMarin Pharmaceuticals

in San Francisco. He was a founding AUOA member and has served as secretary, vice-president and president.

Dr Helen Heslop, (MB ChB, 1980, MD, 1990, DSc (Hons) 2013)



Helen is Professor of Medicine and Paediatrics and Dan L. Duncan Chair at Baylor College of Medicine and associate director for clinical research at the Dan L. Duncan Cancer Center. She directs the Center for Cell and Gene Therapy at Baylor College of Medicine, Houston

Methodist Hospital and Texas Children's Hospital. She is also the president of the American Society for Gene and Cell Therapy.

Nigel Bain, Regional Associate Member Liaison, (BSc (Hons) 1976)



Nigel majored in Mineral Technology and worked worldwide for mining companies involved in industrial minerals or precious metal extraction. He is now executive director of Barrick Gold USA. He has helped develop new initiatives to improve safety, productivity and the working

culture of underground soft-rock excavation. Nigel supports a number of community outreach and education initiatives in Nevada.

Catherine Bollard, (MB ChB, 1991, MD, 2005)



Catherine is chief of the Division of Allergy and Immunology and director of the Program for Cell Enhancement and Technologies for Immunotherapy, Center for Cancer and Immunology Research at the Children's National Medical Center; and Professor of Paediatrics and of Microbiology, Immunology and Tropical Medicine at the George Washington University School of Medicine and Health Sciences.

Jacinta Calverley, (BA, 1980, PGDipArts, 1981)



With a career in business and corporate HR and organisation development, Jacinta has been a trustee of the Fletcher Challenge Trust; chair of the NZ Employment Equity Trust; director of Enterprise New Zealand; chief judge of the NZ Young Enterprise Awards; and

director of Netball New Zealand. She moved to the US in 2000 and was the International Netball Federation's mediator for the US national representation issue 2008 to 2010.

Catherine Shyer, (BSc, 1976)



After graduating, Catherine held management positions at AC Nielsen, including a two-year international assignment in Toronto, Canada. She returned to New Zealand in 1990 and was appointed Managing Director of AC Nielsen New Zealand. She relocated to

the US in 1993 and is now a commissioner on the Salisbury, Connecticut Planning and Zoning Commission.

Chris White, (BCom, 1996)



Chris is the founder of Greenstone Value Opportunity Fund, a US-based hedge fund. As well as sitting on the AUOA board, Chris has founded an internship programme with Otago to assist graduates in finding internships with US funds and leading financial institutions. He is also on

the board of the American New Zealand Association.

Dr Andrew Hamer, (MB ChB, 1985)



Andrew is medical director of Global Development at Amgen Inc. He had a 20-year career as a cardiologist and clinical researcher, and chaired the Cardiac Society, the National Cardiac Surgery Network and New Zealand Cardiac Network.

Honorary advisory board members

Sir Murray F. Brennan, GNZM, (BSc, 1962, MB ChB, 1964)



During a distinguished career in medicine Sir Murray has held prestigious positions worldwide, including Chairman of Surgery at Memorial Sloan-Kettering Cancer Center. He was AUOA president from 2008 until 2013.

Jennifer (Jenny) Schreiber, (Diploma of Home Science, 1963)



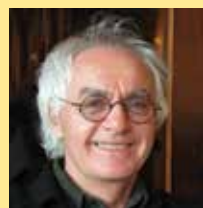
Jenny has lived in the United States for more than 50 years and has been the principal in her interior design firm since 1978. Jenny was involved in establishing the AUOA and was its secretary 2008-2012.

William (Bill) Lindqvist, (Bachelor of Engineering, 1964)



Bill's 45-year mining career involved exploration for gold and base metals for companies in "about 49 countries". He was a founding member of the board that established the AUOA as a legal charitable entity in 2008 and served as vice-president until 2012.

Andrew King (MB ChB, 1971)



Andrew is on the faculty of the Louisiana State University Medical Centre and heads the spine unit at New Orleans Children's Hospital. He was a founding 2008 AUOA member and served on its board until November 2016.

... the University

First awarded in 1908, University of Otago Blues continue to be highly prized as a recognition of outstanding student sporting achievement.

Otago was the first New Zealand university to adopt the traditional English university Blues system, which began at Oxford and Cambridge universities with the awarding of a “Blue” to rowers and then, later, to other sportspeople. The name derived from the light blue colours worn by the Cambridge rowers and the dark blue hues of the Oxford crews taking part in their annual boat race on the Thames.

In 1908, the Otago University Rugby Football Club asked the Otago University Students’ Association to authorise Blues – marked by a special blue jacket – for rugby. The association went further and awarded Blues that year to 10 rugby players, nine men’s hockey players and eight women’s hockey players.

The number of eligible sports increased steadily. Early additions included conventional sports such as athletics, boxing, tennis, soccer, cricket, netball, basketball, rowing, swimming, shooting, skiing and golf.

Sports more recently embraced by the awards include aerobics, equestrian, lacrosse, mountain running, scuba diving, skeleton racing, snow boarding, speed skating, ice hockey, ice figure skating, handball, futsal, bodybuilding, power lifting and rogaining (a type of orienteering).

Otago Blues recipients include a who’s who of New Zealand sporting fame: from athletics great Jack Lovelock in 1930, to more recent sporting stars such as swimmer Danyon Loader, cyclist Greg Henderson, rugby players Anton Oliver and Farah Palmer, netballers Lesley Nicol and Belinda Colling, and dual international basketball and cricket representative Suzie Bates.

OUSA has extended the sporting accolades beyond Blues awards for specific sports. In 1960, it introduced the sportsman of the year award: Olympic men’s hockey team member John Cullen was the first winner.

In 1967, award organisers were faced with the phenomenon of a woman, Rae Johnston (later Henderson), winning the sportsman of the year award, for netball. Now retired and living in Waikanae, she recalls that, “I can still see some faces looking quite stunned. I don’t think they had contemplated a woman winning the award. It was amazing to receive the award. It was the top award as far as university sport went.”

The sportsman of the year name persisted into the 1980s, despite several further female winners, before the name was changed to sportsperson of the year. In 2010, the association replaced the sportsperson award with two separate awards: for sportsman and sportswoman of the year.

In 1990, OUSA introduced an award for club administrators, replaced in 2008 by an award for outstanding contribution to sport. Netballer Angelina Yates was the inaugural winner of the Māori sportsperson of the year award, introduced in 2001; the Otago University Harrier and Multisport Club was the first recipient of the award for sports club of the year, introduced in 2004; and rugby coach Helen Littleworth was named the first coach of the year, in 2013.

Mild controversy surrounding the Blues awards has occasionally extended beyond the inevitable debates arising from the subjective task of selecting a few from the many. In 2009, for example, the Otago University Rowing Club boycotted the Blues awards, because it felt that they had been devalued by a name change – from University of Otago Blues to OUSA Blues – which had been made the previous year to coincide with the awards’ 100th anniversary. The association promptly reverted to the original name.

OUSA has not only increased the number of sporting awards, but also extended the scope of the awards to embrace outstanding cultural, artistic and community contributions by Otago students, through associated Golds awards introduced in 2002. The inaugural recipients included Anna

of Otago Blues?

Leese, for singing; and Hayley Adams, for her involvement in Habitat for Humanity.

OUSA has also expanded these honours to include awards for outstanding contributions to arts and culture; services to faculty clubs; club of the year and society of the year; and, last year, community awards for altruistic students who have given back to the University and the city.

OUSA clubs development officer Sarah Taylor explains that a panel of OUSA Executive members and people with outside expertise decide which of the nominees will receive awards each year. She says that choosing Blues winners is usually more straightforward than deciding what constitute standout contributions deserving Golds awards.

OUSA recreation manager Michaela Tangimetua says that the Golds awards, in particular, are important in recognising students' hard work and positive contributions. "That might be the only formal acknowledgement they get, and people might otherwise never see what they are doing."

No one gets a blue jacket to wear these days, but all Blues and Golds awards recipients are presented with a plaque, and major award winners with a miniature replica of the trophy and some cash, at the annual awards function each September.

IAN DOUGHERTY



OUSA has ... also extended the scope of the awards to embrace outstanding cultural, artistic and community contributions by Otago students.

Cleverness is
taught.

Wisdom is
learnt.

POSTGRADUATE



ONLY
OTAGO