## 

**MARCH 2015** 

40

INSIDE

## Housing and health 2014 Prime Minister's Science Prize

Coroner's Court: insights and recommendations The One Health concept IVF pioneer Dr Richard Fisher UNIVERSITY OTAGO



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NEW ZEALAND



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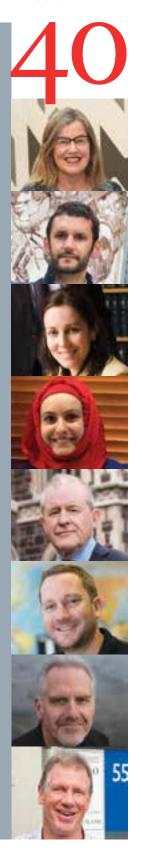
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43

5	Vice-Chancellor's comment		
6	Health and home The work of the He Kainga Oranga/Ho has been recognised with one of New 2		
10	Stress brakes Dr Karl Iremonger's ground-breaking work is rewarded with the Prime Minister's MacDiarmid Emerging Scientist Prize		
13	Coronial review  How is the New Zealand Coroner's Court working and how are recommendations implemented?		
<ul><li>13</li><li>16</li><li>18</li></ul>	Caring for change Dr Assil Russell's humanitarian projects, both in her native Iraq and in New Zealand		
18	People first  IVF pioneer and Otago alumnus Dr R	ichard Fi	sher
21	Celebrating 25 years Te Tumu: School of Māori, Pacific and Indigenous Studies and the Māori Centr (Te Huka Mātauraka) mark their 25th anniversaries		
<ul><li>24</li><li>26</li><li>28</li></ul>	The international volunteer Alumnus Dan Radcliffe's personal search led to the establishment of his successful volunteer travel business		
26	Apportunities  New opportunities for technology transfer throughout the University		
28	<b>Opinion</b> Professor David Murdoch discusses the One Health concept and its role in the fight against infectious diseases		
30	<b>Development</b> The School of Physical Education, Sport and Exercise Sciences is launching an endowment fund campaign		
38	Student life The Otago University Debating Societ		
33	InBrief Research highlights	44	Alumni news
40	UniNews	50	Books

51

Whatever happened to ... ... The Cook?



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University of Otago Magazine

MARCH 2015 ISSN - 1175-8147

Editor Designer Peter Scott Writers

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Cover

Printing PMP Print

Circulation

• To update or change delivery address

To read the Magazine and other alumni communications electronically

· To receive just one "household" postal copy of the Magazine Please email database.alumni@otago.ac.nz

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s I write this, we have just finished Orientation Week [O-Week] here in Dunedin. Once again, the press was filled with unsavoury photos of glass-strewn streets and burned-out furniture. I have received the usual string of letters from business owners in North Dunedin, members of the general public and parents who were understandably concerned about the noise, mayhem and general threats to safety in the area.

At the same time, I have also received the usual string of comments from individuals who have argued that the press coverage is unfair because it only highlights the negative aspects of the rituals that accompany the students' annual migration to Dunedin and gives far greater prominence to misbehaviour by students than to the misbehaviour of other groups.

Both sides of this story are true. As I recently reported to the University Council, we have made major headway in taking a bite out of the anti-social behaviour that is exhibited by some of our students. The number of fires, the amount of broken glass and the number of students summoned to appear before the Proctor has declined year after year. But we still have a long way to go.

We live in a country with a dangerously unhealthy relationship with alcohol. If we are serious about making additional changes to the student behaviour we don't like, we have to tackle the issue of dangerous drinking per se, not only in Dunedin, not only at Otago, but throughout New Zealand. The University is more than prepared to do our part, but to turn things around we require the support of everyone who has a voice.

On a related matter, the University is often accused of closing the pubs in North Dunedin. Nothing could be further from the truth. The pubs closed because the students no longer went there

to drink, choosing instead to pre-load on cheap alcohol purchased in supermarkets and off-licence premises located on every street in their neighbourhood. We acknowledge that students are much safer if they are drinking in pubs and we applaud the efforts of Chris James, Noel Kennedy and Greg Paterson to refurbish the Captain Cook Hotel [see page 51] because the international literature clearly shows that students are safer if they do their drinking in well-managed on-licence premises.

The other unfortunate side to the O-Week coin is that because the press and the public are understandably distracted by the negative aspects of the week, they miss out on all the good things. I have a unique vantage point during O-Week. I spend five days (and nights) with our students, in formal Orientation speeches and information sessions, and during recreational activities on the sports field, around campus and at the stadium.

This year, we held our inaugural Academic Convocation Ceremony in which we officially welcomed the incoming class of 2015. More than 4,000 students who were new to Otago were welcomed by Ngāi Tahu, OUSA president Mr Paul Hunt, Dunedin Mayor Mr Dave Cull, Prime Minister the Rt Hon. John Key, and me. These 4,000 students sat without making a sound, taking in every word of advice that was offered. Throughout the rest of the week, I spoke to dozens and dozens of students who wanted to share their reflections on what they had learned at the convocation. Countless students also approached me to discuss their dreams and aspirations for the year ahead, and to marvel at the physical beauty of their new home city.

I have no real forum in which to share these stories. They are not the kinds of things that the media cover. But for me, they are salient



reminders of what we are dealing with. Yes, there are some trouble-makers and they are always dealt with appropriately, but the vast majority of these rowdy, messy and sometimes even mouthy students are not the bad people that the press portrays – in fact, they are remarkable people who will eventually become great partners, great parents, productive professionals, and good citizens of New Zealand and the rest of the world.

I know this, not only because I spend time getting to know them, but because I have also spent time getting to know you, the alumni of the University of Otago who – let's face it – were also periodically troublesome as well.

I recommend that we keep the spotlight sharply focused on the problem that we face during O-Week - that problem is large quantities of easily accessible and inexpensive alcohol. Once and for all, this University, this city and this country need to work together to make it possible for our students to spread their wings in an exciting, but safe environment. When it comes to the University and the city, I know that everyone is up for the challenge. While we are at it, I would also like the spotlight to occasionally shine on the other things that I get to see, the little bits of "scarfie magic" that happen each and every day.

Professor Harlene Hayne

Vice-Chancellor, University of Otago

# Health and home

Multidisciplinary research providing practical solutions to improve the health and well-being of New Zealanders has been recognised with one of this country's most important science honours.

he University of Otago's
Wellington-based Housing and
Health research team has been awarded
the 2014 Prime Minister's Science Prize.

Led by Professor Philippa Howden-Chapman, the 28-member *He Kainga Oranga*/Housing and Health Research Programme includes researchers in the areas of social science, epidemiology, biostatistics, engineering, physics, architecture, building science and economics.

The team of five co-directors includes Professors Michael Baker and Julian Crane from the University of Otago Wellington, Professors Chris Cunningham and Robyn Phipps from Massey University and Dr Malcolm Cunningham, formerly from BRANZ (Building Research Association of New Zealand).

"We've worked for 15 years now with a dedicated group of people. Being a small country there's a sense we need to be generalists, but many of the solutions to the problems are on the boundaries of one discipline and another," Howden-Chapman explains.

"The research we've been able to do focuses on creating knowledge of practical solutions to improve our old housing stock and to bring it up to more modern standards that specifically improve health and well-being. It's very rewarding to have identified cost/ beneficial interventions that make a difference to health. It's very satisfying on all sorts of levels."

Right from the start, the focus for the team has been on addressing longstanding quality deficiencies in housing, particularly as they affect vulnerable





"Small differences across the whole population can make profound changes to maintaining good health – more so than making huge changes for just a few people."

groups such as children, older people and those with chronic health conditions including asthma and COPD (chronic obstructive pulmonary disease). They have used large-scale community trials, involving around 10,000 New Zealand households, testing and quantifying the effectiveness of measures such as retrofitting insulation to modern standards, installing effective heating and reducing home hazards that cause costly trips and falls.

"When we started these big community trials we didn't know what the results would be," says Howden-Chapman.

"But the positive results reinforced for us that what are actually relatively small changes – in indoor temperature and relative humidity, and minor trip hazards in the home – can make significant differences to people's health, safety and well-being. Small differences across the whole population can make profound changes to maintaining good health – more so than making huge changes for just a few people.

"The population approach we have in public health is often neglected because state-of-the-art clinical medicine is seen to be more glamorous with immediate results. But putting in place a better standard of living for everyone is really a crucial part of preventing illness occurring in the first place."

One of the things they have been able to take advantage of is the very good

## Prize money to fund further research

A large chunk of the Prime Minister's Science Prize money will go to supporting postdoctoral students undertaking new research. Around \$400,000 is targeted at a project to improve the health of newborn babies using the knowledge gained over the past 15 years to make housing as healthy and safe as possible, then following those babies to measure what difference it makes to their health.

One of the programme's co-directors, Professor Julian Crane (Wellington Asthma Research Group), says his focus is on respiratory health.

"We are particularly interested in asthma and allergic disease, the impact of the housing environment and how people live in the houses contributes to that."

Crane says the plan is to go back and look at what it might be possible to do in the housing situation to improve the early life events for a child.

"One of the things about asthma and allergic disease, and not just respiratory disease, is that a lot of what's important actually happens very early on in life," he says. "If you can really improve and maximise the health of the environment in those early stages you may get a much bigger gain than later on when you have a house full of adults with problems.

"So, the idea is to focus on doing things in the home to keep them warm, to reduce the opportunity for mould to develop, even prior to a child being born."

While the detail is yet to be confirmed, the basic concept is to try to intervene very early and see what impact that has in the early parts of childhood.

Crane says if there are signs that it is having an impact, then they will probably follow the children for longer in life.

"We would develop a package of interventions which we would put in place, and then follow those children forward and look at the rates at which they got respiratory problems. We can then see if, by doing those things, we have an impact on their risk of developing respiratory and allergic illness and, if so, how large an impact."

Interventions to date have been around initiatives such as changing the

types of heaters used in the homes of children with already established asthma, he explains.

"The idea is to go to a form of primary prevention. If you bring a child up in a warm, dry, mould-free environment, what impact does that have in improving their subsequent respiratory and immunological health?"

Howden-Chapman says they also plan to undertake a study called SHELTER in which they will look at improving the homes of children who have already been admitted to hospital because of respiratory illness.

"The other area we're looking at is children who do come into hospital and what difference it makes if you go and fix up their home before they go back home – as we're often seeing children patched up in hospital and then sent back into the environment that made them sick in the first place."

administrative data that are kept in New Zealand.

"We've got data about hospitalisation that are linked to every person and you can now link their pharmaceutical records. We've also got this world-renowned ACC system which records every injury for which people claim compensation.

"We can use all these and other administrative systems to ask how can we lower these hospitalisations, how can we lower ACC claims and how can we lower pharmaceutical bills? We've shown several ways in which you can do this, so this is really important for keeping people healthy and really showing that prevention is better than cure," she says.

"The clincher cases that we've made using cost-benefit analyses have been possible because of this very good administrative data."

Howden-Chapman says they have also been aided by New Zealand's size and the ability to talk to so many different groups such as Housing New Zealand Corporation, BRANZ and NIWA (National Institute of Water and Atmospheric Research), as well as being supported by district health boards and electricity companies.

"In larger places these can easily be larger and more formidable institutions that you can't easily collaborate with. But, in New Zealand, I think we've still got a strong sense of the public good and trust. There's a huge amount that can still be done in this space where we're trying to improve everybody's health and well-being.

"We're really delighted that we can provide results that help policy-makers put in place policies that will improve the health of everybody. We've always been accessible to anyone who wants to talk to us. We are supported by the taxpayer through our Health Research Council programme grants, so we feel we have a responsibility to make our results widely available.

"There are about 1.4 million houses in New Zealand – housing is an important part of our infrastructure." The robust, evidence-based work of *He Kainga Oranga* has also been recognised internationally.

Howden-Chapman currently chairs the World Health Organization (WHO) Housing and Health Guidelines Development Group which is examining international standards for basic housing, in much the same way as we have basic standards for air quality.

There is also involvement with the International Energy Agency (IEA) in the area of the co-benefits of improving energy efficiency in housing.

Late last year Howden-Chapman represented New Zealand at the launch of the Urban Health and Wellbeing Programme, a major new 10-year interdisciplinary global scientific collaboration hosted by the Chinese Academy of Sciences' Institute of Urban Environment in Xiamen, China.

The consortium behind the new programme is headed by the International Council for Science (ICSU), with co-sponsorship from the InterAcademy Medical Panel (IAMP) and the United Nations University (UNU). It aims to empower planners and policy-makers to achieve better health for billions of people living in fast-growing urban areas by considering the city as a complex system, with factors varying across different local and regional contexts.

Howden-Chapman says the programme is designed to link the science and policy communities in developing research that sets goals to improve the health and wellbeing of urban populations.

"I was asked to speak there because the multidisciplinary Resilient Urban Futures programme, which is funded by the Ministry of Business, Innovation and Employment and led by Otago, is seen as an example of what can be achieved by integrating robust research and policy. People acknowledge that even though New Zealand is relatively small we have been doing some pioneering work in this area."

## MARK WRIGHT

## Warm-Up New Zealand: Heat Smart Programme

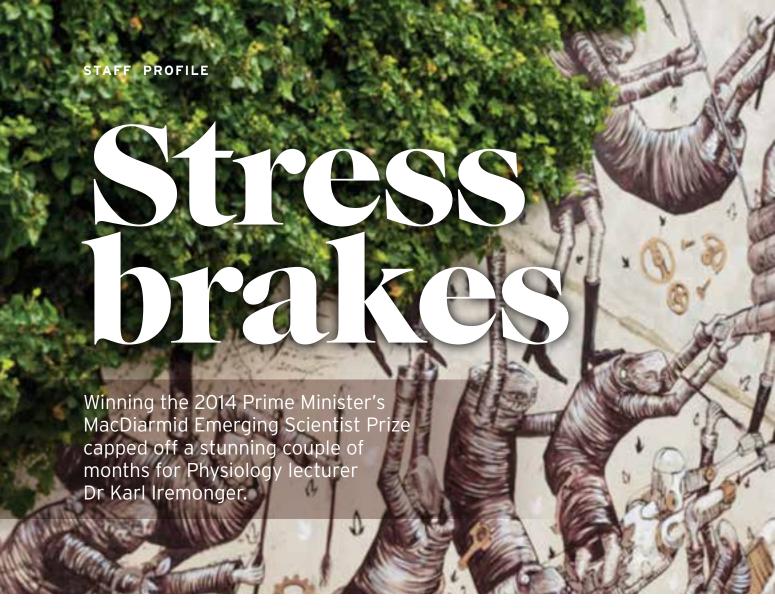
Professor Philippa Howden-Chapman's team has carried out an extensive cost-benefit analysis of the Warm-Up New Zealand: Heat Smart Programme with researchers from Motu Economic and Public Policy Research, showing that the health benefits for adults exceeded the costs by a factor of nearly fourto-one and, for children, six-to-one.

The analysis included data from approximately 46,500 households and showed that the initiative led to a significant reduction in premature mortality in those aged 65 and over, lowered hospital and prescription costs, and produced other co-benefits such as energy efficiency, more time spent at school and overall well-being.

They estimated benefits totalling \$1.224 billion, compared to costs of \$339 million which effectively translates to one million dollars in benefit for every \$250,000 invested.



Otago Magazine online: Professor Philippa Howden-Chapman talks about her work. otago.ac.nz/otagomagazine



f Dr Karl Iremonger (Physiology) was worried about securing funding for his research on stress, there was really no need.

Iremonger received a \$300,000 Marsden Fund Fast-Start grant for emerging researchers from the Royal Society of New Zealand in November.

He was awarded a Sir Charles Hercus Health Research Fellowship from the Health Research Council in the same month, worth just over \$489,000 and one of only two of the prestigious fellowships awarded last year.

And he travelled to Wellington in December to be presented with the \$200,000 2014 Prime Minister's MacDiarmid Emerging Scientist Prize.

Iremonger, who grew up in rural Canterbury and Southland, completed

undergraduate degrees in physical education and physiology at Otago. He then moved to Canada, where he earned a master's degree and a doctorate in neuroscience at the University of Calgary.

"My interest in neuroscience was sparked by an honours project I did in phys-ed in which I worked with people with multiple sclerosis, looking at the effect of exercise on their symptoms," Iremonger says. "And I wanted to combine more education and training with a bit of life experience and travel."

He returned to Otago in 2010 to undertake postdoctoral research, working with Professor Allan Herbison in the Centre for Neuroendocrinology within the Department of Physiology, and took up an appointment as a lecturer in the centre in October 2014. Iremonger specialises in research on a part of the brain called the hypothalamus. It's about the size of an almond and located in the centre of the head, at about eye level.

"The hypothalamus is an area of the brain that subconsciously controls behaviours and functions which are absolutely critical for survival," Iremonger explains. "For example, it controls stress hormone levels, fertility, metabolism, thirst, body temperature. It's a physiological controller that makes sure your body is functioning properly without you having to think about it."

The MacDiarmid Emerging Scientist Prize was an acknowledgment of his research on the neurons that control fertility and reproduction within the hypothalamus.



"We discovered that these fertility neurons have a structure and function that are really different to any other cells that we know of in the brain. How they control fertility, how they process information from other brain cells, is really quite unique and remarkable."

He says that this discovery opens up the possibility of regulating the activity of these brain cells with drugs, paving the way for new treatments for infertility. He adds that, if other brain cells also process information differently to what we currently think, it has huge ramifications in developing treatments for other neurological disorders.

In announcing the prize, the MacDiarmid judges described his findings as "internationally significant".

Iremonger is putting most of the

MacDiarmid prize money towards setting up a laboratory with a small staff in the Centre for Neuroendocrinology to carry out related research on stress, funded by the Marsden and Hercus money.

Most of us get stressed from time to time, but Iremonger says that his research is concerned with the damaging effect on our bodies and brains from chronic or prolonged stress, when we secrete elevated levels of stress hormones in response to this ongoing stress.

"We are generally resilient when it comes to single stresses and acute exposure to these stress hormones can actually be beneficial. But, what is really damaging to us is repeated stresses and persistently elevated levels of stress hormones that we can't control over extended periods of time. That's when we seem to break down and become more susceptible to things like cardiovascular disease, metabolic disorders, diminished fertility, impaired short-term memory, anxiety and depression."

Iremonger cites one specific example of the effects on our metabolism. "The stress hormones that circulate in your blood do a number of things. One thing they do is to cause the release of glucose into the blood. If you are trying to escape from a lion, release of energy stores is going to give you energy to escape. That's the acute advantage. But, if your blood glucose is always elevated, that can lead to diabetes."

Iremonger says that part of his research focuses on neurons that are activated in the hypothalamus during stress. One lot are called corticotropin-

releasing hormone neurons, thankfully abbreviated to CRH neurons; the other lot are called oxytocin neurons.

He explains that stress activates the CRH neurons and they release the stress hormones into the body.

"These stress neurons integrate information from a whole bunch of other parts of the brain that all relay different stress signals – things like immune stress when you get an infection, low blood pressure and low blood glucose, and psychological and emotional stress – and, in turn, control the levels of stress hormones circulating in the body.

"Acute stress temporarily increases the excitability of these CRH neurons but, if these neurons become overactive as a result of chronic stress, it is going to cause too much release of stress hormones into your blood and the consequent health problems."

Oxytocin neurons, on the other hand, help to prevent excessive stress hormone release.

"The hypothesis is that oxytocin neurons, which sit right next to the CRH neurons, are a safety brake which prevent the CRH neurons from becoming hyperactive. So we are interested in studying, at the level of single cells, how these two cells talk to each other and control each other's activities."

He says that understanding how this happens might lead to better drug treatments to prevent excessive stress hormone release and, thereby, prevent many of the detrimental health consequences of chronic stress.

Iremonger also wants to understand why CRH brain cell activity sometimes remains elevated after the cause of the stress has gone.

"The hypothesis is that there are longlasting changes that happen to these stress neurons that make them hyperexcitable for longer periods of time, and this could be due to changes in their structure and in their function. So we are going to first figure out what their normal structure and function is and then see how that changes after exposure to stress."

He says that by identifying these changes, we will also be better able to prevent or reverse them, to restore normal stress hormone levels.

The stress research, which is being undertaken with the assistance of Dr Valery Grinevich from the University of Heidelberg, involves studying neurons in brain tissue obtained from mice.

Iremonger is confident that the research on mice is applicable to humans. "We know that the basic circuits and the mechanisms of how brain cells work and how networks of brain cells function is very similar between mice and humans."

Iremonger intends making known the results of his research through journals, conferences and the media, in which he has quickly established an impressive track record.

The MacDiarmid judges noted that, since returning to New Zealand in 2010, he has "presented his work numerous times at national and international conferences" and "has an outstanding publication record for an early-career scientist". He has already published 17 papers, many of which have appeared in prestigious research journals.

And how does the busy scientist deal with stress in his own life? He says that a sense of perspective, physical exercise and family are important.

Spending six years in Calgary in the shadow of the Canadian Rockies enabled him to indulge his passions for skiing, biking and hiking. Back home, the 35-year-old enjoys summer surfing, winter skiing and year-round running – time permitting; he was training for the 42-kilometre off-road Motatapu Marathon near Wanaka held earlier this month.

He says that his greatest relaxation is spending time with his wife, Dunedin Hospital dietitian Jo Iremonger, and their funny and energetic two-year-old daughter.

## IAN DOUGHERTY



Otago Magazine online: Dr Karl Iremonger talks about his work. otago.ac.nz/otagomagazine

"The hypothesis is that oxytocin neurons, which sit right next to the CRH neurons, are a safety brake which prevent the CRH neurons from becoming hyperactive. So we are interested in studying, at the level of single cells, how these two cells talk to each other and control each other's activities."

## Coronial review

A comprehensive study of the New Zealand Coroner's Court has provided much-needed information about how coroners work and how their recommendations are implemented.

oroners' efforts to prevent future loss of life don't always work as well as they should.

But it's hard to identify systemic problems and find solutions without an in-depth understanding of what coroners have to deal with.

Dr Jennifer Moore (Faculty of Law, and Department of Preventive and Social Medicine) has a rare background in both public health and law, which qualified her to be the right person to research the effectiveness of the New Zealand Coroner's Court.

"Coroners do really important work, and their recommendations have the potential to save lives and guide policy. But no one had studied what happened to those recommendations.

"There was no New Zealand research, and limited international research, about coroners' decision-making and the extent of organisations' implementation of coroners' recommendations.

"The New Zealand public deserves a high-performing coronial service, so I felt it was time that someone evaluated the system."

Moore and co-researcher Professor Mark Henaghan (Law) decided to investigate coroners' cases and recommendations for the five-year period from 2007 to 2012, which followed the passing of the 2006 Coroners Act.

Initially Moore thought her research would involve wading through the

appropriate records in the law reports for the Coroner's Court. But immediately she hit a snag. There were no reports.

"I was shocked. It's a scandal that there are no Coroner's Court law reports. Other courts produce law reports – it's a fundamental aspect of the legal system – but the Coroner's Court seemed to have slipped through a gap.

"I thought it was going to be easy to collect the data, but it was quite a mission even finding out how many cases there were over the five-year period we studied."

Moore spent months travelling to courts around the country, tracking down hard copies of hundreds of files, obtaining electronic copies of files from the Coronial Services of New Zealand, cross checking to see she had them all, discovering many were missing, chasing them up, collating her information – and only then could she really make a start on her research.

The New Zealand Law Foundation was funding the project and all eyes were on Moore's work because it was likely to influence the government review of the Coroners Act 2006.

"We timed our research to coincide with the review because we hoped to be able to inform policy. The Law Foundation realised the importance of this law reform objective and supported us."

Moore's extensive background in both law and public health helped her

with the difficult tasks of accessing and understanding information. At the time of her report she was acting director of the Legal Issues Centre in the Faculty of Law, but had gained her PhD at the University of Melbourne's Faculty of Medicine.

She is a lawyer, social scientist and health scientist, with experience in New Zealand, Australia and Israel, and later this year will be taking up a Harkness Fellowship to study health policy and health law at Harvard and Stanford Universities.

"Coroners have a statutory public health function and, as I have a foot in both camps, it qualified me to do the policy research and suggest possible reforms."

With 607 cases collected, Moore found coroners had made 1,644 recommendations to 309 parties, with the highest number going to government organisations (121).

She contacted more than 200 organisations that coroners had made recommendations to. She gained approval to interview 79 of them, but once she collated the replies she began to wonder whether more data were needed.

The research participants were so strongly in agreement about how the law should be reformed that she feared that interviewing only those who agreed to be interviewed might have skewed the results. So, to ensure balance, she

## "This is not research that will sit gathering dust on an academic bookshelf. Our findings are informing law and policy reform, and improving the Act has every likelihood of helping to save lives."

surveyed the non-interviewees to see if they felt differently.

They didn't. "We received 42 completed questionnaires and the data were extremely robust. The results from the survey data and interview data were consistent across the organisations."

There was strong support for the Coroners Act to be amended to include a mandatory response regime in order to ensure organisations respond to recommendations.

Moore worked with the Chief Coroner to try to get mandatory response systems added to the amendments going through Parliament. The Bill has now been referred to the Justice and Electoral Committee for consideration and to hear submissions

"While mandatory responses are not included in the Bill at this stage, we are still hopeful it will happen because the research is overwhelmingly in favour of the change. However, a number of our other recommendations have been included in the amended Bill – such as a new definition of 'interested parties' – so, overall, we are pleased with the uptake of our findings.

"This is not research that will sit gathering dust on an academic bookshelf. Our findings are informing law and policy reform, and improving the Act has every likelihood of helping to save lives."

Over the five-year study period some 20 per cent of coroners' recommendations had been rejected by the organisations they had been submitted to. Moore suggests that figure might have been less than some people might have thought.

"I think there's a general idea that no one takes any notice of coroners' recommendations, but we found that wasn't the case. Many organisations acted promptly to change their systems after lives had been lost. "In 49 per cent of the cases, organisations had already taken action because the coroners' recommendations had taken too long to be made – especially in hospital deaths. Coroners then just endorsed the action taken."

Moore found not all recommendations hit their mark – and for good reason. They were not specific in their target.

"I was surprised to find that 23 per cent of recommendations during the study period were untargeted, being directed at vague groups such as 'all hunters', 'all people in the boating community', 'all drug users' or 'all people reading this decision'.

"A recommendation needs to be directed at specific organisations or people to be effective. It has to go to the right person who can do something about it.

"If it goes to the wrong person and they say 'This is not for me', it either goes in the bin or is forwarded on – but if recommendations are constantly made to the wrong place over time they are less likely to be forwarded or implemented."

Moore is working on ensuring that coroners have access to the right people. "Our research now has a list of contacts for most of the organisations likely to be targeted for recommendations. We can help coroners to target the right person."

Although Moore's research is formally over, she is still committed to helping coroners use public health principles to get better results.

"There has been a fantastic level of interest from coroners, before, during and after our research, and we have had great feedback. They've been really open about the recommendations we have made and are already actively making changes where they can.

"Another big surprise to us was that we discovered many coroners felt they were working in a vacuum. Working largely alone, they didn't know what other coroners did and generally got information about what others were doing from media reports.

"It's not their fault – they only meet each other twice a year and have limited access to other coroners' findings, so we feel there is room for improvement there."

Moore is aiming to help coroners to change their practice and work more efficiently by changing how they work, particularly by getting better access to existing data. Coroners only have two researchers to help them with cases.

So far the response from coroners has been good and swift, but some improvements need time.

Setting up good national electronic data systems and services similar to the Australian National Coronial Information System needs the assistance of the Ministry of Justice, but Moore is confident that things are changing for the better.

She's writing a book about New Zealand's coronial system and how it compares with those in other countries. And she's still liaising with the Chief Coroner to massage improvements into law.

"Our research has been a mix of public health analysis, legal analysis and social sciences, and it has thrown up some valuable suggestions.

"It has been a massive project – much larger than I expected – but it has been the best way to answer the questions about the effectiveness of coroners in this country.

"The system is there to prevent future loss of life, and improvements can be made. Coroner's Court law reports should be introduced and full coronial findings should be available electronically. It's not a radical idea, and yet it is so important."

### **NIGEL ZEGA**



## Caring for change

The plight of children in her native Iraq prompted Dr Assil Russell to establish the rapidly growing international aid organisation ICARE. Now she is also working closer to her New Zealand home with the Revive A Smile campaign.

hile world leaders dither over how best to respond to the humanitarian crisis caused by political and religious turmoil in Iraq and Syria, an Otago graduate is quietly getting on with the job of providing aid to suffering children and families.

ICARE, a charity started in 2010 by Dr Assil Russell while she was a student dentist in Dunedin, has grown from helping with health problems to supplying food and shelter to displaced Iraqis in desperate need.

Her organisation has also gone global for fundraising and support, with hundreds of volunteers around the world and on the ground in Iraq.

It's dangerous work, brought home recently when one of ICARE's volunteers was killed by a car bomb in Baghdad. But it doesn't stop Russell and others continuing to try to alleviate the plight of innocent people caught up in a war that, Russell says, has little to do with Islam.

"Anyone who knows anything about Islam will realise that calling the terrorists Islamic State (IS) is so wrong.

"The religion condemns all acts of violence and barbarism and puts great emphasis on the sanctity of human life. The Quran states that saving one person is equal to saving all of mankind and taking a life is equivalent to murdering all of mankind. Everything the Islamic State criminals are doing is completely un-Islamic."

Russell was only five when her dentist father and doctor mother emigrated

from Iraq to New Zealand to give their children a better life.

She grew up both Kiwi and Iraqi, fluent in both languages and with a strong Moslem faith. Her beliefs encapsulate the caring, giving side of Islam, and it wasn't long before she was involving herself in community projects in her home town, Hamilton.

"My faith teaches that if you can help people less blessed, you should. My brother and I had been so privileged to grow up in New Zealand, and our parents raised us to understand just how lucky we were and instilled in us a strong sense of humanity.

"I've been socially aware ever since I can remember, and at high school I was involved in fundraising and youth organisations including the UN Waikato branch."

After helping out in her father's dental practice, Russell decided to follow his profession and enrolled at Otago.

"I wasn't pushed by my parents. They said just follow your heart – but I always wanted to do something with health care, something hands on. I wanted to improve people's lives and empower them. I love making people smile.

"At University I was asked to do an assignment comparing health-care systems in different countries. Naturally I chose New Zealand and Iraq – most of my family is still there – and during my research I was horrified at just how bad the health situation was and how extremely desperate the needs were. "University enabled me to network and connect with people who shared my vision and goal of creating change in the world by caring for those less fortunate."

In 2010, while still a student at Otago, Russell set up ICARE (Iraqi Children's Aid and Repair Endeavour), a registered charity aiming to fund and provide lifechanging health care for some of the children who were casualties of decades of fighting in Iraq.

Social media helped, says Russell. "It's a great tool used in the right way and it enabled us to work from Dunedin, and now Hamilton.

"We use outlets like Facebook, YouTube, Instagram and Twitter to access all sorts of volunteers – students, builders, professionals, doctors, you name it – as we need them, and to organise work and keep people and donors up to date with where the money raised is being used and who we are helping and how.

"We try to show as true a picture as possible of what is happening in Iraq and it is not always what you see in the media."

ICARE started out by identifying poor and orphaned Iraqi children in need of dental or medical care, raising funds to pay for it and then getting volunteers to see it through, from visiting medical professionals to local helpers.

By filming the children before and after treatment, Russell could show donors the results of their generosity. Unusually, there are no restrictions on who gets assistance.

"Caring can create change. I'm just one of many people out there who care enough to make it happen."

Dr Assil Russell



"What makes ICARE unique is bringing help to people from all walks of life. We are not religion- or faith-based, and don't question people about their beliefs or background. We just help those who need it."

ICARE now has branches in Sydney, Melbourne and in the UK, and is starting up in the US and Canada. International branches are mainly involved with fundraising, but volunteers come from everywhere.

"We can't cope with the number of people offering help. It's overwhelming. It's not just Iraqis, but all kinds of people who have been following what we are doing."

The charity runs 24/7 on the ground in Iraq, where there are five branches and hundreds of volunteers help with distributing aid. And, with the emergence of IS, ICARE's role has expanded dramatically from just health care.

"Lots of medical charities have expanded into humanitarian aid in response to the activities of IS. People are leaving their homes with nothing. They need food, shelter, bedding, clothing, heaters.

"It's been suggested that there are more than five-and-a-half-million orphans and that more than a million people have been internally displaced, but I'm sure the figures will be much higher now. The amount of work that is needed is far greater than any charity in Iraq can cope with."

It's why volunteers keep turning up, despite constant danger. Aside from running the charity from New Zealand, Russell tries to get to Iraq once a year to help out and see family.

"Foreign aid workers are targeted in Iraq. It's a very real risk for us. So we don't announce what we are doing until we have done it. But every person who volunteers puts their life at risk every time they go outside. That was highlighted with the tragic loss of one of our people to a car bomb.

"This year [2014] has been the worst it has been for a very long time. The Iraqi people are generous, helpful and optimistic, but they've been waiting for things to get better for over 10 years.

"We make sure we publicise the work we are doing, because even small successes mean a lot. I speak daily with colleagues in Iraq and we try to keep each other positive."

Running a charity in war-torn Iraq from the other side of the world sounds like work enough for anyone, but Russell also combines it with a busy Hamilton dental practice shared with her father, and has started a second charity effort closer to home.

After seeing how medical treatment could change the lives of Iraqi kids, Russell reckoned there were also people in Hamilton who could benefit from a little help. In 2012 she started Revive a Smile, offering dental treatment to locals with great need, but no resources.

"There are homeless people, refugees, people new to New Zealand, people whose lives are really hard. They haven't got jobs and can't afford dental care. It's hard to get employment if you can't even

smile because your teeth are so bad. So we provide free clinics for those in need."

Russell's practice provides the expertise, with funding from the New Zealand Dental Association and the Wrigley Company Foundation, and support from Independent Dental Supplies and PAK'nSAVE, donating oral-care products to give to patients.

"The project has brought the community together and had positive results with some patients gaining employment after we revived their smiles. Now we're expanding to include more needy Kiwis."

In 2013 Russell was a finalist for New Zealander of the Year. In 2012 her work was nominated for the Sir Peter Blake Leadership Awards. She has given speeches in Parliament and Premier House and hopes to continue working and striving to create change both in New Zealand and Iraq.

How does she find time to fit everything in?

"You just have to make time. Once you start doing what you believe in the world seems to conspire to make it happen.

Along the way there are always obstacles, but surrounding yourself with people who share your dream helps and things begin to take on a life of their own.

"Caring can create change. I'm just one of many people out there who care enough to make it happen."

### **NIGEL ZEGA**



Otago Magazine online: Find out more about ICARE. otago.ac.nz/otagomagazine

## People first

IVF pioneer Dr Richard Fisher talks to Rebecca Tansley about his years at the University of Otago and the events that led to his co-founding Fertility Associates, the company that transformed fertility treatment in this country.

r Richard Fisher's consulting room at Fertility Associates, the company he co-founded, overlooks Auckland's Mercy Ascot Hospital, of which he is chairman. For this reason, despite the fact it is more professionally smart than super plush, it evokes the notion of someone surveying his kingdom. He says he would rather refurbish one of the company's clinics than purchase himself a new car, because it's important to him that his patients and colleagues enjoy their environs. He is, it seems, a people person.

New car or not, undoubtedly Richard Fisher is also a success story. Fisher and Dr Freddie Graham introduced in-vitro fertilisation (IVF) into New Zealand while working at National Women's Hospital in the early 1980s.

In 1987, the pair set up Fertility Associates, the country's first private infertility medicine clinic and now its largest, with clinics in the five main centres, as well as one in Kuala Lumpur.

Fertility Associates has, effectively, led the field of reproductive medicine in New Zealand, achieving a number of "firsts" that include embryo freezing, egg freezing and sperm microinjection, as well as Australasia's first baby to develop from a vitrified and thawed embryo.

Fisher is an honorary professor at the Liggins Institute, is frequently a commentator on fertility medicine issues and, in 2009, his services to medicine were recognised with the award of a Companion of the New Zealand Order of Merit. All this is a far cry from the mayoralty of Hamilton to which the young Richard Fisher aspired as a keen Waikato boy, but no doubt a career that requires comparable levels of diplomacy. Perhaps it's not surprising, then, that he maintains the most important skill for a doctor who practises what he calls "social" medicine rather than "transactional" medicine – the ability to communicate. That ability, he says, he learned from his mother, Anne.

Unusually for the era, Richard's mother worked full-time and was the family breadwinner, as his father had sustained a war injury that prevented him from working consistently. So, in 1947, Anne became a journalist, first in radio and then with the *Waikato Times*.

Afternoons spent doing homework in the newsroom introduced schoolboy Richard Fisher to the debate of local issues and the importance of good communication – both things that would stand him in good stead in his later stint in student politics and, subsequent, career in "social" medicine. It is also evident Fisher's mother was a strong woman who helped to shape an empathy for women that informs his work today.

"The powerful people in my family have always been women, so I think that means my relationships with women have always been different. I understand the issues of feminism, but they were never part of my day-to-day life because I always assumed it was normal for your mother to

be out working and be the boss."

Fisher went to Kings College as a boarder before – under instructions from his mother – heading to the University of Otago to study medicine. Here he was not an A student, but an A+ participant in the experiences that campus life and three years as a resident of Selwyn College could offer. He learned to play billiards, read the complete works of John Steinbeck and became vice-president of the Otago University Students' Association. But he failed to gain entry to Medical School at the first attempt, only succeeding the second time around.

Even after that there were several "chats" with the Medical School Clinical Dean, Dr Robin Irvine, who apparently suggested that if it was ok for the All Blacks to have time off occasionally it was probably alright for student politicians.

"The funny thing is," Fisher recalls, "the student union meetings were always at lunchtime, but lunchtime was the time when we had lectures in genetics and embryology. So I'd never get to them, yet they're the two things I do now."

Fisher credits his entry into obstetrics and gynaecology, that led to his later specialisation in reproductive medicine, to an impromptu stint as an O & G registrar at Waikato Hospital.

"I was originally going to go into general practice, so I was doing a Diploma in Obstetrics, but the day I started the registrar at Waikato Hospital resigned and left. So the consultants



looked at me and said 'you're going to be the registrar'."

Fisher claims to have benefited from the best – if unconventional by today's standards – preparation as a result. By the time he arrived at National Women's Hospital in Auckland at the end of the following year he had already performed more than 200 Caesarean sections.

Specialist training in England followed where he learned of the development of IVF by Drs Robert Edwards and Patrick Steptoe. On his return to New Zealand he met up again with colleague Dr Graham, whom he had known earlier at National Women's Hospital.

"Infertility medicine was pretty limited at the time to a little bit of surgery and a few drugs. IVF revolutionised the field because it was something you could do for a whole lot of people for whom previously you couldn't do anything, even though the results

were extraordinarily poor at that stage. If you had a five per cent success rate everyone thought you were triumphant, because it was five per cent better than anyone had had before.

"When I talk to patients now and say you have a 40 to 50 per cent chance of becoming pregnant they look at me as if to say, 'that's not very much' – and they're right. We're constrained by biology so we're probably not going to get much better than that, but that's so much better than where we started."

Famously Fisher and Graham started up New Zealand's first infertility clinic "by subterfuge", beneath the Auckland Health Board's radar. The service was later sanctioned, but struggled for adequate funding in the face of ballooning demand.

"Things like the donor insemination service were pretty transactional," recalls Fisher. "Someone would come in and say they wanted a baby and you would say 'we'll find you some sperm' and the person got inseminated and went away.

"Perhaps that met the needs of the recipients, but it met none of the needs of the child and none of the needs of the donor. Those were the things [Freddie and I] thought we needed to change."

Reproductive medicine occupies one of the pointy ends of medical ethics. It's an area Fisher is constantly quizzed on.

"Ethics and ethical questions are embedded in our work. Not a day goes by without a new question or debate coming up. Here at Fertility Associates we end up with a consensus view and we'll live with that, but generally we're conservative ethically and we'll err on the side of spending more time on discussion."

Perhaps because of his emphasis on the importance of communication, Fisher has become something of a commentator on such issues, but he doesn't rate himself as "smart". Rather, as a principal of Fertility Associates, where scientific staff "Infertility medicine was pretty limited at the time to a little bit of surgery and a few drugs. IVF revolutionised the field because it was something you could do for a whole lot of people for whom previously you couldn't do anything, even though the results were extraordinarily poor at that stage."

engage one day a week in research, and also at the Liggins Institute Trust, he sees it as his job to be something of a patron to the "smart" people who do medical research.

For those who practise medicine, Fisher believes the most important skills are the ability to think and communicate.

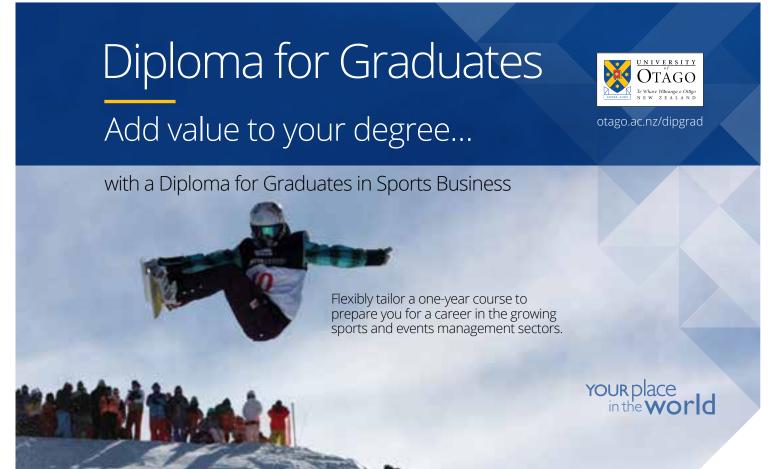
"If you're going to be a surgeon you have to have good technical skills, but the important thing about surgery is you also have to know when to do it. That requires thought processes. If I was

interviewing [potential students] for medical school – which I'm not – I'd be looking for someone who can think and communicate."

Fisher retains links to his alma mater through the Reproductive Medicine Unit at Dunedin Hospital, where Fertility Associates has supervised science for many years, and through his children – two of whom have Otago degrees.

There's also a Frances Hodgkins work on paper hanging in the Clocktower building which he, in his capacity as 1969 OUSA vice-president, helped purchase as a centennial gift to the University from its student cohort. It's fitting, perhaps, given his subsequent career, that the work is from one of the most prominent women artists New Zealand has produced.

"Ralph Hotere was Frances Hodgkins Fellow at the time and he was painting all these works that were black. I just thought a bit of colour would be nice."





## Te Tumu marks 25th anniversary

Over the past quarter century, Te Tumu: School of Māori, Pacific and Indigenous Studies and the Māori Centre (Te Huka Mātauraka) have played significant roles in assisting the University to fulfil an important focus of its strategic direction: to increase Māori student participation and achievement. Both grew from modest beginnings...

e Tumu: School of Māori, Pacific and Indigenous Studies traces its direct ancestry back to 1990, although the teaching of the Māori language at Otago started in the 1950s.

The first courses in te reo were community courses provided through the Department of University Extension from 1957. These evening classes for adult students were initially tutored by a respected Kai Tahu kaumatua from Otakou, Harold Tarewai Wesley.

The University began formal courses in Māori in 1977, when it commenced an introductory first-year course in Māori language and literature, taught by Dr Ray Harlow as part of the linguistics programme in the Department of English.

A first-year Māori language paper was introduced in 1981, also taught by Harlow, but restricted to 28 students until 1984. The lifting of restrictions – and demand for the paper – resulted in a second appointment, that of Godfrey Pohatu in 1986 as a permanent Māori Studies lecturer; his wife, Toroa Pohatu, became a lecturer two years later.

A first-year Māori culture paper was added in 1987, a second-year te reo course in 1989 and third-year course in 1990

Strong student growth resulted in the establishment of the Department of Māori Studies in 1990, headed by Godfrey Pohatu; Harlow had departed for Waikato University the previous year. Consistent demand for the courses saw first-year student numbers increase to 950 by 1994, when postgraduate courses commenced. New staff members were recruited to teach the expanding programmes.

In 1996, a chair in Māori Studies was created to head the department, which was located in the School of Languages. Professor Tania Ka'ai was the first dean, followed by Professors Paul Tapsell from 2007 and Michael Reilly from 2012.

When the Division of Humanities was restructured in 1999, a separate School of Māori Studies was established, with the name Te Tumu. The name references various Polynesian languages, meaning root, stump, stem, foundation

"Māori academics have always been very open and supportive of non-Māori students ... In fact, the staff enjoy having a huge range of students from so many different areas. It's quite stimulating."

or origin. One Māori definition – a post for tying up canoes – is explained as an encouragement to staff, students and guests "to anchor themselves to the school and use the resources and shelter it provides in which to base and fully immerse themselves in all the University of Otago has to offer".

The school adopted its current, expanded name of Te Tumu: School of Māori, Pacific and Indigenous Studies in 2003, following the introduction of degree courses in Pacific Islands Studies and Indigenous Studies, although Māori Studies remains by far the largest programme in terms of staff and students.

In 2000, Te Tumu shifted from a series of old houses near the Burns Building to the Richardson Building South Tower.

From modest beginnings, and through some turbulent waters, Te Tumu today offers degrees in Māori Studies (which accommodates an immersion Māori language programme), Pacific Islands Studies (taught across several University departments) and Indigenous Development to doctorate level, and an online Master of Indigenous Studies.

Te Tumu has a greater proportion of its students at first-year level, compared with other schools; many of the students come from other schools to take one or two papers in language and culture. Te Tumu had about 2,000 individual students at all levels last year, including 1,780 first-year students. They represented about 330 equivalent full-time students.

Reilly, who joined the staff in 1991, says that most of the students who do Māori Studies as a major are of Māori descent, but a large number of the students taking first-year papers, notably the introduction to Māori society paper, are non-Māori, many from overseas.

"Māori academics have always been very open and supportive of non-Māori students; you are very much a part of the group," notes Reilly. "That's certainly the philosophy here. In fact, the staff enjoy having a huge range of students from so many different areas. It's quite stimulating."

Reilly says that the students end up in all sorts of occupations: managers of iwi organisations, teachers, journalists, researchers, planners. "There are a lot of organisations that find it desirable for all sorts of reasons to have people with this sort of academic background."

Reilly refers to the strong research culture that has developed at Te Tumu over recent years.

"In the 1990s, almost all of our postgraduate students would have been staff fulfilling postgraduate qualifications. So, it was very much a capacity-building situation. Whereas most of the staff now have PhDs, there is becoming a stronger research culture in terms of publications and research grants.

"And our postgraduate cohort would now be what you might call 'real' students. At the PhD level particularly, with the website and the staff with all their qualifications and areas of research interest, we are attracting more and more postgraduate students, not only from within New Zealand but from around the world."

Reilly says that although most of what Te Tumu does is in common with other university schools, there are differences.

"As a non-Māori myself, I think the thing that distinguishes a department like Te Tumu is the cultural protocols. Not only do you teach it, but you are not really being consistent if you don't attempt to put it into practice.

"A very simple, but obvious, example would be, when we have guests, we would have speeches in te reo, and maybe waiata, and a lot of food, because one of the key cultural requirements is hospitality or manaakitanga.

"If you look at the Māori language papers particularly, they would utilise cultural practices. For instance, if you were in a classroom where you had people at differing levels of competency, someone who was more fluent would work with someone who was less fluent.

"I guess you could say that's some pedagogical technique, but it does also fit with Māori cultural beliefs about the older or tuakana sibling helping to guide the younger relative."

Reilly predicts that Te Tumu's next 25 years will build on the developments of recent times.

"I would have thought that the research culture evolution that's been noticeable in the last five years would have taken flight. Probably you will have a much older looking department, with more senior staff and a strong ethos of external grants and publication of books, lots of postgraduate students and a strong cohort of undergraduate students.

"Hopefully, alongside that, a continuing practice of what makes places like this unique in terms of how they manifest cultural values."

## Māori Centre celebrates

The Māori Centre (Te Huka Mātauraka), which is slightly older than Te Tumu, is also belatedly celebrating its 25th anniversary.

The idea of a Māori Centre came from Māori staff and students, supported by the Assistant Vice-Chancellor (Humanities) and the Registrar, in the late 1980s. At the same time, the Government, acting on the Watts Report to the New Zealand Vice-Chancellors' Committee, allocated equity funds to each university. As a result, the Māori Centre opened in an old house at 515 Castle Street North in 1989, using most of the Otago equity grant.

The centre was then managed by the Registry and co-ordinated by one staff member, who worked closely with the Māori liaison officer based in the Registry, and with the Māori Studies staff. Since 1999, it has operated under the management of Student Support Services.

Te Huka Mātauraka initially provided study rooms, emergency live-in facilities and a small library. Its primary aim was to help first-year students adjust to the University environment and support them in their studies, through workshops on examination technique and essay writing, and tutorials.

The centre gradually expanded its accommodation (taking over two more adjoining houses) and its staff to cater to the increasing number of Māori students at Otago – and the centre's expanding role. The current staff comprises a manager, academic co-ordinator, mentoring and orientation co-ordinator, community liaison officer, two counsellors, administrator and receptionist, along with many tutors, mentors and other volunteers.

The Māori Centre describes itself as a "whānau on campus" or "home away from home" for students of Māori descent, from Orientation to graduation. Māori pre-graduation ceremonies have become a popular feature of Te Huka Mātauraka for Māori graduates and their families.

The centre manager, Pearl Matahiki, says that the specialist academic, cultural and social support the centre provides is particularly apt at Otago, given that two-thirds of its Māori students come from the North Island and can experience loneliness, homesickness and isolation.

The centre recorded more than 1,000 first-time visits in 2013, more than 4,000

academic enquiries and more than 6,000 attendances at various tutorials it organises for students in particular subjects.

Matahiki says that they have noted a correlation between centre use and academic success: the more tutorials students attend, the higher their marks. All 60 of the Māori students who gained entry to health professional programmes in 2013 had been involved with the centre's various initiatives.

Te Tumu and the Māori Centre have both played significant roles in assisting the University to fulfil an important focus of its strategic direction: to increase Māori student participation and achievement.

Māori enrolments at Otago increased to an all-time high in 2014 of 1,776 students, who comprised a record 9.7% of equivalent full-time domestic students.

There were also increases in the number of Māori students completing postgraduate qualifications, and in the number of research projects being undertaken in association with Māori.

IAN DOUGHERTY



## Reunion

Te Tumu and the Māori Centre are holding back-to-back 25th anniversary celebrations from 28 to 31 May. On the Thursday, Te Tumu will host He Hokinga Mahara - an exhibition celebrating 25 years of Te Tumu staff, student and alumni success - followed by a Friday symposium and dinner. The Māori Centre is holding various social activities on the Saturday and Sunday of what is the long Queen's Birthday weekend, including a Saturday evening dinner. More information and registration details are available at otago.ac.nz/ttmc-25years

## Dan Radcliffe: international volunteer

Walking out on his first job after three days proved the making of Otago Business alumnus Dan Radcliffe who was recently named Ernst & Young Entrepreneur of the Year. By the time you are reading this, his company, International Volunteer HQ, will have placed more than 40,000 people in volunteer roles around the world in just eight years.

eaving your first graduate job after just three days and heading off to volunteer in Kenya may not be a textbook example of how to start your career.

But not sticking to the script has worked out well for Otago alumnus Daniel Radcliffe who was named the 2014 Ernst & Young Entrepreneur of the Year in recognition of the stellar development of International Volunteer HQ (IVHQ), the company he founded and now heads.

Radcliffe spent five enjoyable years at Otago gaining a Bachelor of Commerce (BCom) and a Master of Business (MBus). Like many other young graduates, he headed into a corporate graduate programme, but quickly realised it was not for him.

"I remember thinking – what will I do now? I've studied for close to five years getting this good degree and gone and quit my first job after only a couple of days.

"Other times when I have struggled to know what I wanted to do I have tried to put myself outside of my comfort zone – it was always a good way of learning a bit more about myself. So I decided to head for Africa and do some volunteer work."

But he soon realised the volunteering opportunities were restricted and there was a real opportunity for a company like IVHQ.

"Unless I wanted to go for a year or longer with the Peace Corp or VSA, then there were no real affordable opportunities around.

"I only wanted to go for about three months, so I signed up with the cheapest company I could find to go to Kenya and teach."

Costs were an issue and, after comparing notes, Radcliffe realised he was paying more to volunteer than friends were to go partying with Contiki.

"Once I got to Kenya I realised that the costs of these trips shouldn't be so high. There was a gap in the market because a lot of these companies were charging far too much."

Back in New Zealand he set about launching an affordable volunteer travel company with a transparent pricing structure.

"We charge the volunteer a fee of \$US279. The balance of what's paid goes to our local team in the country to cover all the costs there – depending on where they are going, how long they are going for and what they are doing."

For example, a teaching trip to Kenya is a lot cheaper than doing turtle conservation in an expensive country like Costa Rica, with its high living costs.

Some projects – for example, construction projects – may include the cost of having a supervising foreman. Likewise conservation programmes, where a marine biologist or scientist may be involved. It is about helping cover the costs incurred by having volunteers there.

IVHQ initially started out with four countries – Kenya, Nepal, Thailand and Vietnam – but is about to hit 30 countries, with the addition of Romania and Italy.

"When people think about volunteer travel they think about going to help out poor people," says Radcliffe.

"We are trying to move away from that and have begun opening programmes in places that you wouldn't normally associate with volunteer travels. For example, in Italy people can be involved in building restoration work, childcare work, teaching and working with refugees.

"We are trying to push this idea that volunteer travel can happen anywhere and that, regardless of where you are in the world, you can stop and do something positive while you're abroad."

The company now has more than 100 different projects around the world and has placed volunteers from more than 100 different countries. However, 85 per cent of them have come from either US, Canada, Australia, UK or China.

Radcliffe says IVHQ works because it can send a lot of people while operating on small margins, with its modest registration fee.

"The company I went with must have had a margin of around \$US1,500. We operate on less than 20 per cent of that margin even eight years later."

A staff of 25 in New Plymouth do all the predeparture support. There are about 300 people working under the brand worldwide, although none of them are employed directly by IVHQ; instead, they work for their local teams.

Radcliffe says Otago prepared him well. "In retrospect, the education I got has been perfect for a young guy who was looking to start his own company. There were a lot of ideas and theories, particularly around logistics management and HR, that I've been able to apply to my business.

"More than anything else, too, just the people you are able to meet and the people that you mix with at the Business School have been really helpful post-University."

One of the people with whom he undertook master's at Otago, Ben Brown, is now one of his right-hand people at IVHQ, heading sustainability and risk management.

IVHQ has now placed more than 40,000 people over eight years. That adds up to more than 3,000,000 volunteer hours that they have contributed.

"Outside of the success of the business, the social impact of those people on the ground in those countries is pretty staggering and something we're really, really proud of."

Little wonder that, among many things, the award judges highlighted Radcliffe's personal integrity, and the influence and impact IVHQ is having on communities and in changing lives.

Footnote: On his way to taking out the Ernst & Young Entrepreneur Award, Radcliffe also picked up the Young Entrepreneur Award and will go on to be part of the EY World Entrepreneur Of The Year™ in Monte Carlo in June.

### MARK WRIGHT



## Apportunities

Mobile Apps are offering opportunities for technology transfer across the wider University.

Traditionally when you think of technology transfer at Otago, the Division of Health Sciences comes to mind as a major contributor. Ideas for new drugs, medical devices, diagnostic and therapeutic tools are common place.

However, Otago Innovation Limited commercialisation manager Graham Strong says the App space is opening up commercial opportunities across the rest of the University and, in particular, the Division of Humanities.

"The Humanities are often not seen as an obvious feeding ground for new commercial ideas, but, with the growing popularity of mobile Apps, they have found their niche and are proving to be the real innovators in this space.

"Not constrained by the traditional methods of protecting intellectual property, such as patenting, departments like Music, Philosophy and Archaeology are using mobile and software applications to solve problems that many face today."

The Department of Music is emerging as a strong contributor with two applications under development. *Read and Sing*, from Associate Professor Judy Bellingham with support from Emeritus Professor Geoff Wyvill (Computer Science), helps teach people to learn

how to sight-sing music and shows them visually whether their voice is hitting the right note. Otago Innovation is now working on another music application due for release later this year.

The Department of Philosophy's Associate Professor James Maclaurin created *HelpMePublish*, an App that helps researchers to look for journals in their subject area in a more targeted way.

"It acts as a marketplace for information between journals and researchers," Strong explains. "Surprisingly, research shows that 80 per cent of contributing journals provide information to *HelpMePublish* that is not on their websites."

Strong says language acquisition is a natural fit with mobile Apps and Te Tumu's Associate Professor Poia Rewi and Dr Katharina Ruckstuhl (Research and Enterprise) have developed a free Māori language vocabulary and phrase-learning App called *Aki*. Built by developer Grant Baxter (Applied Sciences), *Aki* is aimed at the in-home learner, particularly young people.

It uses an online, interactive game format in which the player learns and identifies Māori words and phrases to help them escape a taniwha in their canoe. Baxter, a design for technology

professional practice fellow, has been involved with several of the Otago Innovation developments, drawing on his experience as a professional App designer.

Professor Richard Walter
(Anthropology and Archaeology) has
developed an archaeological App to get
around the incorrect labelling of bags in
the field. Using tablets, archaeologists
will be able to scan a QR code on a bag in
the field to record the contents and where
it was found. Once in range of wi-fi, this
information is automatically sent back
to a main server. It also has potential
for other disciplines such as forensics,
zoology and botany.

"The work is predominately copyright IP, often in text and computer code," says Strong. "This is less expensive and, often, easier and faster to develop than some of the more traditional technologies. It's difficult to make a lot of money but, on the flip-side of that, it does raise a lot of awareness of what's going on in the University in this space."

The Sciences and Health Sciences are also grabbing the opportunity. Botany, for example, has developed the *Flora Finder* App which helps the user identify native plants instantly using the camera on a smartphone – a fun, easy-to-use App



The Apps innovators (from left): Associate Professor **James Maclaurin** (Philosophy), Dr **Phil Blyth** (Faculty of Medicine), **Grant Baxter** (Applied Sciences), Dr **Katharina Ruckstuhl** (Research and Enterprise), Dr **Graham Strong** (Otago Innovation Limited), Professor **Richard Walter** (Anthropology and Archaeology), Dr **Janice Lord** (Botany), Associate Professor **Judy Bellingham** (Music).

for tourists, trampers and casual walkers. And, if an identification isn't possible this way, the App offers the functionality to send a leaf image to the experts at the Department of Botany.

Dr Phil Blyth (Faculty of Medicine) has created *Bonedoc*, an App that enables users – anyone from medical students to gamers – to enter a virtual operating theatre. Here they can repair a hip fracture by realigning bones and then placing a plate and screws through an incision. It also provides feedback via the

App's x-ray function, before eventually giving the user a score for their work.

Pharmacy has even delved into the world of simulation technology. *Simpharm*, created by Professor Stephen Duffull, helps students manage a patient's medicines as pharmacists do in practice. It has a range of simulations that run from two hours to five days in which students can prescribe medicines, follow up virtual patients and respond to outcomes.

Strong says anyone could take some aspect of their work into the App space.

"If it is something that can be built, marketed and used to generate revenue, then Otago Innovation is interested. We have a team of people around the University involved in this – from the professional development design guys to the people who are thinking up the ideas.

"The key message is that it's no longer just the domain of traditional technologies; new ones like mobile Apps open the door for anyone ..."

## MARK WRIGHT

## One Health: a holistic view

With its roots in ancient Greece, the One Health concept - recognising the links between humans, other animals and the environment - is gaining momentum in the fight against infectious diseases.

nfectious diseases continue to surprise us. Despite our detailed understanding about the transmission and control of infections, they still present us with new challenges. Previously unknown infections appear at regular intervals. Known infections, such as Ebola, re-emerge in explosive outbreaks.

Indeed, the frequent occurrence of these new outbreaks has prompted some to suggest that we have entered a new era of infectious diseases. This impression has been encouraged by increasing reference to "emerging infectious diseases", a term coined in the 1990s and used extensively since as a focus for research funding and policy-making. Efforts to promote this as a distinct field have resulted in whole research programmes, conferences and journals dedicated solely to emerging infections.

However, this pattern of emergence and re-emergence is simply what infections have always done. It is nothing new.

Nonetheless, recent changes in human behaviour have influenced the emergence of particular infections. Increased urbanisation, crowded living conditions, the ease and speed of global migration, over-use of antibiotics, changes in animal husbandry and (potentially) climate change have created environments that favour transmission of infections.

The recent Ebola outbreak in West Africa is unprecedented in recorded history in terms of the number of people affected. This outbreak appears to have come about more through environmental factors, such as increased movement of people across borders and between rural and urban areas, rather than through new properties of the virus itself.

Indeed, the Ebola virus seems to be behaving in the same manner as in previous outbreaks. It is humans and how they have interacted with other animals and the environment that have changed.

Such recognition that the health of humans, animals and the viability of ecosystems are inextricably linked is the basis of a concept known as One Health. The One Health paradigm provides a conceptual framework for infectious diseases that acknowledges the complex interplay between human health, animal health and the environment, and with the factors that influence transmission of infections within their ecosystems.

The importance of this holistic approach is underscored by the fact that 60 per cent of known human infectious

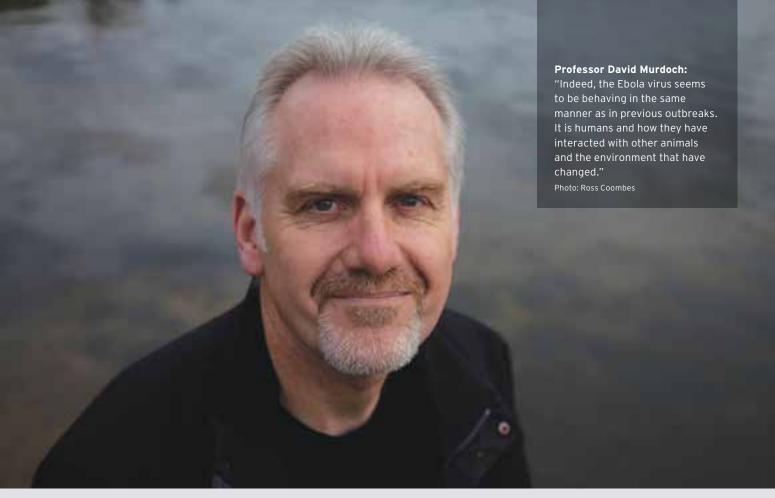
diseases have their source in domestic or wild animals, as do 75 per cent of emerging human infectious diseases and 80 per cent of the infectious microorganisms that are potential agents of bioterrorism.

The One Health concept can be traced as far back as ancient Greece and the physician Hippocrates. However, the term One Health is relatively new and the concept has gained momentum under this banner.

Veterinary researchers have grasped the concept more readily than those focused on human health, but the situation is changing. The One Health Initiative is now supported by many of the world's key human public health organisations, is increasingly part of medical school curricula and used to inform public policy.

Critical to the One Health concept is making it work in a tangible way that truly acknowledges all three components of the triad: humans, other animals and the environment.

It is not just about doctors and veterinarians talking to each other. It is not just a banner to highlight "new" human infections. It is not just about human infections acquired from animals



"The importance of this holistic approach is underscored by the fact that 60 per cent of known human infectious diseases have their source in domestic or wild animals, as do 75 per cent of emerging human infectious diseases and 80 per cent of the infectious micro-organisms that are potential agents of bioterrorism."

(zoonoses). The concept should also not be viewed simply as a new vehicle for attracting research funding.

Equal weighting should be given to each component of the triad, with particular acknowledgment of the importance of ecosystem changes and the holistic approach that is integral to the concept.

There has been surprisingly little recent collaboration between New Zealand's veterinary and medical schools. This is changing with the creation of One Health Aotearoa, a research collaboration led by Massey University and the University of Otago, and involving key players from other universities and crown research institutions nationwide.

Based around the One Health concept, One Health Aotearoa is focused on infectious diseases and brings together medical and veterinary researchers from around New Zealand, many of whom are internationally renowned for their work.

The combined expertise in infectious diseases assembled within the One Health Aotearoa alliance is unparalleled

in New Zealand and has the potential to be among the best in the world. The intention is to strengthen New Zealand's capability in infectious disease research and training, facilitate and enhance interactions between infectious diseases disciplines, and provide a platform from which to rapidly respond to infectious diseases threats to New Zealand.

This type of research alliance is particularly pertinent to New Zealand given the country's agriculturally-based economy, the importance of zoonoses and the need for efficient use of resources.

One Health Aotearoa is still in its infancy. Judging by the overwhelming success of the first symposium run by the alliance last year, there is considerable enthusiasm for a more holistic approach to tacking infectious diseases among New Zealand scientists.

## David Murdoch

Professor and Head of Pathology University of Otago, Christchurch

## Training ground

The School of Physical Education, Sport and Exercise Sciences provides a comprehensive programme of teaching and research, reflecting the growing importance of the sports and exercise industry. It is now launching an endowment fundraising campaign to further extend its research and outreach activities.

ong gone are the days when the School of Physical Education, Sport and Exercise Sciences was preoccupied with training phys-ed teachers, but perceptions persist.

It is one of the reasons why the School of Physical Education – founded by Philip Smithells in 1948 as a diploma course for physical education teacher training – expanded its name in 2013.

The Dean of the School, Professor Doug Booth, explains that the new name better captures the diversity of teaching and research undertaken today.

"We teach everything from anatomy to physiology, from biomechanics to psychology, from dance to history. We're interested in human movement, broadly conceived; we are trying to give the students a holistic approach to human movement."

Booth notes that, in the process, the school maintains close links with other disciplines across the University.

"What we are doing is taking parent disciplines such as physiology and saying, 'How do we apply these to human movement?' or 'How do we apply sociology, or marketing, or nutrition to sport?"

Physical-education students take papers in other departments and students from other disciplines take advantage of the specialist teaching in the School. Booth cites the examples of neuroscience students studying motor and sensory rehabilitation, and management students taking sport management courses.

Booth explains that the school's development reflects the huge growth in the sport and recreation industry over the past few decades.

"The real growth spurt took place in the late 1980s and early 1990s, when the sport and recreation industry really began to develop.

"The sports bureaucracy has grown immensely. There are national sports organisations, and regional and community trusts. There is also greater diversity in physical activity; there are classes and activities for the aged, and people requiring rehabilitation. A lot of our students pursue those areas." Only about a quarter of current students go into teaching.

Booth says that the Bachelor of Physical Education degree has been designed and structured to enhance knowledge of these diverse fields.

"Although other places offer variations of our degree programme, one of the things that makes us distinct is the breadth of our programme. We require everyone to do a component of exercise science, social science, dance, outdoor education and Māori physical concepts."

Students are able to major in exercise and sports science, physical activity and health, professional studies, and sport and leisure studies. Otago also provides postgraduate degrees in physical education, sport and technology, outdoor education and dance studies.

"The staff take their teaching very seriously and they are very good at it," Booth says. "They get excellent feedback and student evaluations, and that extends into our postgraduate supervision and mentorship."

He says that the research undertaken by staff and postgraduate students is as diverse as the teaching.

"Research undertaken by staff includes



not just blue skies research, but practical research involving clinical populations. We have a motor development clinic for children with motor control difficulties and clinics for cancer survivors. And we are undertaking research into cardiac rehabilitation. Much of this work means advising people of the value of physical activity.

"In the past few years, the notion of exercise as medicine has become prevalent. The school is at the fore of this development. A simple walk can produce better health benefits than getting a pill from the doctor. It teaches people more about their bodies and about the environment, another critical element of well-being."

Booth adds that the school is particularly pleased with its achievements in performance-based research funding.

"Academic peers recognise the quality of the school's research and its contribution to knowledge across a whole range of areas."

The six staff research briefs on the next page (page 32) well illustrate the breadth

of research undertaken within the school.

The teaching and research are supported by the school's laboratories, which include some of the most advanced equipment and facilities available anywhere in the world, to teachers, researchers and students of physical education. Among them are an environmental chamber, strength-testing laboratory, a motion-analysis system and an aqua flume.

The school's alumni includes a who's who of New Zealand sport: international representatives Anton Oliver and Farah Palmer (rugby); Lynn Gunson, Anna Stanley and Adine Wilson (netball); Pat Barwick and Suzie Pearce (hockey) and Suzie Bates (cricket); along with respected coaches such as Robyn Broughton, Leigh Gibbs, Graham Henry and Jamie Joseph; and sports administrator Kereyn Smith, the Secretary General of the New Zealand Olympic Committee.

## IAN DOUGHERTY

## **Endowment** campaign

The School of Physical Education, Sport and Exercise Sciences is launching a fundraising campaign to establish a five-year \$5 million endowment fund.

The fund will support the school in its commitment to expanding research capacity and extending community outreach to help those who will most benefit from increased physical activity and movement.

It will also support a new School of Physical Education Research Fellowship.

To find out more about the fundraising campaign and/or to contribute, please contact:
Professor Doug Booth at the School of Physical Education, Sport and Exercise Sciences.

Email: doug.booth@otago.ac.nz Phone: +64 3 479 8995

## The great outdoors

Associate Professor Mike Boyes is passionate about research on outdoor education and outdoor recreation. He is particularly interested in research on teaching and learning in the outdoors, outdoor leadership and participation by older people in outdoor adventures.

His current research projects embrace children and safety management, the experience of time in the outdoors, outdoor education and the social exchange of emotional support, the roles of intuition and analysis in outdoor decision-making, and the social risks of adventure sports.

Boyes has completed funded research projects for various professional and national bodies, including New Zealand Outward Bound, the Spirit of Adventure Trust, the International Sail Training Association, the New Zealand Outdoor Instructors' Association, SPARC, the New Zealand Mountain Safety Council and the World Wildlife Trust.

## Young people's health

Professor Lisette Burrows' research focuses on understanding the place and meaning of health and physical culture in young people's lives. She analyses curricula, policies, pedagogies and interview material to test everyday assumptions about what young people are like, and what they need or desire in terms of health and physical education. She is especially interested in how broader health policies and issues such as obesity shape what happens in the name of health and physical education in schools.

She also has an abiding interest in the ways families are increasingly positioned as culpable for young people's health. Burrows recently became the first female professor of physical education in New Zealand.

## Water safety

Associate Professor Chris Button immerses himself in research on water safety education, sometimes literally.

His recent funded research projects include one on behalf of Water Safety New Zealand on the benefits of training inexperienced swimmers in surviving sudden, unanticipated immersion in cold water, which accounts for about 60 per cent of deaths from drowning in New Zealand. Button continues the school's history in water safety education, in which it has helped to train many thousands of students over the years in its aquatics programmes, and conducted many important research projects on water safety topics.

He says that, in recent years, the school's unique and famous aquatic flume has been busier than ever and staff members are generating new, cutting-edge knowledge through its use.

## Māori health

Dr Anne-Marie Jackson's research is centred on supporting the hopes and aspirations of Māori communities within Māori physical education and health. She focuses on the importance of Māori worldview, the Treaty of Waitangi and Kaupapa Māori theory.

Alongside her colleague, Dr Hauiti Hakopa, she fosters Māori research excellence through a research group called Te Koronga, in which they are growing the next generation of scholars who research on Māori topics. She says that their postgraduate students are able to firmly stand with their feet in two worlds and contribute directly to the communities they work with.

Jackson believes that there is a wide gap between universities and Māori communities, but she is optimistic that research like hers and that of the school's research students is closing the gap.

## Exercise and cancer

Dr Lynnette Jones' specialist research area is in exercise oncology. This includes evaluating the use of exercise training to prevent or relieve the physiological and functional effects of treatment on the cardiovascular system, physical fitness and muscle strength in breast cancer survivors.

She is also researching the underlying mechanisms by which chemotherapy might lead to cardiovascular dysfunction.

Much of the research is undertaken with breast cancer survivors attending the Exercise Training Beyond Breast Cancer clinic: a programme she designed to provide survivors with an individually tailored and monitored exercise programme.

Jones believes that a well-prepared exercise practitioner needs a well-rounded education that integrates theory with practice, and that the experience students receive while working with clients in a supervised exercise setting provides that opportunity.

## Active living and health

Dr Sandra Mandic is particularly interested in research in physical activity and health, and cardiac rehabilitation.

She currently leads the Built Environment and Active Transport to School (BEATS) study, which examines "active transport" (walking and cycling) to school in adolescents.

This multidisciplinary study involves multisector collaborations among Dunedin secondary schools, the city council, local communities and academia.

Mandic says that with all 12 secondary schools in Dunedin participating, the study provides a unique sample of students and parents across one city with a varied physical environment. She says that the findings will enable community health promoters, policy-makers and city planners to address barriers to active transport to schools, encourage active transport and create supportive environments in which to promote it.

## Give peace a chance

Professor Richard Jackson wants to place pacifism and nonviolence in the forefront of our thinking about the world.

Jackson (National Centre for Peace and Conflict Studies) has received a Marsden Fund grant to investigate contemporary pacifism and non-violence. (He explains that pacifism is morally-based non-violence.)

"I am researching why pacifism and non-violence are considered to be naïve and unrealistic, and why knowledge about them is subjugated," says Jackson, "when they can be highly successful and viable approaches to political reform, and there have been well-documented successes."

He says that the research includes studying academic literature on pacifism and non-violence, looking at what children are taught, interviewing politicians and defence people, scrutinising media coverage and running focus groups. He says that there will be a particular focus on Māori peace traditions.

"This study will have potential for peace workers seeking to transform violent cultures, indigenous communities seeking to de-subjugate traditional forms of knowledge, and scholars and practitioners seeking to reintroduce pacifism into international politics as a legitimate form of political theory."

Jackson, a pacifist, says that he would like to see New Zealand get rid of its military forces and become an openly peaceful country, modelled on Costa Rica.

Jackson is undertaking the research with Dr Jeremy Moses (University of Canterbury) and a team of two PhD students and three research assistants. He expects the three-year project to produce the two PhD theses, a book, various journal articles and an edited volume of papers from a conference at Otago featuring leading international scholars on pacifism and non-violence.



**Professor Richard Jackson:** "I am researching why pacifism and non-violence are considered to be naïve and unrealistic, and why knowledge about them is subjugated ... "

## **Cultivating the past**

What role did introduced crops and agricultural techniques play in the colonisation of New Zealand?

Associate Professor Ian Barber (Archaeology) describes this as "a profound, unresolved problem in New Zealand archaeology" and has set about trying to solve it.

Barber explains that there is rigorous debate over the importance of the adaptation by New Zealand Māori and Chatham Islands Moriori of tropical Polynesian crops and agricultural techniques to a temperate land.

"One extreme view is that the people who came here pretty much gave up on crops; they did persist with kumara in the warmer parts of the country but, by and large, they were hunters and gatherers.

"The other scenario is that they managed to successfully adapt tropical crops and agricultural techniques so as to anchor settlement in a number of diverse New Zealand places."

Barber cites as an example of this adaptation one particular innovation in the growing of kumara: the addition of stones to soils to retain heat and facilitate drainage. He says that the kumara storage pit was another unique Māori innovation, to extend supply and keep seed.

"I will be excavating archaeological sites, both storage pits and also agricultural sites, to get new material to identify the technologies and, most particularly, to date those technologies, so we know when they were brought in and, therefore, we can infer how important they were for colonisation."

Barber is undertaking the research with financial help from the Marsden Fund, specialist botanical research from a postdoctoral researcher, and statistical modelling from Professor Richard Barker (Mathematics and Statistics).



**Associate Professor Ian Barber:** "One extreme view is that the people who came here pretty much gave up on crops; they did persist with kumara in the warmer parts of the country but, by and large, they were hunters and gatherers."

## Ancient responsibilities

Modern governments and multinational companies could learn much about corporate social responsibility from long-dead kings of ancient Ceylon.

Dr Sriyalatha Kumarasinghe (Accounting and Finance) was visiting Sri Lanka when she came upon an old stone inscription publicly detailing a ruler's income and expenditure on his people.

"It seemed to be a very early record of corporate social responsibility and, as that is one of my main research areas, I wanted to know more."

Kumarasinghe's subsequent investigation into the records of the rulers of what was then Ceylon covers 1,600 years from the third century BC to the 13th century AD.

"There may be as many as 4,000 of these kinds of records still in existence in places such as museums, jungles, temples and caves, and we can still see most of them. I saw 30 in my short visit and researched about 600."

Although some stone inscriptions are weathered by sun and rain, most are still readable. The inscriptions, combined with similar information from surviving copper plates and documents written on ola leaves, indicate a transparency of governance almost unheard of today.

"They detail income from taxes and how it was spent on health, education, community well-being and spirituality. They list public appointments and committees and their responsibilities, and show the kings' approaches to maintaining law and order.

"The old rulers seem to have been more openly socially responsible than most governments of today."

Kumarasinghe's research was declared best paper at the International Conference on Corporate Social Responsibility recently held in Sri Lanka.



**Dr Sriyalatha Kumarasinghe:** "The old rulers seem to have been more openly socially responsible than most governments of today."

## Fault finding

If you want to understand earthquakes better, try to recreate their effects in a laboratory.

That's the thinking behind research Dr Steven Smith (Geology) is undertaking in collaboration with geologists in Italy and the United Kingdom.

Smith has received a Marsden Fund Fast-Start grant to research whether earthquake faults have been subject to "fast rupture or slow creep".

The grunty part of the research is being carried out at the National Institute of Geophysics and Volcanology in Rome, using two powerful fault simulators, each about the size of a small car.

"These are machines that slide pieces of rock past each other to simulate the sliding of the crust during earthquakes," Smith explains.

"The machines can do the sliding either very slowly or very quickly, depending on what type of earthquake we are trying to reproduce. As the rock pieces are sliding past one another, we can measure a whole bunch of things, like how hot they get, whether they emit gas, and how strong or weak they become.

"We have great facilities and expertise here in Otago to carry out the non-experimental parts of the project," Smith says. This includes using a scanning electron microscope in the Otago Centre for Electron Microscopy that allows researchers to look at samples up to 100,000 times larger than real size. The experimental samples will then be compared with natural rock samples from fault zones in New Zealand and Italy.

"If we want to prepare ourselves better for earthquakes, we need to carry out more basic research into what happens along faults during earthquakes."



**Dr Steven Smith:** "If we want to prepare ourselves better for earthquakes, we need to carry out more basic research into what happens along faults during earthquakes."

## Use it or lose it

New Zealand is famous for its flightless birds, but Professor Jon Waters (Zoology) is equally fascinated with our alpine insects that have lost their ability to fly.

Waters, with assistance from a Marsden Fund grant, has set about the task of unravelling the genetic basis of flight-loss in alpine stoneflies.

"It's about looking at how insects change in response to living at high altitude," Waters explains. "Most insects have the ability to fly, but then you get some that have evolved reduced wings and have lost that ability. It's something that happens repeatedly in the mountains in New Zealand.

"Almost all stoneflies fly, except for a few small isolated alpine ones, and we also get this pattern even within one species, where the lowland populations have regular wings and fly, and the upland ones have reduced wings and don't."

Waters says that we know little about the genetic mechanisms underlying this evolution in reverse.

Working with Associate Professor Peter Dearden (Biochemistry), he says that they will use genomic techniques to test for the genetic changes that cause repeated losses of flight in wing-reduced alpine stoneflies.

"As well as trying to understand how New Zealand's biodiversity has evolved, I think it's also really important for us to develop better skills at sequencing whole genomes and using them to understand morphological differences between and within species."

Waters believes that the likely explanation for the flight-loss in so many New Zealand alpine insect species is a simple response to living at high, windy, exposed altitudes, to stop them being blown away.



**Professor Jon Waters:** "Almost all stoneflies fly, except for a few small isolated alpine ones ..."

## The "broken hearted"

After the 6.3 magnitude earthquake in February 2011, higher rates of patients presented at Christchurch Hospital with symptoms of stress cardiomyopathy (SCM), or "broken heart syndrome".

The disaster gave University of Otago, Christchurch, researchers an opportunity to study the rare condition, which mimics symptoms of coronary heart disease.

The causes are unknown, although psychiatric illnesses such as chronic anxiety disorders have been proposed as risk factors, as have rare genetic variations.

Dr Cameron Lacey is part of the team that compared people who developed earthquake-related SCM with healthy volunteers. They looked for differences in socio-demographics, psychiatric history or rare genetic variations triggered by major stress. The results of their investigations into psychiatric history were published in the *Journal of Psychosomatic Research*.

They found the only difference between the patients and healthy volunteers was slightly higher levels of neuroticism in SCM patients.

Lacey says that while the study did not pinpoint the cause of SCM, it is still important because it adds to the ongoing debate about whether the underlying cause lies in the heart or the nervous system.

"Other international groups have suggested mental disorders such as anxiety and depression may be a risk factor for developing SCM, but our study, along with an earlier study by cardiologist Dr Paul Bridgman following the September 2010 earthquake, found this was not the case in the Christchurch patients."

The team continues to search for genetic origins. Professor Martin Kennedy is seeking funding to follow up an intriguing genetic finding in SCM patients, using advanced genome analysis and cell culture approaches.



**Dr Cameron Lacey:** "Other international groups have suggested mental disorders ... may be a risk factor for developing SCM, but our study ... found this was not the case in the Christchurch patients."

## Challenging perceptions

A societal tendency to pathologise and stigmatise refugees and those who work with them is being challenged by University of Otago, Wellington PhD candidate Marieke Jasperse.

Trained as a cross-cultural psychologist, Jasperse is concerned that refugees are often diagnosed with post-traumatic stress disorder, while those who work with them are perceived as "at risk" and suffering from vicarious trauma.

She has repeatedly seen the impacts of this perspective during 12 years working and volunteering in refugee resettlement in Wellington. What's needed instead, she says, is a holistic perspective that acknowledges the challenges of working in this context, but also draws attention to the resilience of refugees and opportunities for personal and professional growth.

"The way in which people talk about refugees and resettlement, particularly people in a position of authority, has significant implications for how others who then hear those conversations go on to perceive refugees – even when they themselves may have had limited to no contact with refugees."

Conversations dominated by "trauma" and "burden" can feed people's prejudices. In turn, refugees who face that prejudice can be left questioning their place in society.

In her advocacy and support work in resettlement, Jasperse knows it can be challenging, but also rewarding. "There absolutely needs to be a more balanced discussion about this. I want to draw

attention to the derogatory ways in which we talk about refugees, challenge that and provide evidence to the contrary."

Following ethical approval she has been recruiting research participants through NGOs working with refugees. Their enthusiasm for her research has, she says, been "overwhelming".



Marieke Jasperse (left) with her supervisor Dr Joanna MacDonald: "I want to draw attention to the derogatory ways in which we talk about refugees, challenge that and provide evidence to the contrary."

## Economic a-gender

Professor David Fielding (Economics) says his research on the economics of gender equality and female empowerment has shown money doesn't always equal power.

While female participation in paid employment in New Zealand has risen from less than 30 per cent to more than 60 per cent since the 1950s, in low- and medium- income countries the gender gap remains – in the Middle East and Asia, rates remain below 35 per cent.

However, Fielding says economists must look beyond these broad national statistics and conduct research at a household level to reveal how gender equality is linked to other dimensions of development; for instance, the interaction between cultural characteristics - such as attitudes towards women - and economics.

Analysis of women's rights in lower income countries has shown that levels of female empowerment impact on a woman's health more than household income levels. Mental and physical health are adversely affected if the choices women can make for themselves, and for their children, are restricted.

"To some extent, who holds the purse strings matters more than how much is in the purse," Fielding says.

Living in a village with more cultural diversity may improve a woman's options and increase her bargaining power at home.

In a recent paper Fielding questioned the value of per capita

income as a means of measuring development in gender equality.

"We don't really know much about how economic factors influence cultural norms. Development of a thorough-going integrated framework for understanding how social and political policy interventions interact with economics is a long way off."



**Professor David Fielding**: "To some extent, who holds the purse strings matters more than how much is in the purse."

#### **Cross-cultural encounters**

The seeds for Professor Tony Ballantyne's latest book were sown when he was an Otago undergraduate researching early missionary manuscripts in the Hocken Library.

Ballantyne, now head of the Department of History, wasn't considering an academic career until he was inspired by the chronicles of encounters between missionaries and Māori.

He went on to do a PhD at Cambridge and teach in the US and Ireland before returning to Otago - and the manuscripts.

The resulting book, Entanglements of Empire: Missionaries, Māori and the Question of the Body, offers a new, global view of New Zealand prior to the signing of the Treaty of Waitangi.

"It's a fresh approach that restores complexity and humanity to the people involved and shows not just the profound differences between the cultures, but also their common concerns.

"Māori and missionaries both had to explain things such as death, but they did it in very different ways - highlighting the importance of cross-cultural communication, miscommunication and growing forms of interdependence.

"As the two cultures tried to work out how they could live with each other, there were debates and arguments about things such as hygiene, clothing, tattoos, how the dead were treated - and these small everyday discussions had really big ramifications.

"So the first missions established in New Zealand in 1814

effectively entangled Māori and British cultures in ways that they could not envisage at the time.

"In this view, the Treaty can be seen as one unforeseen and improvised outcome of the shifting relationships that developed between missionaries and Māori as they tried to work each other out."



**Professor Tony Ballantyne:** "The first missions established in New Zealand in 1814 effectively entangled Māori and British cultures in ways that they could not envisage at the time."

#### Shocking behaviour

Identifying the foreshock phases of an earthquake sequence could lead to more accurate forecasting of main shocks, says Dr Ting Wang (Department of Mathematics and Statistics).

Wang is undertaking a two-year project aiming to create a statistical model to automatically classify periods of earthquake records into different phases – foreshocks, main shocks, aftershocks and background activity. She is collaborating on the project with Professor Mark Bebbington (Massey), Dr Matthew Gerstenberger (GNS Science) and Dr Virginia Toy (Geology, University of Otago).

"Aftershock behaviour is well studied," says Wang. "What we're trying to do is identify foreshocks by looking at a long sequence with many main shocks and seeing if there are any characteristic behaviour patterns in front of large earthquakes. If there are, they may indicate foreshock activity.

"If we know of foreshocks, next time there is a similar pattern we can estimate the probability of there being a main shock."

Wang is analysing 30 years of data from three regions that share similar tectonic environments with New Zealand – the Middle America Trench, northern California and the east Honshu-Hokkaido region in Japan.

"New Zealand has good records, but doesn't have that many large earthquakes compared to the three chosen areas where there are many large main shocks.

"The statistical model will categorise different behaviours over time and then go backwards to track foreshocks automatically."

In a separate project, Wang is building on her PhD research, in which she developed a statistical model for identifying anomalous GPS signals that could be related to large earthquakes.



**Dr Ting Wang:** "If we know of foreshocks, next time there is a similar pattern we can estimate the probability of there being a main shock."

## Leading argument

Without debate, the University of Otago's oldest society is putting up a persuasive case for top honours. f you were putting it in sporting parlance you would say the Otago University Debating Society (OUDS) has hit a rich vein of form.

Over the past year it won the Joynt Challenge Scroll, New Zealand's oldest and most respected national university debating tournament, and reached the quarter-final round of the prestigious Australasian Intervarsity Debating Championships (Australs) which draws teams from the Asia-Pacific region.

It was also ranked in the top tier of competitors ahead of the World Universities Debating Championships – alongside 10 other prestigious institutions including Oxford, Yale, Harvard and Cambridge.

OUDS 2014 President John Brinsley-Pirie says the strength of the society has been building in recent years.

"When I started debating here five years ago there was a very dedicated core group. Those people stayed around, doing sixth-year honours or a master's degree, and they coached people like me and others. Basically the institution got rebuilt over that time."

The OUDS holds the distinction of being Otago's oldest society – tracing its formation back to 1878. Membership tends to fluctuates, but currently sits at around 80 to 100.

"A lot of effort has been put into marketing the society and encouraging first-year students along. Hopefully, that will sow the seeds to help the society to continue to grow from strength to strength," says Brinsley-Pirie.

Although debating is seen as something strongly allied to the Faculty of Law there are plenty of students from other departments.

"In the last few years we've really broadened out and the best debater at Otago in 2014 was a med student. We also have economics and maths students, and science has had a big renaissance. Certain members in the society worked hard to bring along science students and that has gone down very well with science departments as well."

Being able to join a society that is performing so well at an international level is an added attraction, Brinsley-Pirie explains.

"It gives us the opportunity to try to institutionalise ourselves so that when you go to a tournament people know what Otago is and what that means.

"That's been quite recent and quite nice. Ever since we got into the 2013 world championship final with Alec [Dawson] and Kieran [Bunn], Otago has become a name that people know and the Australs have entrenched that even further."



Otago University Debating Society executive, from left: Patrick Dawson, John Brinsley-Pirie, Alice Sowry, Paul Hunt, Hannah Drury, Alec Dawson and Kurt Purdon.

Otago was awarded the honour of hosting the Australs last year, based on the quality of the judging Otago was able to offer, with Brinsley-Pirie and fellow OUDS member Katarina Schwarz given a role as judges for the final of what is considered the second most prestigous debating event behind the world championships.

Brinsley-Pirie says judging has a competitive element in debating, with judges given a ranking in recognition of their quality.

To make sure members are wellprepared for the competitive world of debating, the OUDS runs first semester training sessions to help new members understand what underlies effective debating.

"It's essentially about getting people to structure their ideas," says Brinsley-Pirie. "Debating is about communicating a simple message in a persuasive way – it's not about yelling someone down." There is also a regular programme of internal and external tournaments during the year, following a similar structure to the worlds and Australs.

"The vast majority of debating is impromptu and you have a time limit for preparation. In the Australs you have 30 minutes to prepare after you're given the topic, while the worlds only have 15 minutes."

Brinsley-Pirie says the OUDS enjoys a lot of practical support from the OUSA and also the Vice-Chancellor's office, while their official patron, Professor Nicola Peart (Faculty of Law), plays a valuable role.

"She really is the constant for a club which otherwise churns through members every few years."

One of the areas of OUDS debate lies around just who they can claim as alumni.

"We still claim David Cunliffe. I talked to him when he was down and it turns out he used to come to internal events, but he didn't go to any tournaments. We think that's enough – that works for us," Brinslie-Pirie adds with a smile. "We also claimed Grant Robertson, but he's denied it."

Their alumni also includes former MPs Michael Laws and Holly Walker, as well as law lecturers Simon Connell, Jesse Wall and Marcelo Rodriguez Ferrere. The latter two won the Joynt Scroll the previous time Otago took it 10 years ago.

#### POST SCRIPT

Since the interview for this story was completed, the Otago A team, comprising Brinsley-Pirie and Patrick Dawson, came 38th out of nearly 400 teams at the world championships in Kuala Lumpur, while Katarina Schwarz qualified as a judge for the knock-out rounds.

Contact can be made with the OUDS via oudspresident@gmail.com

#### MARK WRIGHT

#### MoA signed

The recent signing of a Memorandum of Agreement between Kōkiri Marae Seaview and Tū Kotahi Māori Asthma Trust and the University of Otago formalises a relationship that began more than 30 years ago.

Since 1999, health and social services provider Kökiri Marae Seaview and Tū Kotahi Māori Asthma Trust have supported research and teaching at the University of Otago, Wellington, particularly helping researchers access Māori communities in the Hutt Valley community.

University of Otago, Wellington's Associate Dean Māori, Professor Bridget Robson, says the memorandum is a timely acknowledgement of an enduring and collaborative working relationship that has been critical in ensuring research that is relevant to the Māori community and improves Māori health outcomes.

#### Marsden Fund success

Otago researchers have gained more than \$13.9 million in new government funding to pursue 22 world-class research projects at the forefront of their disciplines.

Researchers from across the University's divisions of Health Sciences, Humanities and Sciences will lead the new projects, which include 16 standard projects and six Fast-Start projects designed to support outstanding researchers early in their careers.

Deputy Vice-Chancellor (Research and Enterprise) Professor Richard Blaikie congratulated Otago's latest Marsden recipients, who together gained one quarter of the \$55.65 million available in this round.

"I am delighted by these researchers' success in what is an extremely competitive funding round. Nationally, only 8.3 per cent of the 1,222 preliminary proposals received were ultimately funded."

#### Online shop launched

Getting your hands on University of Otago memorabilia, clothing and accessories has never been easier with the launch of the Visitors' Centre's new online shop.

Online orders - everything from branded pens, glassware and umbrellas, to stationery, jewellery and framed artwork - can be shipped to most parts of the world, and special deals and offers will be available periodically throughout the year. Find out more at onlineshop.otago.ac.nz

#### **UNESCO** listing

Early 19th century missionary records held at the University of Otago's Hocken Library are among New Zealand archival treasures recently listed on the UNESCO Memory of the World New Zealand register of documentary heritage.

Missionary Society archives are one of the foundation collections of the Hocken Library and, at an early December function in Christchurch, they were formally listed with the Memory of the World register.

Hocken Librarian Sharon Dell says the inscription draws attention to the depth of the Hocken Collections and their national significance.

"It makes us very proud to be the caretakers of such iconic collections," she says.

#### Leith transformed

The transformation of the section of the Leith flowing past the University of Otago's iconic Clocktower building is complete after a major 12-month construction project. Not only have the banks and riverbed been improved to prevent flooding, but new terracing, steps leading down towards the river and a footpath vastly improve public access to the previously unapproachable, but picturesque, Leith.

#### **Awards/Achievements**

The He Kainga Oranga/Housing and Health Research team, led by Professor Philippa Howden-Chapman won the 2014 Prime Minister's Science Prize, valued at \$500,000, recognising research over more than 15 years that has involved thousands of New Zealanders and informed policy developments for successive New Zealand governments. [See story pages 6-91

Dr **Karl Iremonger** (Physiology) was awarded the 2014 Prime Minister's MacDiarmid Emerging Scientist Prize in recognition of his discovery of a new brain cell structure and communication system. [See story pages 10-12]

The outstanding achievements of three University of Otago researchers were recognised through the bestowing of significant national medals at the 2014 Research Honours dinner. The Callaghan Medal for science communication was awarded to geneticist Associate Professor Peter Dearden (Biochemistry); archaeologist Professor Charles Higham (Anthropology and Archaeology) was awarded the Mason Durie Medal for social sciences; and the Sir Charles Hercus Medal for excellence in biomedical and health sciences was



awarded to Professor **Parry Guilford** (Biochemistry).

Four leading University of Otago academics are among the 12 top New Zealand researchers and scholars in basic and applied science and the humanities newly elected as Fellows of the Royal Society of New Zealand. The new Fellows from the University of Otago are: Professor Catherine Day (Biochemistry), Professor Ewan Fordyce (Geology), Professor Neil McNaughton (Psychology) and Professor lain Raeburn (Mathematics and Statistics).

Leading environmental and chemical oceanographer Professor **Keith Hunter** has been awarded the New Zealand Association of Scientists' Marsden Medal recognising outstanding services to science. Professor Hunter is the University of Otago's Pro-Vice-Chancellor (Sciences) and co-director of the NIWA-University of Otago Centre for Chemical and Physical Oceanography.

Three University of Otago staff members and two postgraduate students gained scholarships in the 2014 Rutherford Foundation Trust Awards. Dr Charlotte King (Anatomy) and Dr Karen Reader (Anatomy) were awarded Postdoctoral Fellowships, as were Department of Geology PhD graduate and Teaching Fellow Dr Matthew Sagar. Department of Geography master's graduand Elisabeth Liddle and Biochemistry honours student Max Wilkinson have gained Cambridge-Rutherford Memorial PhD Scholarships to undertake doctoral studies at Cambridge University.

Ten University of Otago researchers are among the recipients of Health Research Council (HRC) Career Development Awards for 2015, with Dr Karl Iremonger (Physiology) gaining a Sir Charles Hercus Health Research Fellowship. Māori Health Research PhD Scholarships were awarded to Tania Huria (University of Otago, Christchurch), Christina McKerchar (Population Health) and Kelly Tikao (Donald Beasley Institute). Māori Health Research Summer Studentships went to Christina Gordon (Physiology) and Te Kahui Tapsell (Primary Health Care and General Practice). Pacific Health

Research PhD Scholarships went to
Jarrod Moors (Biochemistry) and Dr
Faafetai Sopoaga (Preventive and
Social Medicine). Pacific Health Research
Summer Studentships were awarded to
Melbournemockba Mauiliu (Preventive
and Social Medicine) and Alapasita Teu
(Preventive and Social Medicine).

Professor **Jeffrey Miller** (Psychology) was awarded a Humbolt Research Award by the Alexander von Humboldt Foundation of Germany in recognition of lifetime achievements in research.

Professor **Carolyn Burns** (Zoology) has received the New Zealand Freshwater Sciences Society Medal for outstanding contributions to the understanding and management of fresh waters. The citation notes that she is "hugely respected for her scientific knowledge, rigour and sustained contributions to science in New Zealand over many years".

Dr **Jennifer Moore** (Faculty of Law) has been awarded a prestigious Harkness Fellowship to undertake health law research for a 12-month period at Stanford and Harvard Universities.



Professor **Brett Delahunt** (Pathology and Molecular Medicine, University of Otago, Wellington, above) has been appointed to a WHO tumour classification panel being held in Zurich this month (March 2015). He is the only New Zealander ever to participate on the Classification Panel for tumours of the urinary system and male genital organs.

Dr Louise Bicknell (Pathology) and Dr Michael Knapp (Anatomy) have gained highly sought-after Rutherford Discovery Fellowships to help them develop their research careers in New Zealand. Three University of Otago scientists and a PhD graduate have been supported in the Neurological Foundation's December funding round. Department of Psychology PhD graduate Dr Robert Munn was awarded the 2014 Neurological Foundation Postdoctoral Fellowship, while Dr Stephanie Hughes (Biochemistry), Dr Margaret Ryan (Anatomy and Biochemistry) and Associate Professor Greg Anderson (Anatomy) each received project grants.



Professor Richard Blaikie presents the OUSA Top Teaching Award to Dr Kristin Hillman.

Dr Kristin Hillman (Psychology) took top honours in the Otago University Students' Association 2014 teaching awards while Dr Gill Rutherford (Education) was the recipient of the Inclusiveness in Teaching award. PhD student Malcom Smeaton was named the top tutor/lab demonstrator.

Dr **Steve Tumilty** (Physiotherapy) has achieved specialist status - just the third physiotherapist in New Zealand to do so since the new register was created by the Physiotherapy Board two years ago.

Marketing PhD student **Fatima McKague** has been awarded the Todd
Foundation Postgraduate Scholarship
in Energy Research to investigate fuel
poverty in New Zealand.

Dr **Russell Bisset**, a former postgraduate student at the University of Otago, and now a postdoctoral fellow at Los Alamos National Laboratory in the United States, received the 2014 Hatherton Award for the best scientific paper by a student registered for the

degree of PhD in Physical Sciences, Earth Sciences and Mathematical and Information Sciences at a New Zealand university.

Third-year neuroscience student,

Sam Hall-McMaster, has taken out
the third Eureka! Sir Paul Callaghan
Award delivering a winning 12-minute
presentation about how nanoparticles
could solve some of New Zealand's health
and environmental issues.

#### **Appointment**



Dr **David Tombs** (above), a leading public theology and reconciliation researcher working in Northern Ireland, has taken up the University of Otago's Howard Paterson Chair in Theology and Public Issues. The chair is part of the University's Leading Thinkers Initiative and Dr Tombs will also become Director of the University's associated Centre for Theology and Public Issues.

#### **Honorary Doctorate**

In December, the University conferred its inaugural Honorary Doctor of Commerce degree on retired Dunedin business leader and philanthropist **Graeme Marsh.** Dunedin-born and educated, Mr Marsh is a highly successful Otago graduate who has pursued a long and award-winning business career.

#### Professorial promotions

The following leading Otago academics have been promoted to full professorships, effective 1 February: Lutz Beckert (Medicine, Christchurch), David **Brvant** (Mathematics and Statistics). Lisette Burrows (Physical Education, Sport and Exercise Sciences), Warwick Duncan (Oral Sciences), Christopher Frampton (Medicine, Christchurch), Richard Gearry (Medicine, Christchurch), Leigh Hale (Physiotherapy), David Hutchinson (Physics), David Larsen (Chemistry), Rhonda Rosengren (Pharmacology and Toxicology), Katherine Scott (Psychological Medicine), Geoffrey Shaw (Anaesthesia), Takashi Shogimen (History and Art History), Elisabeth Slooten (Zoology) and Stuart Young (Music).

#### **New Year Honours**

Alumni recognised in the New Year Honours include:

Knight Grand Companion of the New Zealand Order of Merit (GNZM): Professor Sir **Murray Frederick Brennan**, for services to medicine.

Officer of the New Zealand Order of Merit (ONZM): Ms **Robyn Jane Baker**, for services to education; Ms **Susan Marie Paterson**, for services to corporate governance.

Member of the New Zealand Order of Merit (MNZM): Mr **Gregory John Dickson**, for services to the cargo industry; Mr **John Anthony Fallon**, for services to people with mental illnesses; Mr Thomas McNeil Pryde, for services to sport and the community; Ms Susannah Adair Staley, for services to governance.

Companion of the Queen's Service Order (QSO): Mr **Brian Edward Hayes**, for services to the land tenure system.

Queen's Service Medal (QSM):
Mrs Maria Elizabeth Collins, for
services to music and the community;
Reverend Tom Etuata, for services to
the Pacific community; Mrs Marjory
Jean Goldschmidt, for services to
the community; Major Barbara June
Sampson, for services to the community;
Mr David Neil Sinclair, for services to
philanthropy and the community; Mr
Peter Humphrey Willsman, for services
to conservation and the community.

#### **Emeritus Professors**

The University Council has recently awarded the following academics the status of Emeritus Professor: Professor Colin Campbell-Hunt (Accountancy and Finance), Professor Geoffrey Hall (Law), Professor Ian Jamieson (Zoology), Professor Alexander McQuillan (Chemistry), Professor Henrik Moller (Centre for Sustainability), Professor Martin Purvis (Information Science) and Professor Peter Skegg (Law).

#### Obituary

Ron Chambers (1940-2014). From 1980-2001, Mr Chambers was Proctor of the University – a job which made him essentially a guardian and protector of students, dealing with order and good behaviour if required. Those who worked alongside him at the University say his contribution to Otago was immense.

### EXECUTIVE RESIDENCE BOUTIQUE HOTEL





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Accommodation on campus just five minutes from Forsyth Barr stadium and minutes from the city centre.

\*Conditions apply.



## Moving history

Bullocks working in Leith Valley in 1939, the Kaikorai cable tramway and the 1955 University of Otago Capping Procession are among the moving snapshots of our past that have been preserved by the Hocken and are now available for public

The Hocken had, among its collections, some 400 reels of old local film that were not only unviewable, but the content of much was unknown. Now, following a collaboration with Maurice Hayward and the Film Heritage Trust, these films have been digitised and catalogued on the library's online database,

Copies are available on disk for use within the library, but extracts have also been uploaded for easy public access on the Hocken's new YouTube channel.

These include a variety of insights into our past including phys-ed classes at Seacliff School and flooding at Balclutha, from George Thorn's 1950s collection; and V-J Day celebrations in Dunedin on 15 August 1945. This footage from amateur filmmaker W.H. Davidson shows dancing and music in the streets, marking the end of World War II.

Also by Davidson is a 1947 film of the Kaikorai tramway enabling the viewer to "ride" the cable car on its journey. This tramway was in service from 1900 to 1947 and the clip has attracted more than 700 views on YouTube and a "reach" of over 15,000 on Facebook.

The footage that has attached the most viewers, however, is a promotional film made by the University of Otago in 1982. The 33-minute, 16mm film, Learning is a way of life: an introduction to student life at Otago, was produced by the University's Higher Education Development Centre's AV production unit in response to several years of declining student numbers.\* 

It tells the stories of five students: first-year Amanda Ellis (arts), medical student Peter Griffiths, Diana Carson (commerce), Graham Mandeno (science) and mature student Joan Parker

(education). Opening with their arrival on campus at the start of the year, it follows them as they settle into their flats and halls of residence, through Orientation and lectures, music and drama productions, life in Dunedin, to graduation at the end of

The film was screened nationwide on television in June and September in 1982, with an additional showing at the Dunedin Public Library. An innovative approach to university marketing at that time, the film triggered a number of similar initiatives from other institutions - and provides a nostalgic view of life at Otago in the early 1980s.



To view these films, visit the Otago Magazine online: otago.ac.nz/otagomagazine (or search Hocken YouTube) facebook.com/HockenCollections

\*Promoting Otago, 1980s-style: by Dr Ali Clarke otago150years.wordpress.com/2014/09/29/promoting-otago-1980s-style



#### Draft Copy: Patrick Lundberg

Works by the 2014 Frances Hodgkins Fellow exploring the expanded field of painting.

#### Picture/Poem

18 April - 25 July 2015

Works on paper by Cilla McQueen and Joanna Paul combining images and text.



WITH

#### Jenifer Lamie

Jenifer Lamie is a Master of International Studies alumna and co-author of *The Laws of Spaceflight: A Guidebook for New Space Lawyers*. She lives and works in the US as Judge Advocate and Captain in the US Army, where she is an international and operational law attorney.

At the start of this year, she took up the position of Brigade Judge Advocate (the legal advisor) for the Cyber Protection Brigade in Georgia.

She also holds an LL.M. in Space, Cyber and Telecommunications Law from the University of Nebraska College of Law and has received a J.D. cum laude from Vermont Law School.

Jenifer counts the publication of *The Laws of Spaceflight* among the highlights of her career. Other highlights include her internship with USSTRATCOM at Offutt Air Force Base and her time as summer law clerk for the Federal Communications Commission (FCC) in Washington, D.C. In her current role, she advises commanders on the law of armed conflict, rules of engagement and international agreements. She provides legal advice and advises on Defense Support of Civil Authorities (DCSA) issues and on issues that arise within the Pacific, including humanitarian assistance and disaster relief.

Jenifer has shared some memories from her time at Otago.

#### How has Otago helped shape your life?

The international law course I took



as part of my degree was the inspiration for attending law school. That passion for international law, and also areas of law that are unsettled or involve new and developing technologies, has continued from my studies into my career. Having a master's from an overseas university also gives me a unique perspective on global issues.

#### Highlights of your university days?

My classmates and I spent a long weekend camping using a University "hut" that was about an hour's hike off the road. It was great fun, although I was eaten alive by mosquitoes. The other main memory I have is of the many hours studying in the beautiful library.

#### Memories of favourite lectures?

I remember giving what ended up being an insanely long presentation on environmental policy in Professor Robert Patman's paper on international politics. I got an excellent mark but, in hindsight, I should have been more conscious of other students' desires to finish the class on time. It was a valuable lesson to learn before making the same mistake during a moot court competition in law school.

#### What do you remember about flatting?

I had an adorable little flat on the hills in Dunedin, on Orbell Street. I had a beautiful view of hills and living there forced me to overcome my nervousness of driving on the left side of the road.

### Do you have memories or impressions of Dunedin that you'd like to share?

Dunedin was a perfect little town. I am not one for big cities, but I am also not big on being in too rural a place either. Dunedin was the perfect size city for me: just enough restaurants and shops; just enough places to go in the evenings without stressing about where I would park. The culture of Dunedin was fantastic and the University itself was picturesque.

#### Memories of graduation?

We had such a small graduating class, we all stuck together taking pictures before and after the graduation ceremony. As you know, Otago has a million perfect picture places. I still have one of those photos sitting on my fireplace mantle.

#### Personal highlights?

Graduating with distinction was nice. My family flew out to visit once and we had a fantastic time, especially going over to Fiordland. I went on a trip to Australia with a classmate for a little over two weeks. We went from Sydney to Cairns on a backpackers' bus and budget. Great times! I saw a lot of the South Island but, sadly, none of the North. Before I started my programme, I picked cherries in Alexandra for a couple months. I think I was the worst cherry picker of all time: not because I ate too many (I only ate the perfect amount), but because I was so slow!

#### What are your special interests?

I am a pastel artist, although dedicating time to paint has been challenging lately. I enjoy legal writing, but I am also writing and illustrating a children's book. Being a children's book author is a side dream of mine. Another is travelling.

Of course, my other life is focused on my family – my wonderful and supportive husband, James Dooley, my perfect stepchildren, Luke and Alison, and Ballard, our English mastiff. They inspire me every day in all aspects of my life.

## Supporting Otago

WITH

### The Medical Class of '79 (MB ChB) Undergraduate Scholarship

Generosity and giving, as evidenced by the Medical Class of '79, is the key to making a difference to the lives of Otago students.

At the 25-year reunion in Wellington in 2004, this class agreed to use the excess funds left over from their event to initiate a scholarship fund – The Class of '79 Undergraduate Scholarship.

The scholarship fund has now been going for 10 years: the first scholarship was awarded in 2009 and a further 10 have been presented since then. The first recipient, Nicola Baxter, has now completed her degree and is working as a house surgeon.

The scholarship is aimed at secondand third-year medical students who are achieving well, but for whom there is also demonstrable financial hardship. The scholarships are adjudicated by Professor Robert Walker and doctors Sharleen Johnston and Mike Hunter, who are Dunedin-based graduates of the Class of '79.

To date, the Class of '79 has raised more than \$130,000 towards the scholarship fund. From the interest



Mr Mike Hunter, 2014 scholarship recipients Claire Richardson and Mercy Moxham, Professor Rob Walker.

generated, two scholarships a year are currently offered and the aim is to keep this going far into the future.

Class members make small donations on a regular basis, as automatic deductions from their bank accounts. Credit card donations are also made, enabling overseas classmates to easily contribute as well.

The positive impact of the scholarships has been immense. Students

who have benefited from the initiative are extremely grateful to have received assistance, providing the crucial support that has enabled them to continue with their degrees.

The Class of '79 would like to challenge all other graduating medical classes to match – or better – their endeavours with fundraising for the University of Otago.



"Receiving the Class of '79 Scholarship in 2009 gave me tremendous support during a time when financial assistance was hard to come by. I am now training to become a physician at Nelson Hospital."

Dr Nicky Baxter

#### CARADEE WRIGHT: Pretoria, South Africa

Based at the Council for Scientific and Industrial Research (CSIR) in Pretoria, South Africa, I'm working as a principal researcher in the Climate Studies, Modelling and Environmental Health Research Group - putting my PhD in public health, obtained at the University of Otago's Department of Preventive and Social Medicine, to excellent use.

I lead a research programme and laboratory that aims to explore the solar ultra-violet radiation-related health risks among Africans of all ethnicities and to develop appropriate sun awareness response tools. My studies at Otago gave me the skills and the confidence to tackle multidisciplinary public health challenges with the need for evidence-based solutions.

Living and working in South Africa provides unique opportunities to explore different sun-related diseases, cultures and behaviours. To some extent, the canvas is blank - by developing the research, presenting the evidence and working in national and international collaborations, we are sure to contribute important knowledge

of worldwide interest in the future.



#### NADEHA KAMALUDIN: Kuching, Malaysia

I work at the Swinburne University of Technology Sarawak Campus and I am currently responsible for the leadership, management and development of communication strategies that best convey the university's brand message, in various media and markets. This is a role that works across the whole university to provide a consistent, cohesive and strategic approach to branding and marketing communications.

I hold a Bachelor of Commerce majoring in economics and management from Otago.

With my Otago qualifications and experience, I've ventured into several industries ranging from investment holding to civil construction, television

broadcasting, marine construction, and now, higher education.

One of my career highlights was my time working in television as a news reader, broadcast reporter and part-time

host. My coming into broadcasting happened unintentionally, when I saw an advertisement in the newspaper. Being on television is an exceptionally fast-paced profession, and not about the limelight and glamour. It comes with hard work, tight deadlines and provides great opportunity to

engage with different parts of society. Read Nadeha's full profile on the Alumni and Friends website at alumni.otago.ac.nz





#### WHERE IN THE WORLD ARE YOU?

Email your 100-word "postcard" to alumni@otago.ac.nz
We want to stay in contact with you wherever you are. Visit
alumni.otago.ac.nz/where-in-the-world-are-you to find out where Otago
graduates take their place in the world.
While you are there you can update your profile, find lost friends and
check for alumni events in your area.

## Alumni notes



#### Dr Rui Araújo

Dr Rui Araújo (above), who is a graduate of Otago's Diploma and Master of Public Health programmes, has been appointed Prime Minister of Timor Leste.

The findings of Dr Araújo's thesis, "A Suitable Medium-to-Long-Term National Health System for East Timor: an East Timorese Perspective", were pivotal in designing the new country's national health system.

He served as an independent in the country's first transitional and second governments and was Deputy Prime Minister and Minister for Health from June 2006 to August 2007. Following his time in cabinet he worked as a health policy advisor at the Ministry of Health and Ministry of Finance respectively.

#### **Ross Haines**

Oxford University PhD candidate – and Otago alumnus – Ross Haines is making a name for himself on the sports field as well as in the classroom. Haines, who gained a Woolf Fisher Scholarship to do a PhD in statistics at Oxford, has recently been named Sportsman of the Year by St John's College and awarded the title of Walter's University of Oxford Sportsman of the Year.

This follows his match-saving performance against Cambridge University in which he scored 61 not out from 44 balls, hitting a six in the final over to win the match. Haines is a member of the Oxford MCCU team, a partnership between Oxford and Oxford Brookes University and funded by the MCC, and who will be playing Middlesex and Worcestershire in first-class fixtures in April.



Ross Haines receives the Man of the Match award from MCC president and former England cricketer Mike Gatting.

#### Eliza Raymond

Eliza Raymond (below), an Otago graduate with a master's degree in tourism, is the co-founder of GOOD Travel – a business designed to "inspire travellers and tourism businesses to transform the travel industry into a force for GOOD".

While living in Peru after she graduated, Raymond says, "I came across an amazing restaurant called Yanapay. The food is great and the decor is completely unique, but the best part is that all the proceeds go to a community centre for kids. I wanted everyone to



know about this restaurant and the many other restaurants, hotels, shops and tour operators around the world doing great things for their communities - so I co-founded GOOD Travel.

"We offer themed GOOD Tours for individuals seeking to meet likeminded travellers e.g. GOOD Food Peru, personalised trips for schools, universities and businesses, and a GOOD Directory of hotels, restaurants and tour operators for independent travellers."

#### Dr Farah Palmer

Phys-ed alumna Dr Farah Palmer has been inducted into the International Rugby Board (IRB) Hall of Fame.

Palmer's rugby career began with an inter-college game in her first year at University. She went on to national honours as a member of the Black Ferns from 1996 to 2006 and played in three Rugby World Cups, winning every one and earning 35 caps.

She was named Māori Sportsperson of the Year in 1998, IRB International Women's Personality of the Year in 2005 and was a member of the IRB Women's Advisory Committee in 2004-05. She is currently a senior lecturer in sport management at Massey University.

#### **Jonathan Squire**

Otago Physics honours graduate Jonathan Squire has won a highly competitive honorific fellowship from the Princeton University Graduate School where he is studying after gaining a threeyear Fulbright Science and Technology Award.

Squire is developing a new theoretical insight into the growth of magnetorotational instability, a subtle process that appears to control the flow of matter around black holes and has implications for the creation of celestial bodies.

## Reunions Events

#### **Upcoming reunions**

MB ChB Class of 1964 reunion
Dunedin and Central Otago, 8-11 April, 2015

Te Tumu/Māori Centre 25th anniversary celebrations, Dunedin, 28-31 May, 2015

MB ChB class of 1985 Queenstown, 28-30 August 2015

MB ChB class of 1954 Dunedin, 29 October - 1 November 2015

MB ChB class of 1955 Dunedin, 6-8 November 2015

Carrington College 70th anniversary reunion Dunedin, 20-22 November, 2015

Caroline Plummer Fellowship in Community Dance 10th anniversary and Moving Communities conference, Dunedin, 25-29 November 2015

Studholme College centenary celebrations and reunion Dunedin, 27-29 November, 2015

MB ChB class of 1976 Auckland, Easter 2016

BDS class of 1968 Dunedin, 2018

For more information
Visit the alumni website:
alumni.otago.ac.nz/Events
For reunions, email:
reunions.alumni@otago.ac.nz
For functions, email:
functions.alumni@otago.ac.nz
Phone: +64 3 479 4516

New York, 5 November 2014



Allan and Brian Portis with the Vice-Chancellor, Professor Harlene Hayne.

Edmonton, 26 October 2014



Chris Hoskins, Stephen Nichol and Bev Nichol.

Toronto, 29 October 2014



Alison Finigan, Paul Denton, Maire O'Sullivan, Hayden Selvadurai and Pat Merrilees.

London, 30 October 2014



Ronda Jolly, Paul Lancaster, Martin Kaufman.



Dakota Fisher-Vance and Jenny Chen.

#### **NEW BENEFITS** FOR ALUMNI

#### University of Otago Alumni Highlanders Club

The University of Otago has nurtured some of this country's best rugby talent. Now join us to celebrate the old and the new.

\$60 a year gives you:

- A University of Otago Alumni Highlanders membership card
- An exclusive video message from a coach on the day of the game
- Exclusive video content postmatch from a player on the game

- Exclusive invitations to pre-match hospitality events at away games
- Exclusive invitations to meet-theteam events at away games
- All official Highlanders' media releases prior to public release
- 20 per cent discount on tickets to all Highlanders' home games.

AND \$5 from every membership will be donated to the University of Otago Rugby Club Foundation for the club's scholarship fund.



#### Radio One 91FM Onecard

For 2015 Otago alumni are entitled to a free Radio One 91FM 2015 Onecard. This subscription card entitles the bearer to discounts on products and services in and around Dunedin. Read more at r1.co.nz/2015onecard and email us at alumni@otago.ac.nz to receive yours.

#### OUSA shuttle service

The airport shuttle service that has been available to students is now available to alumni attending Otago reunions. These shuttles are available for \$12 and \$15.

See ousa.org.nz/shuttles/ and contact reunions.alumni@otago.ac.nz if you want to use this service when you attend your next reunion in Dunedin.

Thanks to OUSA for their generosity.

#### Stay current for Otago communications

Email database.alumni@otago.ac.nz to:

- Update or change your postal address
- Receive email notifications (instead of post)
- Sign up to the *eConnect* newsletter
- Receive one "household" copy of the *Otago Magazine*.

## Alumni benefits and services

#### eConnect newsletter

Stay up to date with the latest alumni news, events, profiles and competitions delivered to your email inbox. Sign up for *eConnect* by emailing *database.alumni@otago.ac.nz* or phone 0800 80 80 98 and ask to update your details.

#### Otago Alumni and Friends Facebook page

Connect with us on Facebook at facebook.com/otagoalumni and engage daily with other Otago alumni and campus life.

#### Library membership

Use the University libraries for reading, writing, research and relaxation with an alumni library card.

#### Reunions

Need help organising your class/college/ flat/University sport reunion? Contact reunions.alumni@otago.ac.nz

#### Career development and advice

Whether you are currently searching for a position, considering a career change, or are seeking fresh talent for your business, Otago's Career Development Centre can help. otago.ac.nz/careers

#### Contact alumni

Get back in touch with lost friends, flatmates and colleagues from your student days by emailing friend.alumni@otago.ac.nz

#### IT training courses

Short courses on Otago campuses are now available to alumni. Some are free of charge and all others receive a special alumni discount of 15 per cent. See the list of courses at otago.ac.nz/ittraining/courses/subject.php

#### GIGATOWN WIN

Thank you to all alumni who supported Dunedin's successful bid to win the Chorus Gigatown competition. This will bring internet speeds of 1 gigabit per second to the city – and huge potential benefits.



#### **Charles Brasch**

Selected Poems

#### Chosen by Alan Roddick

Charles Brasch (1909-1973) was the founder and first editor of *Landfall*, New Zealand's premier journal of literature and ideas.

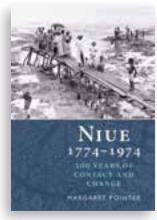
Born in Dunedin, he grew up to be at home in the literature, art and architecture of Europe, but returned to devote his life to the arts in his own country - as editor, critic, collector and patron.

Brasch's vocation, however, was to be a poet. As he said in his memoir *Indirections*, in writing poems he "discovered New Zealand ...

because New Zealand lived in me as no other country could live, part of myself as I was part of it, the world I breathed and wore from birth, my seeing and my language".

This selection shows his journey of discovery, as Charles Brasch learned by reading poets such as Rilke, W.B. Yeats and Robert Graves to find his own voice as "a citizen of the English Language".

It is presented as a beautifully bound cased edition.



#### Niue 1774-1974

200 years of conflict and change

#### By Margaret Pointer

Tiny Niue lies alone in the south Pacific, a single island with formidable cliffs rising from the deep ocean. Far from the main shipping routes and with a daunting reputation, "Savage Island" did not naturally invite visitors.

Yet Niue has a surprisingly rich history of contact, from the brief landings by James Cook in 1774 through to the 19th-century visits by whalers, traders and missionaries, and into the 20th century when New Zealand extended its territory to include the Cook Islands and Niue.

To date, this story has not been told. Using

a wide range of archival material from Niue, New Zealand, Australia and Britain, Margaret Pointer places Niue centre stage in an entertaining and thoroughly readable account of this island nation through to 1974, when Niue became self-governing.

As important as the written story is the visual record and many remarkable images are published here for the first time. Together, text and images unravel a fascinating and colourful Pacific story of Nukututaha, the island that stands alone.

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

#### Books by Otago alumni

Among Secret Beauties: A Memoir of Mountaineering in New Zealand and the Himalayas, by Brian Wilkins, Otago University Press, 2013.

**Little Truff Saves the Kereru**, by Ann Russell, AM Publishing for Ann Russell Publisher, September 2014.

The Adventures of Angel-Louise and Friends: Christmas in my New Home, by Julie Fawcett, illustrated by Charlie Saies-Allen, December 2014.

The Complete Recovery Room Book, 5th edition, by Anthea Hatfield, Oxford University Press, 2014.

**Featherweight - reflections**, by Janet Carrington, Kererū Press, 2014.

The Healthy Country? A History of Life & Death in New Zealand, by Alistair Woodward and Tony Blakely, Auckland University Press, October 2014.

By Students For Students: A History of the Otago Polytechnic Students' Association 1964–2014, by lan Dougherty, Otago Polytechnic Students' Association, October 2014.

Voice and Agency: Empowering Women and Girls for Shared Prosperity, co-authored by Sarah Twigg (with Jeni Klugman, Lucia Hanmer, Tazeen Hasan, Jenifer McCleary-Sills, Julieth Santamaria), World Bank, Washington DC, 2014.

Climate, Science, and Colonization: Histories from Australia and New Zealand, edited by James Beattie, Emily O'Gorman and Matt Henry, Palgrave Macmillan, New York, 2014.

Eco-Cultural Networks and the British Empire: New Views on Environmental History, edited by James Beattie, Edward D. Melillo and Emily O'Gorman, Bloomsbury, London, New York, 2014. **CyPosium - the book**, edited by Annie Abrahams and Helen Varley Jamieson, Link Editions and La Panacée, Centre de Culture Contemporaine, Montpellier (co-publishers), November 2014.

Slice of Heaven: Climbs and Scrambles on Seven Continents, by Ross Cullen, Elcho Publications, Christchurch, December 2014.

Introduction to Ecological Sampling, edited by B.F.J. Manly and Jorge A. Navarro-Alberto, CRC Press (Taylor & Francis Group). Boca Ratón, 2015.

#### Alumni:

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

## ... The Cook?

Totally reburbished, The Cook will be opening its doors again later this year.

here would be few Otago alumni who don't have some sort of story about The Cook.

Built in the 1870s, The Captain Cook Hotel (to use its full name) has been part of North Dunedin as long as the University of Otago itself, becoming woven into the backdrop of student life.

When word of its imminent closure started circulating in 2013, it is fair to say there was widespread dismay at the loss of what was seen as a Dunedin institution. On the day it closed its doors, in June 2013, people who had not set foot in the pub since they were students made sure they went in to toast The Cook and to share their stories and memories.

Since then the two-storey brick building has been wrapped in a scaffolding cocoon while a transformation takes place. The owners – Chris James, Noel Kennedy and Greg Paterson – are having the building taken back to its original look, right down to the old traditional corner entrance to the downstairs front bar.

Contractors Naylor Love Construction have stripped The Cook's interior back to the brickwork – which is triple brick downstairs and double brick upstairs. Extensive earthquake strengthening has also been done to take it to 70 per cent of new building standard, with the addition of extensive steelwork, including rods that tie the external walls to the strengthened internal structure.

New double-glazed wooden sash windows have been installed upstairs,

and big new windows are to be installed downstairs on the Albany Street side to make the best use of its north facing and the light it brings in.

"It will also give the bar a greater relationship to the urban spaces outside," explains supervising architect Ed Elliott.

It has been a project that Queenstownbased Elliott describes as both challenging and interesting.

"We have made a few discoveries along the way, including two original old fireplaces in the bar. We've peeled back a lot of layers and uncovered a lot of the old 19th-century character which will be a feature."

The overall interior look of the downstairs bar is being designed by Wellington designer Alistair Cox whose brief was to create a timeless student bar. One of the key features will be a traditional horseshoe-shaped bar.

Upstairs will retain much of the old layout that Otago alumni will remember, providing plenty of space as a music venue which will be able to hold up to 195 people.

Additions will include a deck overlooking a courtyard area which also turned up a few surprises, including the remnants of an 1850s' stable which will be kept partly visible. Other discoveries included newspapers from 1874 and evidence of an old latrine which predated the building.

There will be kitchen space to provide bar food, plus there will be a separate takeaway business at the south end of the Great King Street facade.

All these changes will give The Cook a future well into the 21st century. One of the businessmen involved, Greg Paterson, says they were always keen to see the pub brought back to life.

"I think it's fair to say we all understand the importance of The Cook to the University and Dunedin. Students are still having a whale of a time here, but it's important for them to have a controlled environment to go to."

It is hoped The Cook will reopen its doors towards the latter part of the year.

MARK WRIGHT

"I think it's fair to say we all understand the importance of The Cook to the University and Dunedin. Students are still having a whale of a time here, but it's important for them to have a controlled environment to go to."



## Postgraduate Study

# Considering your next step?

Boost your career or get into research with a postgraduate qualification from New Zealand's leading postgraduate research university.

Otago – your place in the world.

#### **POSTGRADUATE**



YOUR PLACE IN THE WORLD