

# UNIVERSITY OF OTAGO MAGAZINE

MARCH 2016

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INSIDE

## Medical tourism takes off

Boost for wine industry  
Heart breakthrough to market  
Alumna Kereyn Smith

UNIVERSITY  
of  
OTAGO



*Te Whare Wānanga o Ōtāgo*  
NEW ZEALAND

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Since my appointment as Vice-Chancellor in 2011, much has been made about my gender. I was the first woman to lead the Psychology Department at the University of Otago and the first woman to become a Deputy Vice-Chancellor. I am the first woman to be the Vice-Chancellor at the University of Otago and only the second woman to become a Vice-Chancellor in New Zealand.

Every time the issue of my gender is raised, however, it takes me by surprise. In the course of my own academic career, my gender has never been an issue. I have never felt that people have expected less of me because I am a woman, and I never felt that a glass ceiling prevented me from pursuing my goals and aspirations. When I was growing up, my father used to tell me that girls could do anything. At Otago, I have certainly found that to be true. In this way, my own career has been remarkably gender blind.

But I recognise that the privilege of gender blindness is due, in part, to the historical period in which I live and to the places in which I have been lucky enough to grow up, study and work. I know too that I owe a huge debt of gratitude to those women who came before me.

As a university, we have a very proud history when it comes to women. The University of Otago is New Zealand's oldest university, founded in 1869. The first classes were held here in July of 1871 – and just six weeks later, on 8 August 1871, the University Council voted unanimously to admit women. When they did so, we became the first university in Australasia where women could study.

In fact, the city of Dunedin became a trailblazer in the education of women and girls: just six months earlier, in February of that year, Otago Girls' High School had opened as the first girls state-run secondary school in Australasia.

A key advocate for both developments was a Scots immigrant by the name of Learmonth White Dalrymple. As well as being a noted educationalist, this remarkable, far-sighted woman was active in the Women's Christian



Temperance Movement and the women's suffrage movement.

Dalrymple was the first of a number of remarkable women who paved the way for the rest of us. Caroline Freeman was Otago's first woman graduate. She received her degree in 1885; she walked to and from Green Island every day to attend her classes. In 1896, Emily Siedeberg-McKinnon, a former Otago Girls' High School student, became the first woman medical graduate in New Zealand. At the time she entered medical school, there were only 25 women on the medical register in the entire British Empire. When Ethel Benjamin graduated in 1897 she became New Zealand's first woman law graduate and New Zealand's first female lawyer. She was also the first woman in the British Empire to appear as counsel in court.

Winifred Boys-Smith (1911) was the first woman professor at Otago. She was appointed as the Foundation Professor of the Department of Home Science and Domestic Arts. She came to Otago from Cambridge where she studied natural science. Although she had completed all of the relevant course work, she was prevented from receiving a degree from Cambridge because she was a woman. In 1915, she became the first warden of Studholme College, which was the first residential college specifically for women at Otago.

Today women comprise 32 per cent of the University's academic and research staff, and the number and proportion of women in our more senior academic positions has increased markedly. The number of women professors has increased by 57 per cent in the past five years, and the number of women associate professors has increased by 46 per cent. The proportion of women in our

more senior professional (general) staff positions has also increased markedly. Women now comprise 43 per cent of our senior managers.

Women at Otago are highly successful in the positions that they hold. The current recipients of the University's Distinguished Research Medal and Rowheath Trust Carl Smith Medal (the latter for outstanding early career research) are both women. Women also scooped the pool in our most recent Teaching Excellence Awards, taking all four top awards. Otago academic women also lead the way with the Prime Minister's Supreme Award for Tertiary Teaching. Otago staff have won this award for the past four years, with three of the four winners being women. Nine of the 20 Marsden grants awarded to Otago in the latest round went to projects with women as the principal investigators. Otago women have also featured prominently in the latest grants awarded by the Health Research Council.

The success of our female staff is also mirrored in our female students. Females have outnumbered males at Otago for several decades and they excel academically. Five of the last eight Otago students to secure Rhodes Scholarships have been women. Four of the last eight Otago University Students' Association (OUSA) presidents have been women.

My reflection on women at Otago is prompted in part by the recent publication of *A History of New Zealand Women* by Otago's Professor Barbara Brookes. Her new book, which is both an account of women in New Zealand from the earliest days and a comprehensive history of New Zealand seen through a female lens, is a ground-breaking work.

Barbara is an exemplar in respect of women at the University of Otago.



Success as an undergraduate student at Otago in the 1970s led her to postgraduate study in the United States. She returned to her alma mater to join the ranks of our academic staff in the early 1980s, and has been here ever since. Widely known as an outstanding teacher and researcher, she has also served as a Head of Department and the University Orator.

Like me, Barbara has juggled the demands of academic life with those of raising a family. Like me, Barbara has also seen Otago from the perspective of a parent of an Otago student. The perspective of a parent is the one that comes into sharp relief as I write this piece, for it is Orientation Week. Students by the thousand are pouring into town, the weather is glorious and our Dunedin campus is abuzz with the bright faces and excited chatter of young men and women.

When I meet these students and – in many cases – their parents I am extremely proud that since its inception, the University of Otago has been a place where both men and women have the opportunity to achieve their full potential. Long may that continue.

A handwritten signature in dark ink, reading 'Harlene Hayne'.

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

# Patient travellers

Otago research shows that medical tourism is on the increase – all over the world – and, contrary to popular misconception, the outcomes are generally very good.

**M**any Kiwis are flying home from overseas trips with far more than photographs and memories of cultural experiences.

Increasing numbers of travellers are returning to New Zealand with new hips or knees or other surgical and dental procedures performed at overseas clinics that provide services for medical tourists.

Associate Professor Brent Lovelock (Tourism) and Senior Research Fellow Dr Kirsten Lovelock (Public Health, Wellington) have spent two years completing several projects on the growing phenomenon of medical tourism.

After researching current global literature and analysing websites promoting the service, they conducted a qualitative study involving in-depth interviews with New Zealanders who had travelled abroad for a range of procedures.

“In order to recruit interviewees we asked doctors to promote the study and advertised in national magazines for people who might be willing to talk to us about their experiences,” says Brent.

“It wasn’t easy finding participants,” says Kirsten, “but we ended up with numbers comparable to other qualitative studies internationally. And, in terms of depth of detail, ours is one of only two or three undertaken so far in the world.”

Interviews were generally face-to-face in participants’ homes, covering treatments including dental work and cosmetic, orthopaedic and cardiovascular surgery.

“We would have liked a wider range of procedures, but are happy with the range we were able to explore among New Zealand participants,” says Kirsten. “Our analysis provides an insight into the practice of medical tourism and what motivates people to do it.”

People travelled to a wide variety of countries, with different regions offering distinct specialisations. For example, Thailand, Malaysia and the Philippines are favoured for cosmetic surgery and dental procedures, India for orthopaedic surgery and France for some types of cardiovascular surgery.

Intending patients would research treatments and specialists before leaving home and, although their travels fell into the category of tourism, they would often be far from popular tourist destinations – and spending much of their time overseas in recuperation after surgery.

“There’s a big difference between going on holiday and having work done on an impulse – which usually involves minor cosmetic procedures – and the careful planning that goes into major medical work,” says Kirsten. “In the latter case, it’s often not so much a holiday as recovery in an idyllic setting



**Associate Professor Brent Lovelock:** "In the last few years there has been a much greater awareness of medical tourism. It's now much easier for potential patients to get information about where to go and who to see."

Photo: Alan Dove

and receiving a level of care that they remember when they get home.

"Medical tourism has been around for a long time, predating imperial expansion. But contemporary medical tourism is larger in scope, involves travelling considerable distances and is proactively pursued by countries offering services. It is also a considerable source of revenue."

Patient numbers are hard to pin down, but the expansion of overseas facilities to accommodate travellers speaks for itself, say the researchers.

"There's no doubt medical tourism is on the increase," says Brent. "Growth may not be as fast as originally estimated, but it's happening all over the world. In the US you get patients travelling between states based on treatment cost and availability, and even in New Zealand we have people going from one health board to another to get what they want."

People are driven by a wide range of reasons, he says.

"Some of the main ones are being dissatisfied with the local health system, low standards of treatment in public health, waiting times for treatment, lack of availability of the right treatment, or wanting procedures to be conducted by those with greater expertise."

"Some people go overseas to individual medical specialists who have done thousands of operations," says Kirsten. "They feel they could be at greater risk going to local professionals who may have done the same procedures only half a dozen times."

Some head offshore for privacy, particularly for cosmetic work and fertility treatment. There are also cultural or religious drivers for some ethnic minorities who have to travel overseas to access procedures not done in their country of residence.

Cost is a major factor, with foreign treatment often offering considerable savings.

But what of the quality of overseas medical procedures? The researchers travelled in India gathering data from hospitals and agencies arranging treatments for travellers.

"There's a substantial international market for medical tourism in India, but there's a fast-growing domestic market too," says Brent. "It's a huge country. The market is not just for wealthy tourists. Their biggest clients are wealthy locals and wealthy expats returning home for the best treatment they can get."

"When you see the hospitals in India they are state-of-the-art glass and marble institutions. They're fantastically inviting places where their experts have undertaken thousands of procedures – and at a fraction of the cost in New Zealand."

“The ultimate aim of our research is to be able to contribute to the provision of good advice to people considering travelling overseas for treatment and give policymakers an idea of the ramifications of medical tourism.”

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Kirsten agrees. “The people doing these procedures are easily the most experienced in the world now.”

One New Zealand clinician with a life threatening condition chose to have a serious procedure done overseas simply because the foreign clinic he chose had considerably more experience than anywhere in this country.

Emotions also come into the decision-making process, says Kirsten.

“Initially you might think that people in a far-off land are less likely to be concerned about your welfare than people at home. But when you’re on a waiting list or even dropped off a waiting list, you feel rejected. It challenges your concept of your own country looking after you.

“When you, as a patient, seem to disappear as a person in the public health system and you haven’t got medical insurance or can’t get timely access to appropriate treatment, you’re likely to look at alternatives.

“Then, when you hear returned medical tourists saying the service was amazing, the people were kind, and the institutions were clean, efficient and welcoming, the notion of caring shifts.

“At home you pay taxes, but can’t even get on a waiting list for surgery. You feel the public health system does not care and if you can get treated better elsewhere, why not?

“So you go abroad and get treated really well and feel important and tell other people when you return home and

you get the snowball effect. The caring aspect is a major component of the whole commodity package and it’s definitely growing,” says Kirsten.

Brent adds that while occasionally things do go wrong, you get horror stories in local public health systems too.

“We did hear of a couple of negative experiences but, overall, I was surprised at how many people reported really positive experiences with medical tourism. Even in destinations that New Zealanders might commonly perceive to be ‘poor’ or ‘dirty’, people had good experiences.”

This highlights the difference between assumption and reality in countries where there are substantial differences in wealth, says Kirsten.

“Our analysis provides an insight into the practice of medical tourism and what motivates people to do it.”

Dr Kirsten Lovelock





On the negative side, one patient was defrauded when he paid for treatment that was not carried out. He was subsequently treated in another country. Another patient had a heart operation overseas that went wrong. He deteriorated dramatically on his return home, where he was then treated successfully.

People have generally been really pleased with cosmetic procedures, although one needed several remedial surgeries and was still left with a disfigurement, but the problem could have occurred equally easily in this country, say the researchers.

So, would the investigators consider having work done overseas? “Definitely. Most people have been very happy with their investments.”

The research team, together with Professor Karl Lyons from the Faculty of Dentistry, now plan to focus on dental tourism. They’ll contact New Zealand dentists and look at issues of quality – both good and bad – and what that might mean for both them and their patients.

They’ll also consider the implications for New Zealand dental practitioners when patients have procedures undertaken abroad that require remedial action after they return home.

The investigators feel medical tourism is starting to mature as a viable alternative to health-care provision for certain procedures at home, with implications for New Zealand’s public health system.

“In the last few years there has been a much greater awareness of medical tourism,” says Brent. “It’s now much easier for potential patients to get information about where to go and who to see.

“The ultimate aim of our research is to be able to contribute to the provision of good advice to people considering travelling overseas for treatment and give policymakers an idea of the ramifications of medical tourism.”

**NIGEL ZEGA**

## India investigation

The investigation of the medical tourism industry in India, funded by a New Zealand India Research Institute grant, focuses on case studies in medical facilities in Delhi.

In collaboration with Associate Professor Monika Prakash, of the Indian Institute of Tourism and Travel Management, the project explores the nature of the medical tourism industry, its relationship with local health-service delivery, and connections between health-care providers and the tourism industry.

“We’re documenting the experiences of medical tourists and health-care workers and the perceptions of local health stakeholders,” says Dr Kirsten Lovelock.

The intention is to set up a collaborative longitudinal multi-sited research programme to address the implications of medical tourism for health care in India, and for health-care and tourism systems more generally.

Work to date has identified a large gap between medical tourism and wellness tourism, which features alternative therapies such as spas, yoga retreats and holistic treatments.

“People travel for both, particularly in India,” says Associate Professor Brent Lovelock, “but there’s almost no contact between these two different branches of treatment.

“It stems from a longstanding professional mistrust between the two branches. But this lack of connection could be an opportunity lost for India as a destination.

“Medical and wellness could easily work alongside each other, with patients enjoying the experience of wellness providers while recovering from medical procedures and waiting to be checked before leaving for home.”

# Wine currents

Otago scientists are exploring the use of pulsed electric field processing to help winemakers improve the quality and quantity of their wine – and perhaps even reduce the need for additives.

**U**niversity of Otago scientists are subjecting grapes to shocking treatment, but it is all in the interests of faster, better wine.

Professor Indra Oey (Food Science) and Associate Professor David Burritt (Botany), along with researchers Dr Sze Ying Leong and Alexandra Rozhkova, are testing the use of “pulsed electric field” processing technology in winemaking.

Oey explains that, after the grapes are crushed, they are passed through a machine that gives them a short electric pulse, which affects the structure and permeability of the plant cells.

The technology has been used in winemaking overseas, notably in France and Germany, but this is the first time that it has been applied to New Zealand’s unique winemaking conditions.

“We are interested in giving wine producers access to a new technology which may enable them to tailor their

wines towards more efficient production, better quality and, potentially in some cases, maybe even enable them to use fewer additives like sulphur dioxide,” Burritt explains.

Oey says that, for red wine, the time it takes for the desired colour, flavour, sensory and other molecules to be released from the grapes can be shortened – in the case of pinot noir and merlot, from up to a couple of weeks, to as little as two or three days. With white wine, the timeframes are much shorter.

They say that the process not only shortens the time it takes to make wine but, for some varieties, it also increases the quantity of wine because it results in more efficient extraction of juice from the grapes. It also increases the quality of the wine, partly because there is less time for molecules to be released that have negative effects on wine quality. As a result, winemakers in a bad growing

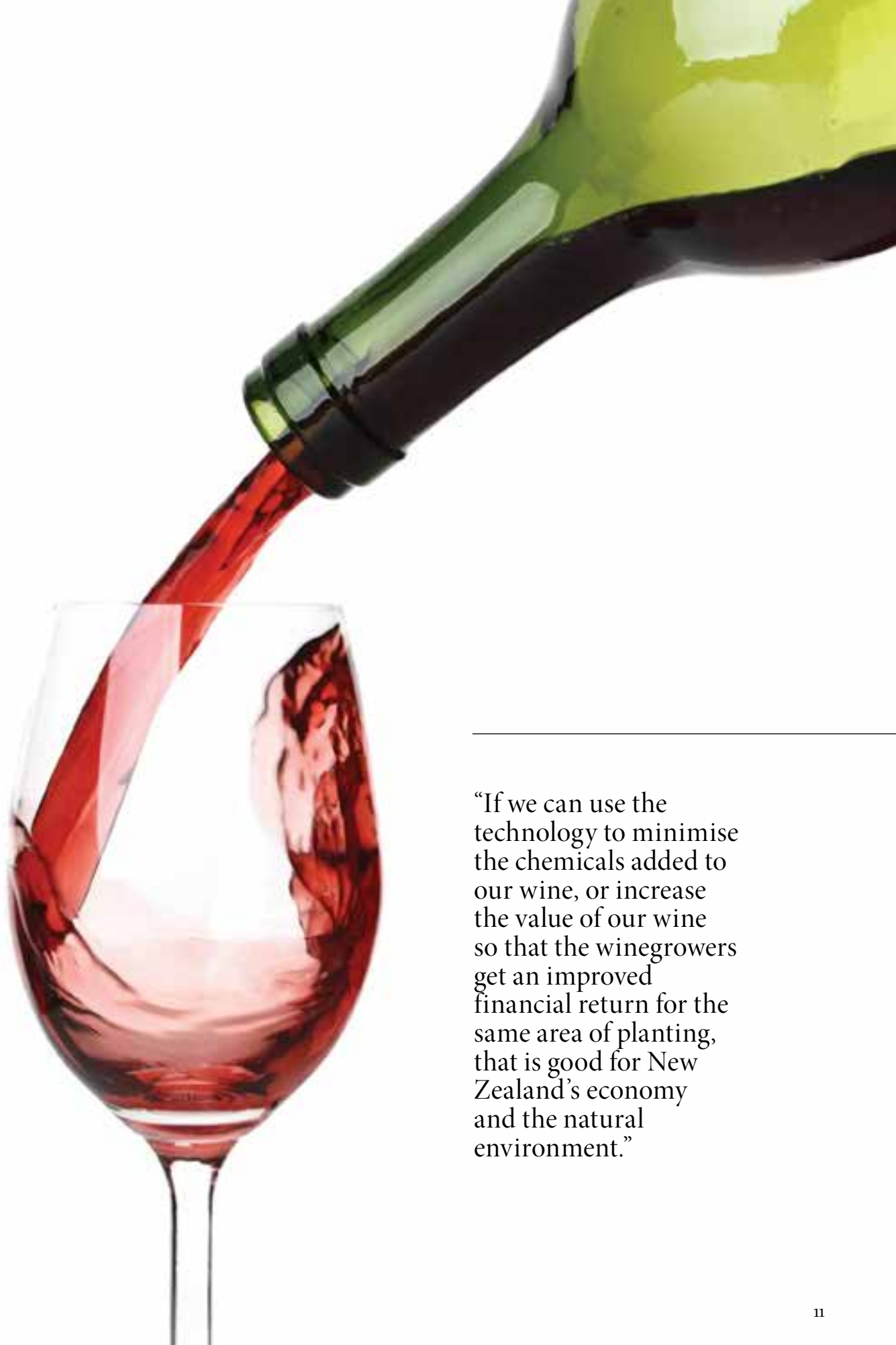
year might be able to produce the same amount and standard of wine that they would produce in a good year.

While the process uses very little energy, Oey says that there are significant energy savings as the grapes need to be kept at a controlled temperature for a much shorter period.

As for fewer additives, Burritt says that white wine – which contains fewer natural preservatives than red wine – currently has sulphur dioxide added as a preservative and an antioxidant to prevent the wine from going off, but this is a potential barrier to wine exports, particularly to Europe.

“We are investigating pulsed electric field treatment as a way of releasing other metabolites from the grapes that may act as antioxidants and may have some preservative effects as well.

“If we can use the technology to minimise the chemicals added to our



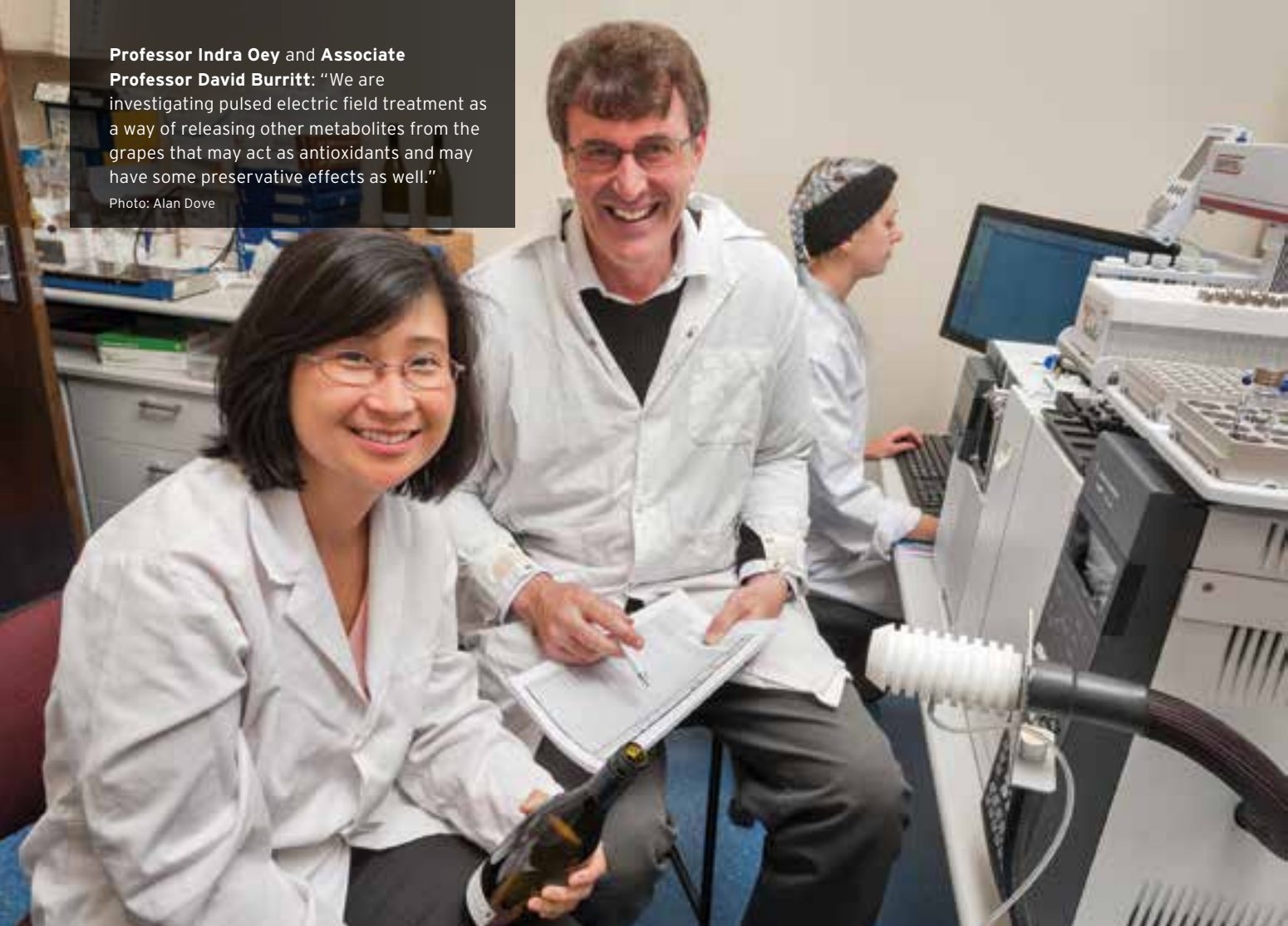
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“If we can use the technology to minimise the chemicals added to our wine, or increase the value of our wine so that the winegrowers get an improved financial return for the same area of planting, that is good for New Zealand’s economy and the natural environment.”

**Professor Indra Oey and Associate**

**Professor David Burritt:** "We are investigating pulsed electric field treatment as a way of releasing other metabolites from the grapes that may act as antioxidants and may have some preservative effects as well."

Photo: Alan Dove



wine, or increase the value of our wine so that the winegrowers get an improved financial return for the same area of planting, that is good for New Zealand's economy and the natural environment," Burritt says.

They are factoring into their research the need for the vine management strategies viticulturists currently employ, such as the expensive practice of removing leaves from vines to control the amount of light the berries receive.

Oey and Burritt are quick to assure winemaking traditionalists that, in using pulsed electric field processing, they are simply speeding up and improving a natural process; and to assure consumers that the technology is not merely harmless, but potentially beneficial.

The research is partly a collaboration with Lincoln University: the grapes are grown at Lincoln's research vineyard, the

processing and testing of the berries is done at Otago, and the wine is produced back at Lincoln.

The researchers are planning to replace a small processing machine at Otago with a large transportable machine, imported from Germany, which will be used to undertake pilot trials on different grapes and growing conditions at vineyards throughout New Zealand.

The industry-focused research is being funded by Otago and Lincoln universities; the Ministry of Business, Innovation and Employment; and the Cresswell Jackson New Zealand Wine Trust, with support from New Zealand winegrowers.

The researchers are progressively publishing the research results as they go. Articles have already appeared in the *Food and Bioprocess Technology* and *Food Chemistry* journals.

The wine research is part of wider collaborative work by Oey and Burritt on the benefits of pulsed electric field processing technology applied to food. Their endeavours to date have included research on meat, potatoes and carrots, with planned research on kiwifruit and cherries.

Oey and Burritt say that it made sense to bring together the expertise of a plant scientist with a background in plant biotechnology and crop production, and a food scientist with a background in pulsed electric field processing research for this type of work: the type of interdisciplinary study they say the University of Otago is renowned for.

And while Oey enjoys an occasional glass of wine, the non-alcohol consuming Burritt has a purely professional interest in the subject.

**IAN DOUGHERTY**



[otago.ac.nz/otagomagazine](http://otago.ac.nz/otagomagazine)



# Rules of engagement

Change has been the hallmark of Professor Helen Nicholson's career. Now she is taking on the latest in a long list of challenges as Otago's inaugural Deputy Vice-Chancellor (External Engagement).

**H**ow did someone who studied medicine at Bristol University and began clinical work and research in urology end up as Deputy Vice-Chancellor (External Engagement) at a university on the other side of the world?

It is a natural question to ask and one you suspect Professor Helen Nicholson has asked herself. But, as she recounts the twists and turns of the path she has taken, you soon realise you are talking to someone who relishes new challenges.

After graduating at Bristol her surgical training took her into the field of urology and, eventually, to research into the hormone oxytocin and its role in male reproduction.

"It wasn't a particularly easy decision to leave clinical medicine, but I did and went back and did an MD."

Family commitments followed, but when her youngest child was about to start school she applied for a lectureship in anatomy which allowed her to pursue both teaching and research.

A sabbatical in New Zealand, while doing research on the effect of oxytocin

on sperm transport in sheep, enabled Nicholson to make contact with Professor Gareth Jones in Otago's Department of Anatomy. Two years later, in 2000, she was appointed to the role of Professor of Anatomy at Otago, thus completing the move to the other side of the world.

But more change was to come. In 2003 Nicholson took over as Head of Department and then became Dean of the Otago School of Medical Sciences in 2007, revelling in the challenges of an expanded leadership role.

"I enjoyed the problem solving and the strategy side, and I also enjoyed the people – which I guess is why I went into medicine in the first place. Those roles do involve the need to understand people and getting them to work well together."

Understanding people is vital, she explains. "We are all different and work in slightly different ways. Understanding how you can develop people so they can be the best they can is what's important to me.

"It is about developing people's strengths, rather than dwelling on their weaknesses."

More new challenges were just around the corner, firstly as acting Deputy Vice-Chancellor (Research and Enterprise) and then as Deputy Pro-Vice-Chancellor (Health Sciences), taking over the space portfolio and overseeing the development of the Health Sciences campus plan.

Involvement in the making of the documentary *Donated to Science* in 2009 took Nicholson's interest in medical education down another interesting path.

"That opened for me a whole new area of research. We've carried on filming those students, who are now registrars, looking at a whole variety of issues around not only dealing with death, but developing professional identity and what determines which careers you go into."

Yet another change of direction followed in 2014, tackling the role of Pro-Vice-Chancellor International in 2014 which brought its own unique challenges.

"I think internally the International Office had been quite silent and my challenge was to get the wider University involved. If you're wanting to develop new products for the University and you

are wanting academics to understand why it is important to have international students, you actually need to work with the academic divisions.

“So we put in place Associate Deans International for each of the academic divisions to act as a conduit to increase communications both ways, so we can explain to the divisions what international students from different countries are looking for and wanting, and they can tell us the issues they are facing around international students.”

In June 2015 the new Division of External Engagement was created. As the title suggests, her role has now broadened into external engagement, recognising the areas of potential overlap and synergy between what International was doing and other parts of the University.

The new division comprises Marketing and Communications, International, and Development and Alumni Relations: Nicholson says there is growing literature which suggests these areas should work much more closely together.

“We’re all trying to do similar things. We’re all trying to raise the profile of the University and we’re all trying to increase student numbers, whether it is domestic or international.

“It just seemed to make sense because when you have three areas with similar aims reporting to different members of the senior management team, trying to make things happen in a timely manner can be difficult.”

Nicholson says the change is occurring at a time when domestic student numbers are flat and when government wants to double the income from international students by 2025.

“Government drivers are also to

increase domestic student mobility and international postgraduate students. There is pressure from government, but when you’ve got flat domestic enrolments you have to increase your roll with good students from elsewhere. We’re trying to develop a more effective team to do that.”

There is also the ever-increasing focus on international rankings and University profile to contend with.

“It matters. Certainly the evidence shows that internationalisation, in terms of the number of international students you have and the international staff members you have, affects rankings.

“It’s a win-win. You increase international students and you retain and recruit good international staff – 70 per cent of our staff are international or have their higher degree acquired internationally. So we’re doing well in the staff area, but we need to increase our international student numbers as well.”

Nicholson has been tasked to raise the profile of the University nationally and internationally, to increase engagement with key stakeholders, here and overseas.

“This also involves working with the academic divisions because they need to understand what we’re trying to do and why. The whole area of engagement just can’t be the centre engaging – it needs to be the wider University population.

“What we’ve done in the last year is go out to the departments and ask them to tell us where they have their international research collaborations and also tell us where they have students coming from other universities on a research exchange,” she says.

“The aim next is to build on those relationships and develop them into much stronger ones rather than just going out cold to wherever we want

to go. With more data around where our staff are engaging nationally and internationally, we can use this information strategically.”

There is a need, she says, to harness existing activity and co-ordinate it so that “we can work smarter” and more effectively.

The “here” part ranges from local schools to government as well as working with Māori and Pasifika and then increasing enrolment numbers, both national and international, with good students.

Also within the new division is the Schools’ Liaison team who visit schools across New Zealand explaining the opportunities that exist at Otago and working one-on-one with high-school students to assist their career decisions.

This year the scholarship programme has been expanded to attract the brightest and the best to the University and Schools’ Liaison plays an important role in raising awareness of these scholarships.

Nicholson is also aware of Otago’s role in its own international neighbourhood, the Pacific, by engaging with their governments, their universities and their ministries of health to facilitate and provide research and evaluation.

“We want to recruit students here who will hopefully return to their communities. We don’t want to remove all the good people from the Pacific Islands. We want to help them so that they can go back home and make a difference.”

**MARK WRIGHT**



“We are all different and work in slightly different ways. Understanding how you can develop people so they can be the best they can be what’s important to me.”

Professor Helen Nicholson

# Heart breakthrough

Upstream Medical Technologies (UMT), a new partnership between the University of Otago and venture capitalists Powerhouse Ventures Ltd, was launched late last year. It is one of the largest – and most complex – projects the University's commercialisation arm, Otago Innovation Ltd, has had involvement with, to date.

The new company's aim is to revolutionise the accurate and timely diagnosis of heart conditions – in particular, unstable angina – by commercialising technology being developed by the internationally recognised Christchurch Heart Institute research team, led by Professor Mark Richards and Associate Professor Chris Pemberton.

UMT is the result of more than seven years' work by Otago Innovation, a venture senior commercialisation manager David Christensen says was made possible by a combination of commercial opportunity, and the outstanding reputation and enthusiasm of the research team.

"Chris's commitment, in particular, has been a key to the programme's success, helping us to get to the point where we were able to engage with Powerhouse."

The deal has involved seven patent families which have already sought, or are about to seek, protection in multiple places including Australia, Canada, China, Europe, India, Japan, New Zealand and the United States.

Powerhouse Chief Operating Officer Colin Dawson says the prospects are exciting, with widespread international implications and benefits for patients.

"Our investment will fund further refinements of the tests being developed by the research team, as well as the larger clinical trials necessary in developing the product."

The global market for unstable angina diagnostics alone is estimated at more than \$US1 billion.

Additional financial support is also being provided by Callaghan Innovation's repayable loan scheme and the New Zealand Investment Venture Fund is a co-investment partner. Otago Innovation remains an active shareholder and director of UMT.

**L**urking inside the arteries of thousands of New Zealanders is unstable heart plaque. Slowly building up on artery walls, it can break away, block blood flow and cause heart attacks.

Many people with unstable angina visit an emergency department with chest pain or a shortness of breath in the months before their heart attack. But, with no easy way to diagnose the condition, they are usually subjected to a barrage of tests over several days to get a diagnosis, or discharged with no definitive diagnosis.

However, patients may be far better off in future thanks to the work of Associate Professor Chris Pemberton and his team from the University of Otago, Christchurch. They are developing a test to quickly and easily detect unstable angina by measuring levels of the hormone BNP signal peptide in a patient's blood.

This groundbreaking test is one of a number under development by the Christchurch researchers for the newly formed company Upstream Medical Technologies (UMT).

The research team – led by Pemberton and Professor Mark Richards of the Christchurch Heart Institute – has been at the forefront of global research into heart disease diagnostics for more than 30 years.

In the mid-1980s they were first to prove how a particular heart hormone affected the human, including its actions on the heart, kidneys and circulation. A decade later the Christchurch researchers were first to show that



“It’s a long but very exciting journey that we are on. Our ultimate aim is to invent tests that are game changers and save lives and time by fast, easy diagnosis.”

Associate Professor Chris Pemberton



BNP could be used to diagnose heart failure. In 1996, they cemented their place as cardiac research leaders with the discovery of peptide NT-proBNP and a subsequent treatment strategy based on serial measurement of the hormone’s levels in patients’ blood. This strategy is now used in hospitals around the globe.

Pemberton says the Christchurch group has an international reputation as being among the best at measuring substances in the blood related to heart disease and kidney function. This makes them ideally placed to develop new tests for use in hospitals worldwide.

“There are many clinical grey areas where new tests could make a huge difference in emergency departments or cardiology wards.”

One obvious area of unmet clinical need is a test for unstable angina. Currently, there is no test in use that can diagnose the condition, Pemberton says.

A recent *American Medical Journal* article found that less than five per cent

of unstable angina cases were picked up by stress tests (a common diagnostic tool). Pemberton says the condition usually comes to a doctor’s attention when the patient has a heart attack.

“A test that identifies unstable angina could be really crucial as it would allow clinicians to quickly identify those who need drug treatment or a stent inserted.”

A test could also be commercially profitable as heart disease is a huge – and still growing – problem internationally. According to Heart Foundation figures, more than 12,000 New Zealanders are discharged every year from hospital for heart attacks and almost 2500 people die from heart attack annually.

Pemberton says his team has conducted small research studies on their unstable angina test. The early results are promising. They now need to conduct multinational clinical trials of up to 5000 people to produce the robust evidence required by bodies such as America’s Food and Drug

Administration before it can be used in hospitals.

The team is developing another test to detect those with heart failure and pneumonia. To have both conditions is common among the elderly, but they “superimpose” each other on chest x-rays making diagnosis difficult. Patients can wait up to two days before a laboratory sample confirms they have pneumonia, during which time their condition could deteriorate without correct medication, Pemberton says.

While Pemberton is enthusiastic about this and a range of other tests under development, it will be years – and several million dollars in research and development – before any get to market.

“It’s a long but very exciting journey that we are on. Our ultimate aim is to invent tests that are game changers and save lives and time by fast, easy diagnosis.”

**KIM THOMAS**

# Child's world

For almost 21 years, Otago's Children's Issues Centre has been leading the world in research and teaching on issues affecting children, and advocating for their rights. The results of this work are reflected in much public policy today.

**T**wenty-one years is time enough for a child to grow to adulthood and undergo the vast array of experiences that will shape her or his life. So it is for the University's Children's Issues Centre (CIC), which celebrates its 21st year in 2016 and reflects on two decades of world-leading research and teaching that have made a significant contribution to the lives of many children.

The CIC's establishment in 1995 was a progressive step for Otago, at that time under the Vice-Chancellorship of Dr Graeme Fogelberg. It was the first of its kind in Australasia and, led by Professor Anne Smith (now Emerita) along with researcher Nicola Taylor and administrator Rachael Brinsdon, it immediately set out to establish connections with the international networks of children-centred researchers.

"We were innovators," says Smith, "working at the micro-level – talking to children about their experiences – and having that influence policy at the macro-level. What we set out to do and what we achieved here seems commonplace now, but it was highly innovative at the time.

"The other important aspect was that we aimed to be interdisciplinary

and to focus broadly on issues affecting children, researching and advocating for children's rights, and also providing outreach education for professionals working with children. My background was in educational psychology and Nicola Taylor [now Associate Professor] had a background in social work and law. We belonged to a new theoretical paradigm known as Childhood Studies."

The CIC was invited to join the [then] Norway-based Childwatch international research network. This proved an entrée into a series of fruitful international research collaborations – on such topics as citizenship, family law and rural childhood – that continue to the present day and which, says Smith, "have helped to influence our interdisciplinary approach to issues that affect the everyday lives of children, and to incorporate a respect for the agency and rights of children in all aspects of our work".

The CIC also initiated, along with Childwatch, Unicef and the Centre for Children and Young People at Southern Cross University (Australia), the development of international guidelines for research involving children. This project aimed to identify the ethical

issues faced by those who undertake research with, and for, children and young people in different world contexts, and to identify and collate existing guidelines and resources. It involved an international survey with 257 researchers in 46 countries. The result was the Ethical Research Involving Children website (*childethics.com*) and a printed guide which provides a resource for researchers around the world.

Closer to home, the CIC's impact in relation to child-centred issues has been significant. Current director and holder of the Alexander McMillan Chair in Childhood Studies, Taylor cites three particularly notable examples, the earliest being research into the impact of early childhood educational quality, led by Smith, that contributed to the Ministry of Education's Strategic Plan for the ECE sector, *Ngā Huarahi Arataki*.

Then, in 2003, the CIC was commissioned by the Office of the Children's Commissioner to undertake a literature review of research in relation to discipline strategies for children.

"The findings pretty much showed that physical punishment achieves immediate, short-term, compliance by the child, but does little to influence

**Emeritus Professor Anne Smith and  
Associate Professor Nicola Taylor.**

Photo: Sharron Bennett



their understanding that what they did was wrong or dangerous,” says Taylor. “That research was an important piece of work that helped push the Crimes (Substituted Section 59) Amendment Act 2007 – which abolished the defence of reasonable force for physical punishment – through Parliament. I think it’s one of our proudest moments.”

The CIC’s focus on socio-legal research reflects, in part, Taylor’s background, but also the longstanding involvement with the CIC of Otago’s Dean of Law and family law expert, Professor Mark Henaghan.

“The Children’s Issues Centre is the only centre in New Zealand – and one of the few in the world – that looks at the law and policy from a child’s point of view,” says Henaghan. “There has been a common thread to improve social conditions and enhance child-centred practices, and I see the imprint of the CIC in public policy today. Child-centred research reminds policymakers that children are a significant part of any society and the impact on them would be unnoticed without such research.”

“At the heart of our research since our inception is an intention to honour and

privilege children’s perspectives on the events in their lives that are important to them,” Taylor explains.

A good example of this is the CIC’s research into the impact on children of family transitions such as parental separation, divorce, relocation and supervised contact. It directly influenced government policy and legislation through the development of the Care of Children Act 2004, particularly the Act’s inclusion of a broader provision around the ascertainment of children’s views in Family Court proceedings.

“This was – and still is – world leading in that it removed any reference to children’s age and maturity and made it compulsory for there to be reasonable opportunities – plural, not singular – for children to be able to express their views,” says Taylor. “The role of lawyer for child was also updated to ensure that they were appointed in appropriate cases, that the children knew of their

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“That research was an important piece of work that helped push the Crimes (Substituted Section 59) Amendment Act 2007 – which abolished the defence of reasonable force for physical punishment – through Parliament. I think it’s one of our proudest moments.”

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appointment and that the lawyer did meet with those children.”

A recent CIC socio-legal research project has explored the impact on children of relocation following parental separation – a topical issue in an age when people are increasingly mobile across not just regional boundaries, but also national borders. It recently completed a review of judicial practices when interviewing children for Family Court proceedings and is currently working with the family justice sector to evaluate the 2014 family law reforms. Taylor also has a key involvement with the NGO report to the United Nations regarding New Zealand’s compliance with the Convention on the Rights of the Child.

“The Children’s Issues Centre is known throughout New Zealand, particularly in the political system and the legal system, and its work is held in the highest regard by the New Zealand Family Court,” says Henaghan.

Senior research fellow Megan Gollop primarily works on the Graduate Longitudinal Study New Zealand with the National Centre for Lifecourse Research, co-chairs the Children and Young People as Social Actors Research Cluster, contributes to the CIC’s socio-legal research programme and has an interest in digital media issues. Jocelyn Diedrichs, the other longstanding staff member, is the CIC’s part-time administrator.

In addition to the calibre of the CIC’s research, it has remained committed to an interdisciplinary postgraduate teaching programme. This spans

certificate, diploma, master’s and doctoral programmes that meet the needs of professionals such as social workers, lawyers, educators, health professionals and family agency staff working in child-focused sectors.

Taylor believes that with an increased emphasis on the need for these professions to take a child-centred approach as a result of large-scale changes occurring, the CIC can make an even more significant national contribution in teaching that equals the import of its research outputs.

“New Zealand is currently experiencing a significant nationwide shake-up in relation to the key sectors that interact with children and their families. There were the Family Court reforms of 2014 that dealt with private law matters around how disputes between parents are resolved post-separation, and we now have reforms within the public law around vulnerable children, children in state care and the modernisation of Child, Youth and Family. So it’s a time of enormous upheaval in relation to the services and professions allied and working with children and their families.

“We’ve offered interdisciplinary, child-centred teaching programmes for nearly 20 years – I think what we provide can certainly meet the workforce demands that are being identified on a national basis.”

Taylor says the biggest issues facing New Zealand children today – violence and poverty – suggest a new area of research that needs to be addressed.

“We already have ample evidence in New Zealand around poverty and

violence; I don’t believe we need more research into the dynamics of these particular social issues, but we do need research that evaluates the programmes designed to mediate or assist families experiencing those issues. That will help us implement new services or utilise existing funding better to do more prevention and intervention work and to look at how effective that is for children, young people and their families/whanau.”

While the Alexander McMillan Trust generously funded the Leading Thinkers’ Chair in Childhood Studies in 2006, Smith – who retired in 2006 – says more funding is needed to secure the future of the CIC and to enable it to continue the valuable research and teaching that has led to eight books, over 200 publications, 50-plus research projects, a dozen PhD graduates, 125 masters’ and postgraduate diploma/certificate graduates, and scores of conferences, courses and seminars.

“The Children’s Issues Centre has a unique place in the New Zealand research, child advocacy and outreach education community. Serious consideration needs to be given and strategies developed to retain and strengthen it, because I believe it can continue to really make a difference to New Zealand by doing research that can be applied for public good purposes.”

**REBECCA TANSLEY**



# Sports champion

A horse-riding accident curtailed a young Kereyn Smith's own sporting activities so, instead, the now Secretary General of the New Zealand Olympic Committee channelled her considerable talents and energy into sports administration.

**G**rowing up, Kereyn Smith dreamed of being (a) a farmer and (b) an All Black. That's how it is when you live on a farm in Clinton with lots of brothers and cows and horses, and where rugby is an important social glue for the community.

Smith has achieved neither of the above, but no one could say she has let the grass grow under her feet. Instead of a career *on* either paddock she has become a consummate team leader *off* it, and is today one of New Zealand's most experienced and highest achieving sports administrators.

Of course, in the sporting arena it doesn't get any higher than the Olympic Games. In 2010 Smith was appointed Secretary General of the New Zealand Olympic Committee (NZOC), the pinnacle (so far – there is bound to be more to come) in a career that has encompassed being private secretary to the Minister of Sport, Fitness and Leisure; general manager of the Hillary Commission; and CEO of the New Zealand Academy of Sport.

Smith also chaired the board of Netball New Zealand for six years, was vice-president of the International Federation of Netball Association, has been a trustee for the Forsyth Barr Stadium and Skeggs Foundation, a director of the Highlanders' rugby franchise and is an advisory committee member for the New Zealand Rugby Union. And, in 2004, she returned to the University of Otago as a Council member, a role she held for 10 years.

In part, Smith attributes the pragmatism and can-do attitude that have got her this far to her rural upbringing. Small schools and small communities, Smith says, provide more leadership opportunities – a factor that contributes, she believes, to the disproportionate representation of women from rural backgrounds in the lower levels of sports leadership.

Despite this fertile ground, however, women generally are still woefully under-represented at the governance level in sport (as in the business sector). A 2012

audit of 55 national sports organisations found that 89 per cent had less than 50 per cent female representation on their boards and just over half reached the International Olympic Committee (IOC) target of 20 per cent representation.

Because all national sports organisations are members of the NZOC, it's Smith's job to keep a watching brief on this issue. So why, when women all over the country contribute at least equally to keeping the wheels of both community and elite sport rolling, does the "grass ceiling" persist?

"How people are elected [to governance roles] is not always that friendly for women," says Smith, "and sometimes it's not possible for women to dedicate the time that's necessary. But some of the barriers are institutional issues that need constitutional change and, also, there needs to be wider acceptance of the fact that greater diversity and inclusive policies create a better organisation that connects more strongly with membership."

Smith says that with effort, advocacy and support – and “a little bit of naming and shaming” – the NZOC has helped improve women’s representation on national sports bodies over the last three years to an average of 31 per cent – with the exception of our so-called national sport, rugby, for which there are currently no women on the board.

“They would put that in a work-in-progress basket,” says Smith, who suggests the success of the Black Ferns and the inclusion of Sevens for both men and women in the Olympic Games presents “a massive opportunity” for rugby to improve its connection with female athletes and address the paucity of women among the code’s senior leadership.

“As guardians of the Olympic movement in New Zealand [the NZOC] likes to think we’re a country that projects inclusiveness. We like to be advocates for women in leadership throughout the organisation and role models in that regard.”

The NZOC’s own initiatives include the Aspiring Women’s Olympic Leaders programme which supports female athletes to transition from the field of play to leadership positions in the work place.

It also supports the monitoring of gender balance on national sports boards and promotes the Women in Governance programme. Constitutional changes and appointment policies have also addressed gender balance on athlete, education and

other commissions and the NZOC’s own board.

This commitment has seen the NZOC increase the number of women in decision-making and leadership positions throughout the wider sporting sector. As a result, in November 2015 it was recognised with the IOC World Trophy for Women in Sport – the first time the award has been presented to a New Zealand organisation or individual, and a first for any national Olympic Committee.

“At the London Olympic Games, 47.3 per cent of our athletes were female and 50 per cent of the gold medals were won by women,” Smith says. “We know that, through sport, women can both build and demonstrate the same qualities that also make great leaders.”

Smith’s own transition to sports leadership was largely due to injury – a common pathway for many athletes. In her sixth-form year she was thrown from a horse, breaking her leg and smashing her knee. While this did not deter her from pursuing a Diploma in Physical Education at Otago – she graduated in 1982 – the repaired leg could never sustain the level of activity required for elite sports success, so she opted to pursue her passion for sport through teaching.

Smith taught physical education in New Zealand and the United Kingdom before taking on her first formal sports management position at Sport Manawatu, but she has also

consistently been part of the volunteer backbone of community sports in both coaching and administrative roles. This involvement saw her rise to the board of Netball New Zealand, which she chaired for six of an 11-year tenure. During this time she helped guide the transformation of the code from amateur to semi-professional status, an experience she describes as “fundamental” to her own professional development.

“Over the years I’ve learnt as much from my volunteer activity as I have as a professional,” says Smith, who believes participation in the various aspects of community sports is critical to community health.

“Clubs, sport, physical activity, volunteering, leadership and coaching are about giving back, teaching, growing and learning new skills. It’s really healthy for communities to have that vibrancy and, in fact, I believe it’s one of the pillars required for a healthy community. It’s about physical literacy and people developing mental capacity and personality.”

Motivating young people to be active and keeping adults interested in volunteering is vital, she says, and although in her current role her focus has shifted to elite participation on an international scale, the Olympic values she champions – excellence, friendship and respect – are applicable to all and promote sports participation at all levels.

Smith’s current job, she explains, is a mix of business, sport, diplomacy and relationship-building. “Prior to Games, it’s about funding and international advocacy, then in the lead-up to Games it’s about planning and attendance, and connecting with international sports organisations, coaches, team members and athletes.”

The NZOC deals at any one time with the organising committees of

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“When you’re talking about galvanising a team of people, inspiring a nation and portraying an image of excellence and the Olympic values, it’s not hard to be passionate.”

the next Olympic Games as well as the Winter Olympics, Commonwealth Games, Youth Games and others. So, at the time of writing, that's Rio de Janeiro, but also Tokyo and Pyeongchang, and the organising committees of the countries who want to win the vote to host the subsequent Games.


Her role also includes maintaining government relationships, overseeing the NZOC's diverse activities and generating revenue. Funding is an on-going challenge; the NZOC receives only 20 per cent of its funds from government, with the balance coming from philanthropy and partnerships with commercial organisations.

"It's challenging because it's not getting any cheaper and our teams are getting bigger; we're also moving horses and boats. In the four-year period that will culminate in the 2016 Olympic Games we will have had Winter Olympics in Sochi, Commonwealth Games in Glasgow and the Olympic Games in Rio de Janeiro.

"Those are remote and costly destinations and complex places to plan and execute – Rio is about 30 per cent more expensive than the last Olympics, for example. We need to be creative in how we resource that."

Given such challenges, optimism, resilience and passion are important qualities for the job but, Smith adds, "when you're talking about galvanising a team of people, inspiring a nation and portraying an image of excellence and the Olympic values, it's not hard to be passionate. Who couldn't get out of bed and be excited about that?"

**REBECCA TANSLEY**



"Clubs, sport, physical activity, volunteering, leadership and coaching are about giving back, teaching, growing and learning new skills. It's really healthy for communities to have that vibrancy..."

Kereyn Smith

# University challenges

Long-serving former University of Otago Council member, Lorraine Isaacs, started as a student at Otago in 1964 and feels as though she never left.

**F**or the past four decades – and more – Lorraine Isaacs has been living parallel lives, as a staunch member of the University of Otago community and New Zealand television.

The Isaacs family emigrated from South Africa to New Zealand in 1955, when Lorraine was eight. After fleeing generations of persecution in Russia, the Jewish family was especially averse to the apartheid policies being implemented in South Africa; her father was a veterinarian and New Zealand was desperately short of vets.

The family settled in Invercargill, but moved to Dunedin when Isaacs was about to turn 17. Rather than enrol her in what would have been her 10th school, her parents decided that she would go straight to the University of Otago, where she studied English, French, Russian and history.

Isaacs' claims to student fame occurred when she was the women's representative on the Otago University Students' Association executive.

She was among about 1000 students who took part in an overnight "live-in" in the Student Union building in 1967, in protest against what was effectively a ban by the University on mixed-sex flatting.

Isaacs was at the centre of a further protest that year, against an alternative

student publication, *Falus*. She argued at an OUSA forum in the Student Union that the broadsheet – a copy of which she clenched in her hand – was disgusting, lacked literary merit and should be banned.

"I dramatically said how terrible it was, lit a match, set fire to it, threw it into the rubbish bin and stalked out of the room," Isaacs recalls. "The rubbish in the bin caught fire and students rushed to put it out, which messed up my whole dramatic exit."

Isaacs completed a Master of Arts degree in English at Otago, a teaching diploma at the Secondary Teachers' Training College in Christchurch, and another master's degree – this time in American literature – at the University of Hawai'i, while on an American Federal Government East West Center Scholarship.

On her return to Dunedin in 1971, a serendipitous conversation with a neighbour led to what was to become a long and fruitful television career.

"I had registered to become a secondary school teacher, but the man who lived across the road from my parents came over and said, 'We are desperately short of somebody to research news for DNTV2 because our researcher is having a baby, but she is promising to come back in six weeks'

time.' I enjoyed the work and she never came back."

After working on the Dunedin regional news programme, *The South Tonight*, for a couple of years, Isaacs went on her "OE", working as a trade officer with the New Zealand High Commission in London for three years. Back home in Dunedin, she again applied to go teaching.

"I walked round the corner from the Department of Education to the television studios: there was Michael Stedman, he looked up, didn't even say 'Hello', even though I had been away for three years. He simply said, 'Good, can you start at 8.30 tomorrow morning?'"

Her subsequent television CV as a researcher, director and producer in Dunedin and Wellington spans a nostalgic feast of New Zealand television, including children's programmes *Spot On* and *Play School*, panel "agony aunts" show *Beauty and the Beast*, and highbrow quiz show *University Challenge*. She also helped to produce fundraising Telethons and became the first female television manager in New Zealand.

Since 1993, Isaacs has worked as a freelance television researcher, director and producer for various Dunedin production companies, and managed or mentored regional television stations in Dunedin and Invercargill.



**Lorraine Isaacs:** "... the world desperately needs educated people and the University is one of the places where people can get educated, not just in specific vocational areas, but educated to think and to use their intellectual ability."

Photo: Alan Dove



Throughout this time, however, Isaacs has maintained her strong University connections. She joined the New Zealand Federation of University (now Graduate) Women in 1976, a 40-year involvement that includes three years as national president. Her local efforts include helping with the rental of academic dress for graduation ceremonies – an activity, she says, which earns about \$100,000 a year, funding scholarships for women in New Zealand and overseas.

Isaacs is a long-standing member of the University of Otago Graduates' Association, also serving as president of that association. She was also briefly on the staff at the University of Otago, as the director of University Extension from 1991 to 1993.

In 1999 she became a member of the University Council, as one of three members elected by the graduates. She recalls that the previous times she had been in the Council Chamber – where University Council meetings are held – she was a student and it was the Library.

She has also served on a host of other university committees, panels and boards, from the Fundraising Committee and the Development Society Committee, to the Cumberland College Council, the University of Otago Foundation Trust board of trustees, and a panel that selects OUSA Golds Awards' recipients.

Isaacs should have ceased to be a University Council member in 2014, on completion of the prescribed maximum of 16 years, but stayed on for another year

until legislative changes reducing the size of councils took effect at the start of 2016. She is continuing as the lay convenor of two Council sub-committees: Human Ethics, and Human Ethics (Health).

Her explanation for her 17 years' service on the Council is simple. "You do it because you love the University. And I think that it is an incredibly important job, because the world desperately needs educated people and the University is one of the places where people can get educated, not just in specific vocational areas, but educated to think and to use their intellectual ability."

Isaacs reflects that she has witnessed huge changes at the University since she was a student more than five decades ago.

"The biggest change is in the size of

Her subsequent television CV as a researcher, director and producer in Dunedin and Wellington spans a nostalgic feast of New Zealand television ... She also helped to produce fundraising Telethons and became the first female television manager in New Zealand.

the University. There were 3500 students when I was there; there are now 20,000 students. The second biggest change is the percentage of women. It used to be 20 per cent; it is now around 60 per cent."

She notes that there has also been a substantial increase in the number of international students and in the range of subjects, although a few subjects – such as Icelandic and Gothic languages – have disappeared.

Thirty-five years after writing questions for *University Challenge*, the television veteran has recently been back compiling questions for the quiz show's revival.

And what is her all-time-favourite *University Challenge* question? "What is a dendrochronologist?" (It is someone who studies the annual growth rings in trees.)

Astonishingly, Isaacs has not had a television set at home since Television New Zealand took back her work-supplied set when she finished as the TVNZ manager in Dunedin in 1990. "Television for me is about making programmes, not watching them."

She instead devours books. She still uses a fax machine and only recently acquired a computer, for work related to *University Challenge*.

Isaacs' services to television, education and women were recognised in 2010 with a Queens Service Order.

Away from the University and television, the 69-year-old spends a month for two out of every three northern summers as an international volunteer working on archaeological sites in Israel.

**IAN DOUGHERTY**



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# Beautiful ambitions

Newly-qualified doctor, entrepreneur and beauty queen: Otago's Deb Lambie is much more than a pretty face.

**D**eb Lambie seems to be living a fairytale.

She's a newly-qualified doctor starting work in a hospital, she's co-founder of a charity educational project and she recently represented New Zealand in the last Miss World contest.

Her achievements haven't all come easily. Like any good fairytale, failure and effort have played their part in Lambie's story.

With both parents doctors who had studied at Otago, it was always possible she would follow in their footsteps. Her decision came at Dunedin Hospital when the teenage Lambie witnessed her father's kindness to a distressed elderly woman.

"Having good role models who were making a contribution to the community through their work was inspirational, and that has only been strengthened through the people I have met while studying medicine," says Lambie.

Otago was the obvious choice. "Most of my friends were going there and there's also something special about going to the university your parents went to. I loved it."

Health Sciences First Year was a reality check. "My only thought was that

I might not be able to get into medical school. The course was competitive and our grades needed to be so good. It was such a relief at the end of the year when I got accepted.

"At med school you make special friendships with the people you meet. Medical students have so many unique and different experiences – such as witnessing births and deaths – and those really bring you closer.

"The staff are a wonderful group of dedicated people who go above and beyond to help students do their best, not just academically. They also try to look after students' mental health and help you to be the best you can be as a person. They work to produce doctors who are well rounded as well as well qualified.

"I loved studying, but also loved doing things outside of med school with the competitions I have done for beauty pageants."

Lambie's slightly more glamorous life had started in a dairy, when the owner of a modelling agency invited her to come to see her.

"I was in the last year of high school. I never thought that modelling would be something I would be able to do. I finally

went along a few months later and the owner had completely forgotten me – but said she might be able to use me in a few things."

Lambie began modelling in Dunedin fashion shows and things grew rapidly from there. "Beauty pageants were the obvious next step because they were not just about walking down a runway, but involved interviews and public speaking.

"In my first competition I was really nervous because I had done no public speaking, so I joined Toastmasters in Dunedin. Developing those skills has been hugely valuable. Public speaking is such an important life skill.

"If the only gain that I ever got out of beauty pageants had been joining Toastmasters it would have been worth it. The organisation helped me turn my weakness into a strength."

In 2012 Lambie was second runner up for Miss Otago, which she won in 2015. "I had no expectations. If someone had told me I would win Miss New Zealand and go to Miss World I would not have believed them."

Lambie had to juggle her extra-curricular activities with her studies. "I worked really hard and the University

supported me doing these things. Whenever I went to them with a request, their attitude was ‘how can we make this work?’ which I really appreciated.”

Beauty contests have changed with the times, says Lambie, who is a strong supporter of rights and equality for women.

“My generation does not have the same negative associations with beauty contests that my parents’ and grandparents’ generations may have had.

“Historically, the contests may have been based much more on aesthetics and may not have been empowering for women. But that’s not been my experience at all. For me, it has been far more about the whole person and your involvement in your community. It’s about the contribution you make.”

Contestants are encouraged to do charity work and the Miss World competition has raised more than half a billion dollars for charity over the last 30 years, says Lambie.

She has not only worked with several existing charities, but has started one of her own.

After her Bachelor of Medical Sciences, with first class honours in bioethics, she completed a Master of Entrepreneurship. With fellow student and now fiancé Dave Cameron, she founded LearnCoach to provide free online tutorials for NCEA students.

“The master’s challenged my thinking in lots of ways. Now it’s awesome to be working with a team of people who believe in sharing the gift of education.

“Over the last three years we have delivered millions of tutorials to thousands of students.

“This year we plan to broaden the content on the website and make

LearnCoach accessible to all young New Zealanders by incorporating New Zealand Sign Language and Te Reo Māori.”

Not everything went smoothly in Lambie’s expanding world. Although short-listed for a Rhodes Scholarship, she didn’t get it. “I was disappointed to miss out on what would have been a life-changing opportunity, but just making it to the final seven was amazing.”

Competition at Miss World was tough too.

“We were such a diverse group – doctors, lawyers, models, professional athletes, singers – the talent was incredible. It was a huge team effort to prepare for Miss World and so many people came forward to support me. On the final night I was delighted to come 15th out of the 120 contestants.”

Lambie found herself rooming with another Otago student, law undergraduate Latafale Auva’a, who was representing Samoa. “She’s so talented, good at study, sport and music, but such a lovely, kind, down-to-earth person. I hope to stay in touch with her for a long time.”

Lambie caused a mini media storm when she performed a haka in the cultural section of the contest.

“I really didn’t see that coming. I worked for months with expert Kereama Te Ua, who lectures in Māori performing arts. I’d performed the haka at marae and had feedback from different people. I could not have made a more genuine effort to perform it in the correct way.

“Then there was a lot of negative comment saying I should not have done it at all – but on the flip side I received an equal number of lovely messages of support, which really meant a lot.”

Lambie also learned some New Zealand sign language for the talent section of the competition.

“Learning that haka and some New Zealand sign language were my first real connections with people from those communities. They helped me understand things from a new perspective and could, quite possibly, change the direction of my career and what I end up doing.”

Now Lambie has hung up her tiara. “My run is over. I’ve loved the opportunities that pageants have brought, but now it’s time to concentrate on medicine and the future.”

She has two years as a house officer at Wellington Hospital before she has to decide where she wants to specialise.

“It’s been such a privilege to have attended medical school and received a world-class education at Otago. I’ve been shown so many different areas of medicine, but I am yet to decide the one that will be the best fit for me.

“I also really hope to continue public speaking. Once I thought there was nothing worse than having to do a speech, but now I love it.”

She may be in luck. Following the Miss World competition, Lambie was invited to MC the opening ceremony of the World Miss University contest in China.

But her over-riding aim is to make a difference in the community – because she can.

“I believe in making the most of all opportunities that come your way and using them to make a contribution to the community.”

**NIGEL ZEGA**



“Historically, the contests may have been based much more on aesthetics and may not have been empowering for women. But that’s not been my experience at all. For me, it has been far more about the whole person and your involvement in your community. It’s about the contribution you make.”

Deb Lambie



## A different picture

**Hollywood favours blockbuster movies directed at the young, but women over 25 are being catered for elsewhere.**

That is according to Professor Hilary Radner (History and Art History) who has been researching films directed at female audiences.

"Scholars tend to agree that classical Hollywood cinema deemed women to be its most important viewers," Radner explains. "With the demise of the American studio system in the 1960s, males under 25 became increasingly seen as the most important audience."

"I argue that independent productions, often broadcast on television, streamed, downloaded [rather than distributed in theatrical release] or screened at local film festivals, have continued to address the concerns of women over 25."

Radner asserts that films associated with a specific country have played an important role in the development of movies that highlight issues confronting women over 25, such as human relationships, family, generational disputes, and conflicts between ambition and emotional fulfilment. She cites *Perfect Strangers*, directed by Gaylene Preston, as a New Zealand example.

Radner says that part of her research involves watching as many movies (about 500 for this specific research project) as many times as she can, but she also scours film reviews, historical and contemporary newspaper clippings and other archival material.

"When it comes to current films, I talk to my students about what they [and their mothers] like, but also to my yoga class, which includes fans of the New Zealand International Film Festival." Radner's findings are to be published by Routledge under the title, *The New Woman's Film*.



**Professor Hilary Radner:** "I argue that independent productions ... have continued to address the concerns of women over 25."

## Translating history

**For more than 27 years Professor Glenn Summerhayes (Anthropology and Archaeology) has been working in remote Papua New Guinea (PNG) unravelling details of human activity dating back more than 40,000 years.**

This research has shed light on not only the prehistory of Pacific peoples, but also the story of human civilisation – on when humans became truly "modern".

Now he is giving back to the communities who have helped make this work possible, co-ordinating and editing the translation into English of three significant historical volumes, written in German more than 100 years ago.

These are *St Matthias Group* and *Admiralty Islands*, both by Dr Hans Nevermann, and – the most recent – Otto Reche's 1913 500-page *Sepik River*. The translations have been completed by Otago's Mr John Dennison, Department of Anatomy research fellow and accomplished linguist, a task undertaken over several years.

Documenting the daily lives of the people of these regions in the early 20th century, the translations have been distributed to the local communities, regional libraries and schools; the National Museum, Art Gallery and University of Papua New Guinea.

"For the people of PNG these are the stories of their grandparents and ancestors, but because they were in German most people could not access them," says Summerhayes. "Now, for the first time, they can read about their past. One elderly man

told me that he had been 'blind' to these stories, but now the translations have let him 'see'."

The books have been funded by Summerhayes with support from the Chiang Ching-kuo Foundation for International Scholarly Exchange, and are available online. The study and its results have been published in the US journal *PLOS ONE*.



**Professor Glenn Summerhayes and Mr John Dennison:** ""For the people of PNG these are the stories of their grandparents and ancestors ..."

## Tunnel vision

**A team from the University of Otago is helping illuminate the work of New Zealand tunnellers in France during World War 1.**

School of Surveying staff members Richard Hemi and Dr Pascal Sirguey, and postgraduate student Chris Page, are working with French academics to survey the tunnels dug by members of the New Zealand Engineers Tunnelling Company in and around the town of Arras in 1916-17.

Hemi explains that the tunnels linked a series of abandoned underground quarries that had been mined for chalkstone to build the town.

The quarries and tunnels, along with cellars of the town, were turned into a vast underground military complex to quarter up to 25,000 troops and supplies, ready for an attack on the German front line. They included a fully-equipped hospital.

The Kiwi tunnellers – several hundred mostly quarrymen and gold and coal miners, as well as public works engineers – named the quarries after New Zealand placenames, from north to south, Russell to Bluff, to help with underground orientation.

The team has so far carried out a pilot survey, using a terrestrial laser scanner. Hemi says that they hope to complete the survey work, and produce maps and 3-D animations of the significant New Zealand military heritage site, in time for the 100<sup>th</sup> anniversary of the Battle of Arras in April 2017.

The work is being funded by the Lottery Grants Board and the New Zealand-France Friendship Fund, with assistance from groups such as the Carriere Wellington Museum in Arras.



**Richard Hemi:** He and colleagues are surveying the extensive networks of tunnels dug by New Zealanders in France during WW1.

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## Mission controls

**University of Otago, Christchurch (UOC) researchers are playing a crucial role in research that will assist in NASA's mission to Mars.**

The Christchurch researchers are scanning the brains of explorers who have wintered in Antarctica as part of a NASA / German Aerospace Center project to understand what impact living in extreme environments has on the human brain.

The research will be relevant for NASA's plans to send humans to Mars. The shortest possible return trip to the red planet would take two years.

The international research team is led by the University of Pennsylvania's Associate Professor Mathias Basner. His team will be scanning the brains of astronauts, while the Canterbury team is focusing on those who have wintered in Antarctica's extreme and isolated environment.

Dr Tracy Melzer is the MRI research manager for the UOC's New Zealand Brain Research Institute. He says the research aims to understand whether prolonged periods in these extreme, isolated and hostile environments change brain structure and function.

His international collaborators have already found the hippocampus region of the brain, which is important for memory formation and visual/spatial orientation, actually shrinks during the Antarctica winter.

Melzer and his colleagues will scan the brains of up to 28 international explorers over two years. They are tested before leaving for Antarctica, immediately on their return, then six months afterwards. The Christchurch scans are particularly important because they capture explorers immediately as they return from the ice.



**Dr Tracy Melzer:** Is brain structure and function changed by prolonged periods in extreme environments?



## Managing monks

**What is the relationship between religious and secular law? Tensions between the two systems – one mandated by religion and the other by the state – are at the core of many contemporary conflicts within and between religious groups, says Dr Ben Schonthal (Theology and Religion).**

He believes that in religiously diverse societies it is essential to know about religious law and how religious groups govern themselves.

His research – for which he won a Marsden Fast-Start grant – focuses on one such situation: the case of Buddhist law in Southern Asia, a region that has seen a recent rise in Buddhist groups that preach messages of intolerance against Muslims and Christians.

This has become both a personal and logical dilemma for Schonthal. “I have researched and taught about Buddhism for most of my adult life, and have met some amazingly kind and selfless Buddhist monks so I was really upset and vexed by the rise of these aggressive groups.

“How, in the context of an established system of Buddhist law, which admonishes against violence, were such intolerant groups able to thrive? People blame particular monks or political factors, but what role does religious law play in preventing or failing to prevent the rise of these sorts of groups?”

Schonthal says these questions are relevant to any religious group. In asking how and why this has occurred in Southern Asia, he hopes to gain a better understanding of the relationships between religious law and civil law in the wider contemporary world.



**Dr Ben Schonthal:** “How, in the context of an established system of Buddhist law, which admonishes against violence, were such intolerant groups able to thrive?”

## Collaborative approach

**A team of Christchurch researchers, scientists and clinicians are collaborating to find better ways of predicting and diagnosing the expensive – and often deadly – condition of sepsis.**

The team includes researchers from the University of Otago, Christchurch; the University of Canterbury; and scientists and clinicians from the Canterbury District Health Board and Canterbury Health Laboratories.

Dr Anitra Carr is a researcher with the University’s Centre for Free Radical Research. She says sepsis accounts for more than 10 per cent of intensive care admissions in New Zealand and Australia, has mortality rates as high as 40 per cent and is one of the more expensive conditions to treat. Despite this, treatment options are limited and attempts to develop new therapies have been largely unsuccessful.

She and her Christchurch collaborators will study levels of selected biomarkers in intensive care unit patients with and without sepsis to determine if any, or any combinations, of biomarkers have potential as tests or predictive tools.

Carr says being able to better predict which patients are likely to develop sepsis will mean earlier and more successful intervention.

The team includes intensive care specialist and University of Otago researcher Professor Geoff Shaw; the University’s Christchurch-based inflammation expert Professor Madhav Bhatia

as well as its infectious disease specialists Professors David Murdoch and Steve Chambers; and Professor Steven Giesege from the University of Canterbury’s School of Biological Sciences.

The team are recruiting patients for the year-and-a-half-long project.



**Dr Anitra Carr** (right) with **Associate Professor Steven Giesege**, **Professor Geoff Shaw** and **Professor Madhav Bhatia** who are looking to find better ways of diagnosing sepsis.



## Weight of pregnancy

A research team headed by Dr Kirsten Coppell (Dunedin School of Medicine) is looking at how best to deliver nutritional advice to women about healthy weight gain during pregnancy.

"Obesity and overweight is such a common problem in our society, along with associated conditions such as diabetes and fatty liver disease," Coppell notes.

"Obesity and overweight in pregnancy increases the risks for both mother and baby: obvious risks for the mother are gestational diabetes, high blood pressure and caesarean sections, and there are poorer fetal outcomes as well.

"There hasn't been a lot of research work around how to best guide women through healthy weight gain during pregnancy," Coppell says. "There is an expectation that lead maternity carers are giving good nutritional advice, but they are under pressure to give other care and advice as well."

Coppell explains that they want to be able to help midwives tailor tangible, useful advice to individual women, given the range of cultural, income and other differences in society.

"Where is the credibility in telling a pregnant woman what foods she should be eating when her budget does not allow her to eat them?"

Coppell says that part of the research involves developing a booklet, which they will submit to a "citizens' jury" of pregnant

women and then pilot as part of an intervention with midwives and pregnant women.

The research is being undertaken at the Edgar Diabetes and Obesity Research Centre and is being funded by the University of Otago and the Otago Southland Diabetes Research Trust.



**Dr Kirsten Coppell:** "Obesity and overweight in pregnancy increases the risks for both mother and baby."

## Monday returns

The well-known Monday effect in stock markets (lower/negative returns on Mondays) may have disappeared during the last 15-20 years, but another anomaly still exists.

University of Otago research has found that an aspect of the Monday anomaly persists to date and is pervasive across the world stock markets - Monday returns on the stock market are likely to reverse on subsequent days.

US researchers first noted this anomalous pattern in 1993. Dr Numan Ülkü, senior lecturer in Accountancy and Finance, has now documented, in a recent study published in *Quantitative Finance* (2015), that this effect surprisingly persists.

He has shown if the stock market goes down on Monday, it is likely to rebound later in the week. Conversely, if the stock market rises on Mondays, it is likely to drop over the rest of the week.

He also showed that it could be possible for investors to take advantage of this anomaly through a simple trading rule, which produces positive profits after adjusting for transactions costs. That means traders can benefit from betting against the market movement on Monday during the rest of the week, although Ülkü warned this does not mean that this strategy will make positive profits every week.

Now, he is extending this research to investigate the causes behind this anomaly, together with his master's student Madeline Rogers. They believe that one potential cause could be that

institutional investors trade less on Mondays. Ülkü and Rogers are now working on documenting evidence for their hypothesised explanation.



**Dr Numan Ülkü** and master's student **Madeline Rogers:** Is the Monday returns reversal caused by less trade by institutional investors?

## Ice age explanations

Antarctic research led by an Otago geologist, Dr Christian Ohneiser, has unearthed an astonishing explanation for the acknowledged evaporation and refilling of the Mediterranean Sea more than five million years ago.

Ohneiser explains that sedimentary records obtained from core samples around Antarctica indicate that growth of the ice sheet during an ice age 5.6 million years ago caused a global drop in sea levels.

Using a computer model, the team discovered that the ocean lowered so much that the Mediterranean Sea became separated from the Atlantic Ocean, because the Strait of Gibraltar was very shallow at the time.

Ohneiser says that the Mediterranean Sea evaporated almost completely in a few thousand years and the earth's crust began to rise because the weight of the overlying water had been removed.

He says that the opposite occurred when the ice sheet started melting about 200 thousand years later. The meltdown was so great that the sea level was high enough to pour over the barrier at the Strait of Gibraltar, resulting in the Mediterranean refilling. The water eroded the barrier in the process, preventing the same thing happening again.

The research is part of wider work Ohneiser is undertaking, which focuses on reconstructing from sedimentary records the history of the ice sheets and Earth's climate system, and

involves expeditions to remote areas such as the Ross Ice Shelf in Antarctica.

The research findings on the link between Antarctica and the Mediterranean have been published in the *Nature Communications* journal.



**Dr Christian Ohneiser:** His research shows that the Mediterranean Sea almost completely evaporated around five million years ago.

## Mind reading

**Are some of us better than others at reading other people's minds?**

This is one of the questions that a University of Otago psychology student, Marea Colombo, is seeking to answer in her PhD thesis on what psychology researchers have dubbed "theory of mind".

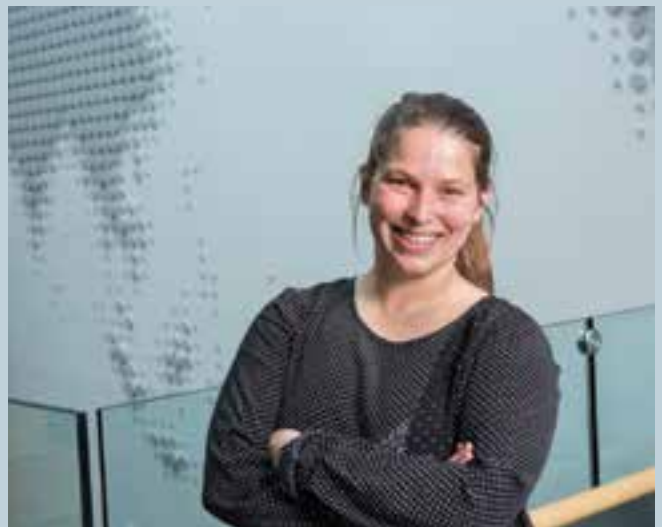
"When you run into someone on the street and you make assumptions about what they are thinking or feeling, you are using your theory of mind," Colombo explains. "It allows us to predict, interpret and explain other people's behaviour."

"We use quite a complicated bundle of things in this social mind-reading: the look in someone's eyes, their body movements, the way they say things, and what we know - or think we know - about the other person."

Colombo says that previous research on theory of mind has concentrated on young children, because it is more difficult to find differences in adults, but she is focusing on young adults, aged between 18 and 25, using fellow psychology students and Student Job Search recruits.

"I want to look at the conditions under which adults effectively use their theory of mind and part of this journey will be to develop a new theory of mind task that can measure adult differences in this ability."

Colombo says that she finds her understanding of theory of mind especially useful as a member of an improvised comedy troupe, trying to work out what her fellow performers are going to say or do - or want her to say or do - next.



**Marea Colombo:** "I want to look at the conditions under which adults effectively use their theory of mind ..."

## Best friends

**Animals have feelings; they're not simply objects for our leisure.**

New Zealand's Animal Welfare Bill was amended in early 2015 to acknowledge that animals, like humans, are "sentient" beings – that is, they can experience both positive and negative emotions, including pain and distress. Animal welfare is, therefore, a basic right.

This reflects that views on pets are changing – they are more central to society rather than a frivolous luxury and, increasingly, pets like dogs are considered a member of the human family.

University of Otago Associate Professor Neil Carr (Tourism) is analysing the nature of this changing relationship with domesticated animals, humans and leisure. At its core is that pets are beings with rights, rather than objects.

Carr is keen to encourage conversation on what is now right and wrong, something that's not always clear-cut.

For instance, is racing animals inhumane, as greyhound-racing opponents suggest, when the dogs are well cared for? What would happen to them in an unregulated environment if racing was banned and went "underground"?

Is humanising a pet, such as movie star Paris Hilton's "handbag pooch" acceptable or projecting unfair expectations of human behaviour?

Are dogs treated as an object of leisure time – have you considered its rights in activities such as walking?

What are the rights of other cultures who view dogs differently and use them for hunting, working and, sometimes, even eating?

Carr's recently published book *Dogs in the Leisure Experience* and his edited book *Domestic Animals and Leisure* discuss some of these issues.



**Associate Professor Neil Carr:** He wants to encourage debate around our changing relationship with domesticated animals.

## City living

**Traditionally New Zealanders dreamed of owning a quarter acre section, but a recent survey shows attitudes are changing. We're moving towards mixed-use development where housing is in walking and cycling distance of key amenities like work, school or shopping.**

Researchers surveyed 3080 New Zealanders in a horizon poll to find out opinions and preferences for urban environments, including the types and locations of housing, transport options and planning regulations.

The survey is part of a major recent report, "Drivers of Urban Change", by the New Zealand Centre for Sustainable Cities.

"Many New Zealanders would still like a large, stand-alone house. But that view changes when people are asked to think about distance from the city or town centre," say co-authors Anna Hamer-Adams and Ed Randal from the University of Otago, Wellington.

The poll showed that Auckland and Wellington respondents, in particular, were more comfortable with intensification in their neighbourhoods. Those under 25 and over 65 years old were more likely than other age groups to prefer a smaller house, townhouse or apartment in the city/town centre.

Most respondents thought that councils, which represent residents, should play a key role in defining the limits and form of the city, as opposed to market forces. Kiwis also generally saw the need for sustainability, with 60 per cent saying policies are

urgently needed to reduce greenhouse gas emissions. Many felt urban limits are necessary so that cities develop more sustainably.

The report is part of the Resilient Urban Futures programme, funded by the Ministry of Business, Innovation and Employment.



**Ed Randal and Anna Hamer-Adams:** "Many New Zealanders would still like a large, stand-alone house. But that view changes when people are asked to think about distance from the city or town centre."

# Pushing the boundaries

From an early interest in molecular biology, Otago alumnus Dr Tim Stewart has forged a stellar career at the forefront of medical science.

**G**roundbreaking scientific advances can attract short-term controversy, but gain long-term acceptance as their values are revealed.

When the recently graduated Dr Tim Stewart entered the rapidly developing field of molecular biology in the late '70s, he had no idea he was about to make history.

But in 1984 he and leading American molecular biologist Dr Phil Leder succeeded in creating a transgenic mouse designed for cancer research. Their oncomouse had genes injected into its embryo that increased its susceptibility to cancer.

Their pioneering work saw them granted the world's first patent for a genetically engineered animal – now a commonplace occurrence and a vital part of a wide range of medical research areas. A copy of the patent hangs on the wall of the US Patent Office alongside those granted to Alexander Bell and the Wright brothers.

Stewart went on to complete a stellar career in the US, far from his New Zealand origins. He had just started studying Chemistry at Canterbury University when he discovered the work of French biochemist Jacques Monod on genetic control systems.

"The idea that a group of bacterial genes could be turned on or off together was an epiphany. It was so breathtaking

it resulted in my transferring to Otago to do biochemistry," he says.

"Dunedin was a fantastic student town and environment. I really liked the way all the students lived together in a relatively small part of the city, and the combination of flats and hostels."

After completing a BSc Honours and a PhD in biochemistry, Stewart realised his future was overseas.

"Over my studies I'd spent a lot of time discussing developmental and molecular biology with colleagues in biochemistry and other departments including physiology and microbiology. Elsewhere in the world people were asking critical questions and developing interesting techniques."

He applied to half a dozen laboratories, mainly in the US, and gained a postdoctoral fellowship at the Institute for Cancer Research at Fox Chase in Philadelphia, where research included using teratocarcinoma cells to introduce specific genetic changes into mice.

He joined a team that expanded this research to include the direct introduction of cloned genes into early mouse embryos to study tissue-specific gene expression.

"I was interested in the mechanics and relationships between developmental biology and the underlying genes but, at that time, it was not clear exactly what a

gene looked like or how the expression of the gene was controlled. It was my first formal introduction to genetics.

"I spent four years there and it would have been hard to have found a better position in terms of setting me up for the future."

Stewart was plunged into long hours in a highly-competitive environment.

"I'd gone straight from my PhD at Otago to a very prestigious institution in Philadelphia. East Coast science is very aggressive and can be intimidating to the uninitiated. But, after a couple of years, I realised that I enjoyed the high-pressure environment and that I could compete.

"Did that come from me or from what I learned at Otago? Probably a little bit of both. Otago taught me to be independent. We had formal lectures, but we also had to learn to be independent.

"You had to get out and find the right people to talk to. You had to learn to work independently. I feel a lot of gratitude to the University of Otago for what I got from there and the path it enabled me to take."

Stewart's work in Philadelphia introduced the idea of artificially introducing a new gene into an animal – and he wanted to know more.

He took a research fellowship with Dr Phil Leder's Department of Genetics at Harvard Medical School in Boston.



“We were trying to address significant questions and were succeeding, but we did not think it was such a big deal at the time. We had no idea that we were making history.”

Dr Tim Stewart



“I think you can make your own luck and timing. It was the beginning of an explosion in molecular biology research and Phil was one of the top five names in the world.

“I was in Boston for almost two years, working very, very long hours, but having a spectacular time with a great group of people.

“We worked very hard on profound questions about the role of genetic changes in the development of cancers. Now, those questions might seem trivial. However, when they were being discussed then, it wasn’t obvious how to go about addressing them.”

Genetically engineering a designer mouse for cancer research drew the attention of contemporary animal rights groups, but it was a breakthrough that has benefited medical science ever since.

“We were trying to address significant questions and were succeeding, but we did not think it was such a big deal at the time. We had no idea that we were making history.

“It was a major success, but only a small part of the work that we initiated in the lab while I was there.”

Stewart expected to move on to a permanent academic post, but was headhunted by leading biotechnology company Genentech.

“It never crossed my mind to go into industry. It wasn’t the thing serious scientists did at the time. But Genentech called and within two months I was in San

Francisco, working with very confident, gifted and technically smart people. I could not have gone to a better place.”

In almost two decades with Genentech, Stewart continued to research and push the boundaries of medicine.

His highlights include unravelling the relationship between gene expression and autoimmune diseases, particularly type 1 diabetes, and discovering the functions of molecule FGF19 in terms of health and disease, especially how it increases energy metabolism in animals – suggesting a potential future use as a drug for treating metabolic diseases.

When Genentech made a business decision to stop endocrine research, then-director Stewart had the opportunity to take over other projects within the company or to out-license projects he had been working on.

“Initially I had an emotional attachment to seeing things through, but I found I wasn’t ready to keep working seven days a week running my own pharmaceutical company.

“I’d had a hell of a good run, but I remembered the saying that mathematicians don’t do important maths after they are 30.

“It’s true of all science to some extent. These days it’s hard to compete with the energy and the skills of 30 year olds coming out of postdocs. So I am now largely retired from the biotech industry.”

Stewart runs his own consulting practice as an independent advisor,

which gives him time to indulge his passions for travel and sport.

He and his wife Rose, whom he met at Otago, visit their holiday home in New Zealand a couple of times a year.

Stewart was a member of the New Zealand ski team in his youth and still skis, surfs and kiteboards.

“I first tried surfing in Christchurch, but I was never good at it. After years of talking about it in San Francisco I finally got back into it. It has to be one of the hardest sports to take up again later in life, but now I love it. And one of my sons got me into kiteboarding.”

He and Rose also volunteer with Habitat for Humanity, building homes for people in need.

“New Zealanders seem to be do-it-yourselfers and I’m no exception. When I left Genentech it was almost a given that I would end up doing voluntary work. Now I volunteer as a builder/plumber, helping build houses with Habitat for Humanity in San Francisco and elsewhere around the world.

“Every year for the last eight years Rose and I have done at least one international Global Village build in some very off-the-beaten-path parts of the world and we have a blast. It’s so rewarding to give your time and leave behind increased value for a family.”

It seems a fitting role for a man who has spent a lifetime seeking new ways of leaving behind increased value for the world.

**NIGEL ZEGA**

# Time for some NZ sunshine?

Professor Tim Stokes discusses financial conflicts of interest in medical research and practice.

I have had a longstanding interest in the relationship medical practitioners and researchers have with the pharmaceutical and medical device industry, and whether such interests constitute a conflict.

As a medical student I would regularly receive free lunches and medical equipment in exchange for listening to reps talking about their company's latest drug. As an advisor to the UK's National Institute for Health and Care Excellence (NICE) I became aware of the intricate web that links medical researchers and the pharmaceutical industry and the need for transparency in such dealings. As a university academic I am aware of the important role the industry plays in funding medical research and universities' promotion of research commercialisation; and also of the need for academics to be a critic and conscience of society.

I believe such interests do matter for patients, for doctors and for society in general. For example, many adults take medication (statins) to reduce their future risk of having a heart attack or stroke. In some people these drugs have troublesome side effects. The trend is for more and more adults to be prescribed these drugs as international clinical guidelines, which clinicians use, have recently lowered the risk threshold for starting statin therapy. But what if clinicians, acting

in good faith, are following guidelines that are not trustworthy? What if the recommendation may not be based on a robust assessment of the research evidence, but be biased in some way? Such concerns were widely reported in the UK in 2014 following research published in the *British Medical Journal* which contended that the benefits of statins in low-risk people were less than has been claimed and the side-effect risk greater.

Conflicts of interest (COI) occur when a clinician or researcher's judgement concerning a primary interest, such as validity of research, is unduly influenced by a secondary interest, such as financial gain. Lisa Bero and colleagues from the *Cochrane Collaboration* have shown that financial COI are relatively easy to define and bias research findings.

My view is that financial payments from industry to doctors are important for two reasons. First, such funding is sizeable. In the US in 2014 there were 11.4 million payments from industry for research and education totalling \$US6.49 billion. Over half a million US doctors received such payments.

Second, they bias research findings. Bias weakens the evidence base for health-care decisions. We may think we are doing "good", but may in fact be doing "no good" or "more harm than good". It occurs at three points on the pathway by which research is converted into clinical

guidelines for clinicians to use with their patients.


First, in the conduct of primary research studies (randomised controlled trials of drug therapies). Pharmaceutical industry-sponsored studies overestimate the benefits and underestimate the harms of their treatments.

Second, when the primary studies are pooled together as a systematic review of the available evidence for a particular treatment. Again, industry-funded systematic reviews are more likely to produce findings that favour the sponsor's treatment.

Third, when groups of medical experts meet to produce clinical guideline recommendations. Here, financial COI are common among group members and can directly influence the wording of guideline recommendations.

So, if financial COI are important, what should we do about them? Two approaches have been used internationally. The first is self-regulation; the second is mandatory disclosure.

Self-regulation has hitherto been the standard way in which the pharmaceutical industry, academia, guideline-producing organisations and medical practitioners have addressed the problem of COI. Such bodies now have detailed policies requiring both disclosure of financial interests and offering clear guidance about what to do

A portrait of Professor Tim Stokes, a middle-aged man with glasses, wearing a dark blazer over a light blue striped shirt. He is sitting in front of a window with a grid of small, square glass panes. The lighting is soft, coming from the window behind him.

Professor Tim Stokes: "Bias weakens the evidence base for health-care decisions. We may think we are doing 'good', but may in fact be doing 'no good' or 'more harm than good'."

Photo: Alan Dove

if financial COI exists. However, given that such policies are based on trust and rely on individual self-disclosure, it is difficult to audit the accuracy of the declarations of COI.

Mandatory disclosure of financial payments was made law in the US in 2010 by the Physician Payment Sunshine Act (PPSA). All payments individual US doctors or their institutions have received are available through OpenPaymentsData. Since the US legislation has been enacted, Australia and European countries have

either enacted or begun to enact similar legislation.

The situation in New Zealand, however, remains that we do not have a mechanism for disclosure of payments to doctors from industry. Together with colleagues from the University of Auckland, we set out the issues in an editorial in the *New Zealand Medical Journal* in March 2015. We argued that the time was now right for New Zealand to enact a physician payment sunshine act. The response to our editorial from

government and the pharmaceutical industry was that existing self-regulation structures were sufficient.

We remain confident that, as other countries enact planned legislation in this area, there will be increasing pressure for New Zealand to follow suit and, in doing so, shed more sunshine on the industry–doctor/researcher relationship.

Professor Tim Stokes  
Department of General Practice  
and Rural Health

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“We remain confident that, as other countries enact planned legislation in this area, there will be increasing pressure for New Zealand to follow suit and, in doing so, shed more sunshine on the industry–doctor/researcher relationship.”

# The power of C

Private donors are helping Professor Margreet Vissers and her team investigate the use of vitamin C in the fight against cancer.

Long considered the domain of “alternative” medicine providers, vitamin C is now being investigated by respected scientists as a possible mainstream treatment for cancer.

Leading an international study of the vitamin’s cancer-fighting potential is University of Otago, Christchurch researcher Professor Margreet Vissers. She has worked for more than 15 years to understand the relationship between vitamin C and cancer, and is supported in her latest study by private donors wanting evidence that has long been lacking.

Vissers has an established reputation in free radical research and her investigations into the antioxidant effects of vitamin C in 2000 instead led to a “serendipitous” discovery that linked vitamin C to cancer cell growth.

“For many years people around the world have used vitamin C as a therapy in a number of diseases and there have been many reports of quite extraordinary effects. But it is mostly anecdotal information.

“What we observed in 2000 was so unexpected that it sparked our interest, and we [Vissers and her free radical research team] have become very focused on explaining it and addressing all the unanswered questions our results raised.”

Vissers worked with the Christchurch Cancer Society Tissue Bank to undertake the first-ever analysis of tumour ascorbate (vitamin C) levels and to relate these to tumour growth promoters. Her results were published in the *Cancer Research* journal.

That, and subsequent studies in other

patient groups and in animals, showed that tumours are less able to accumulate vitamin C compared with normal healthy tissue, and that this is associated with the ability of the tumour to survive and grow. Tumours with low vitamin C levels have more of a protein called HIF-1 that allows them to thrive in conditions of stress.

“These findings showed, for the first time, a direct relationship between HIF-1 and vitamin C levels in tumours and suggested it would be beneficial for people with cancer cells to have more vitamin C. This could help limit the rate of tumour growth, increase the responsiveness to chemotherapy and may prevent the formation of solid tumours,” Vissers says.

After studying the vitamin C content of bowel cancer samples, she observed that patients whose tumours had higher levels of vitamin C had longer disease-free survival than those with low levels of vitamin C. While there is a desire in the community for cancer treatments that are more than just a toxic drug, Vissers says evidence of the efficacy of natural compounds is sorely needed.

“One day vitamin C could be used by oncologists alongside established treatments such as surgery, chemotherapy and radiotherapy. But before it could be used in the clinic, evidence for a mechanism of action is needed, as this will help determine which patients it will benefit and what doses are appropriate.

“We have identified a mechanism that looks very plausible from the point of view of potentially slowing the cancer

growth, but this information has been gathered without intervention, in vitro, or in animals, and no one – including us – has looked in patients yet,” she says.

Vissers is about to begin the first study in people that investigates the effect of intravenous vitamin C treatment on tumour biology. This study will help determine a mechanism of action and has been made possible by the generous donations of many private donors.

“Many of those who have donated are affected by cancer, either themselves or someone close to them. They want information. They may have asked ‘would taking vitamin C be good for me or my loved one?’ and found there are no good answers to that question.”

Vissers and her team will study 12 patients with colorectal cancer who will either get four daily injections of vitamin C or a placebo. Intravenous injection is the most commonly used method in “alternative” medicine and may result in better access for ascorbate into the difficult-to-access tumour environment.

“The patient will receive the vitamin C treatment prior to surgery. We will analyse tissue taken before and after vitamin C treatment to determine what the intervention has done – if anything – and if it affects any of the biological processes we know encourage tumour growth,” she says.

The trial will test both the activation of HIF-1 and other leading theories.

“Our aim is to gather information that will indicate whether this treatment could be of benefit and, if so, what level



“Many of those who have donated are affected by cancer ... They may have asked ‘would taking vitamin C be good for me or my loved one?’ and found there are no good answers to that question.”

Professor Margreet Vissers



of dosing would be appropriate and which patients could it be targeted at. If we don't understand the mechanism, we have no idea how to use this treatment option and that's the situation at the moment. People are being treated in a variety of ways – once a week, every day, once every fortnight – there is no recommended protocol. Then when patients reportedly do better (or not), the data is rather meaningless. No one knows how to harness the power of this vitamin.”

The final step before vitamin C could be used in hospitals is a randomised controlled clinical trial, however this is still several steps away.

Vissers is grateful for all her private donors and funders such as the Health Research Council and the New Zealand Breast Cancer Research Foundation who enable her to continue this work. In the current cash-strapped research environment, she says more funding is necessary to achieve the aim of a randomised controlled clinical trial.

Vissers is driven to answer the many pressing questions about vitamin C and cancer for the benefit of patients and their families. She recounts the story of a woman with breast cancer who shared her experience of intravenous vitamin C treatment.

“She was a long way down the road with her chemotherapy and the side effects had been debilitating. She told me ‘of all the treatments I have undergone this is the one that asked nothing of me and the one that gave me the most obvious benefit’. Her story made me think ‘we need to know more about this and how to use it to patients’ best advantage’. That is a powerful motivation for me to carry on my work.”

**KIM THOMAS**

## Funding support

Seeing the difference that intravenous vitamin C therapy makes to cancer patients' quality of life has motivated the Centre for Advanced Medicine to fund groundbreaking research into the treatment.

The centre has made a significant donation to the Vitamin C for Cancer Trust, which was set up to support the research of Professor Margreet Vissers and her team into the effect of vitamin C on cancer.

As a result of generous private donations such as this, Vissers is about to begin the first human trial that investigates the effect of intravenous vitamin C treatment on tumour biology.

Centre for Advanced Medicine CEO Jackson Perry says that over the past 15 years his company, along with associated clinic Integrated Health Options, has provided care for thousands of patients seeking intravenous vitamin C treatment for a variety of conditions, including cancer, viral/bacterial infections, and for immune support.

Many cancer patients approach the clinic at a time when their quality of life has been significantly reduced through progression of disease and there appear to be few options available to help them, Perry says.

“Our experience has shown that intravenous vitamin C therapy improves outcomes for cancer patients in a number of ways, including quality of life benefits, such as improved appetite, reduced pain and overall well-being. We have also seen, on a case-by-case basis, increased longevity and improved prognosis,” he says.

“As a result of these observations, we are very motivated to understand better how vitamin C works in the treatment of cancer. The earlier work conducted by Professor Vissers and her team gives us great confidence that this study will significantly advance the understanding of the use of vitamin C in cancer and enable patients to make better informed choices.”

To contribute to the Vitamin C for Cancer Trust please go to:  
<https://secure-www.otago.ac.nz/donations/alumni-vitamin-c/>

# Reunions + Events

## 2016

**Medical class of 1976 reunion**  
Friday 25 March, Auckland

**Medical class of 1996 reunion**  
20-year reunion  
Friday 8 April, Dunedin

**ITS 50th anniversary reunion**  
Sat 27 August, Dunedin

**Home Science class of 1966 reunion**  
Friday 28 October, New Plymouth

**Dental class of 1976 reunion**  
Friday 25 to Sunday 27 November

**Distance Learning 30th anniversary celebrations**  
October, Dunedin, Christchurch and Wellington

**Cumberland College class of 1989 reunion**  
Friday 18 November, Dunedin

**Dental class of 1966: 50-year reunion**  
Friday 25 to Sunday 27 November, Dunedin

## 2017

**Phys-Ed class of 1977 reunion**  
Friday 27 January, Dunedin

**Medical class of 1967 reunion**  
Monday 4 to Friday 8 December, Dunedin

## 2018

**Dental class of 1968 reunion**  
22 March, Dunedin

## 2019

**Unicol 50th anniversary reunion**  
November, Dunedin

### For more information

Visit: [otago.ac.nz/alumni/events](http://otago.ac.nz/alumni/events)

For reunions, email:  
[reunions.alumni@otago.ac.nz](mailto:reunions.alumni@otago.ac.nz)

For functions, email:  
[functions.alumni@otago.ac.nz](mailto:functions.alumni@otago.ac.nz)  
Phone: +64 3 479 4516

Medical Class of 1954, Dunedin, October 2015



Medical Class of 1955, Dunedin, November 2015



Medical Class of 1995, Dunedin, November 2015





Carrington College 70th anniversary, Dunedin, November 2015



Studholme College centenary, Dunedin, November 2015



Chicago alumni enjoy an All Blacks win, October 2015



## Reunions: you are not alone

Class reunions are a wonderful way to reconnect with old friends, a time for nostalgia and for making new memories too. You are never too young or too old: 101-year-old alumna Dawn Ibbotson (below) recently attended her Studholme College reunion and cut the reunion cake.

If you're thinking of organising a class - or even a flat - reunion, the Development and Alumni Relations Office can help. While the reunion itself is organised by you and your committee, we offer a free service to help you where we can.

Most reunions take place over a weekend in Dunedin, but we can also assist you with reunions in other cities.

We will send out invitations and promote the reunion in print and online. We can create an online registration page for your reunion group and advise you on building a programme of events. If you'd like to have a special presenter at your reunion, we can make suggestions for that too. We also provide or co-ordinate tours of campus and individual departments, so you can see all of the new University developments and relive your Otago memories.

We look forward to you contacting us:  
phone 64 3 479 8487 or  
email [reunions.alumni@otago.ac.nz](mailto:reunions.alumni@otago.ac.nz)

We will send you a copy of the reunion guide with further information and handy tips.



# 2015 alumni survey

As an Otago alumnus, you are a highly-valued, lifelong member of the University of Otago community.

In order to ensure we are best meeting your needs, the Development and Alumni Relations Office undertook a comprehensive online survey in 2015, canvassing alumni of all ages and from all parts of the world. From a random sample of 21,000 alumni, we received 5800 completed surveys (a very good 28 per cent response rate).

This anonymous survey was run by Jerold Pearson, director of market research for Stanford University Alumni Association, a highly experienced survey practitioner who was able to benchmark our results against other universities from the US, Canada and Australia. Our results compared very favourably.

Thank you for taking the time to share your views: this is what you told us.

We will now use this information to inform how we engage with you in the future.

## Feelings and affiliations

### Your student experience



satisfied



### Your views on Otago

91%



Pride in your Otago degree

89%



Positive feeling about the University

68%



Identify with the University as a whole

37%



Identify most closely with a school or faculty

### How are we doing?



76%

Otago values its alumni

75%

Otago is doing a good job at keeping you informed

### Personal feelings



79%

Emotionally connected



72%

Otago is a part of who you are



46%

You mentioned the University in conversation in the past week

### Sources of news and information about the University

62%

The *Otago Magazine* is your main source

Friends, family, students, alumni ...

42%

33%

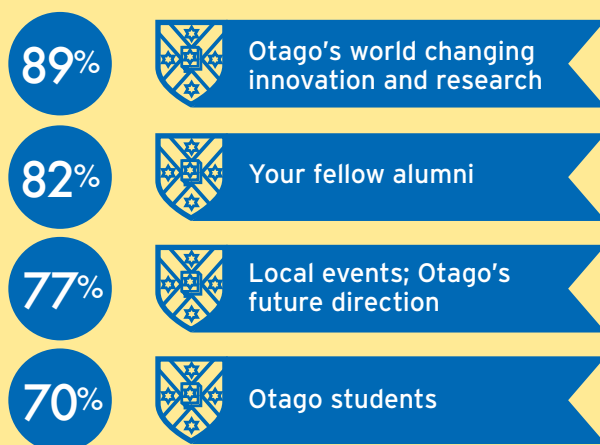
From eConnect

Social media

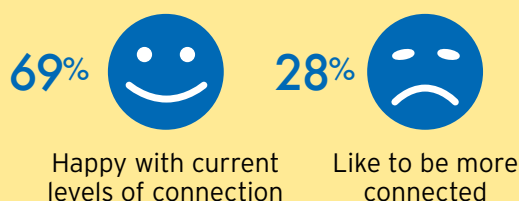
29%



You want to hear about ...



Staying connected with the University



How you want to be involved



## 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](mailto:database.alumni@otago.ac.nz) or

phone 0800 80 80 98 and ask to update your details.

### Connect with Otago Alumni and Friends on social media

[facebook.com/otagoalumni](https://facebook.com/otagoalumni)

[linkedin.com/groups/79350](https://linkedin.com/groups/79350)

[instagram.com/otagoalumni](https://instagram.com/otagoalumni)

### 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](mailto: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](http://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](mailto: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](http://otago.ac.nz/ittraining/courses/subject.php)

### GoinGlobal

GoinGlobal, a leading provider of country-specific information, and international career and employment resources, is now available to the wider University of Otago community. GoinGlobal is used around the world by university career centres, educational and institutional organisations, libraries, corporate HR departments and government agencies.

To find out more and to access GoinGlobal:

Alumni can contact

[database.alumni@otago.ac.nz](mailto:database.alumni@otago.ac.nz)

Students and staff should login to

[OtagoCareerHub](http://OtagoCareerHub) [careerhub.otago.ac.nz](http://careerhub.otago.ac.nz)

## WHERE ARE THEY NOW?

# Closing the gaps

Otago alumni are behind the fast-growing New Zealand software business Timely, that is helping businesses around the world to fill their appointment books.

Once a tech entrepreneur, always a tech entrepreneur: that's what Otago alumni and business partners Ryan Baker and Andrew Schofield discovered not long after their first successful tech start-up was acquired by Trade Me in 2010.

Now at the helm of their second venture, Timely, an appointment scheduling software firm, the entrepreneurs say that New Zealand offers a host of benefits for people wanting to create and grow successful high-tech companies – not the least of which is a rich source of qualified graduates from the University of Otago and other New Zealand universities.

"Today, there are no limitations to being at the bottom of the world," says Baker, CEO of the Dunedin company. "We can be competitive and serve markets anywhere. In fact, Timely has been international from day one, with customers from Australia to Afghanistan."

A cloud-based solution, Timely is a scheduling platform used primarily by small businesses in the health and beauty sector – hair salons, day spas, personal trainers, fitness studios and the like – for appointment booking, customer contact management, staff scheduling and more. From its launch in late 2012, the business has expanded rapidly and today has more than 4000 customers in 70 countries and is growing, on average, by 10 per cent a month.

"Timely wasn't the first product in the appointment scheduling space, but we took it to the next level, creating a full-

featured, reliable and affordable solution for small businesses," says Baker, adding that a cloud-based software service has proven to be a natural fit for Timely's target market, allowing small business customers to access the software using existing hardware and devices – tablets, PCs, Macs or smartphones – without incurring additional costs.

Baker and Schofield (Timely's chief technology officer) had experience entering and succeeding in established markets: they started the accommodation booking service *BookIt.co.nz* in 2003, building it into a thriving online entity based in Dunedin before being acquired by Trade Me in 2010.

At that time, Schofield was working with Ian Taylor, of Taylormade Productions/Animation Research Ltd, trying to get the new online tourism booking business started.

"I needed another developer to help build the software and Ryan was one of the candidates that applied. We clicked at that first interview," Schofield explains. "Ian, Ryan and I went on to found BookIt together and built it up over seven years before selling it to Trade Me."

The duo went to work for the online auction site until early 2012, leaving on excellent terms with their Trade Me bosses after their two-year, post-acquisition contract was up.

"If you have to work for someone else, then Trade Me is the company to work for. We learned so much there," says Baker, noting that working for the company at the time they went public

was particularly exciting and educational.

"It wasn't just the technology, but the management style and human resources side of things. Managers let people do their work. They created a culture where people wanted to be part of something bigger, to make a contribution and we aim to achieve something similar at Timely."


Baker and Schofield's own corporate culture model has been to make Timely a remote-working organisation. That means there's no head office –indeed, no offices at all. Staff work from home or, if they prefer, from co-working spaces, connecting with managers, co-workers and customers virtually, while whole company meetings are held at salubrious venues in Queenstown or Auckland semi-annually.

"We were a remote company right from the start. I stayed in Dunedin because I like the lifestyle here and Andrew moved to Wellington. After a year, we realised it was not a phase, it was an arrangement that worked for us, so we have kept that model and grown from there," Baker says.

Of Timely's 27 staff – 11 of whom are University of Otago graduates – 15 are based in Dunedin, eight in Wellington and two in Auckland.

And while Timely is not quite Trade Me yet, the executive team believes there is ample room for growth and few barriers to expansion.

"We have an obsession with building a highly-polished product, providing great customer service and sticking to business



“Today, there are no limitations to being at the bottom of the world. We can be competitive and serve markets anywhere.”

Andrew Schofield and Ryan Baker

Photo: Graham Warman

fundamentals,” Schofield says. “And we promote an open and honest culture.”

They both agree that their education and experience at the University of Otago and their early years working with Ian Taylor have been critical to their success as technology entrepreneurs.

“The Otago computer science degree introduces you to the full stack of computing, from hardware to end-user interfaces,” explains Schofield. “You’re taught how to solve tricky problems by using a methodical, data-driven approach. These skills can be applied in both software development and business.

“Having a degree from Otago – especially a computer science degree – is definitely a big tick in my book.”

**MOIRA FINN**

For more information about Timely, visit [gettimely.com](http://gettimely.com)



## WHERE IN THE WORLD ARE YOU?

We want to stay in contact with you wherever you are.

Email [alumni@otago.ac.nz](mailto:alumni@otago.ac.nz)

Visit [uolumni.otago.ac.nz/where-in-the-world-are-you](http://uolumni.otago.ac.nz/where-in-the-world-are-you) to find out where other Otago alumni are living.

# Making connections in China

With the mission statement “For alumni, by alumni”, the University of Otago’s China Alumni Network is bringing together Otago graduates - and welcoming others who have studied in New Zealand - for gatherings that are fun, benefit graduates and raise the University’s profile in China.

“Once Chinese students have come home, they like to mix with others who have studied abroad,” says Central Otago native Hunter McGregor, who has lived in China since 2007 and initiated the network. “Our approach is to arrange informal gatherings on a regular basis, as opposed to just a big event once a year. This will get more people out to network and socialise. It’s more relaxed, which is the Kiwi way.”

A six-member alumni network board, based in Shanghai, is spearheading efforts to help University of Otago alumni to connect in China. Here’s a snapshot of who they are and why they are involved.



**Hunter McGregor** (36), BCom (Marketing 2001). Hunter operates a consulting and import business, Rata Forest Ltd. “Seeing the network grow and getting to meet new people has been the best thing about getting involved,” he says.



**Cynthia Feng** (27), BCom (Accounting 2010). Cynthia works as a research analyst with executive search firm Spencer Stuart. She thinks of the alumni network as a community where people feel comfortable, sharing their insights and resources to help others who are new to China. “I want

to see our network and resources grow so that we can offer help to new graduates and create a legacy where one generation of graduates helps the next generation.”



**Ding Yi** (25), BCom (Accounting 2014). Recent graduate Ding Yi also works as a research analyst at Spencer Stuart. “I volunteered at the International Office back at the uni and I was actively looking for an alumni group to get involved with once I got back to Shanghai,” says

Ding. “It is great to have a group of people here with a similar background, supporting each other.”



**Sabrina Li** (37), BCom (Information Science 2002). Sabrina is a fund services operations and accounting manager, who says memories of the fun she had at Toroa College motivated her to get involved in the alumni network: “I’d like to help promote the University of Otago here and to make the name better known here.”



**Daniel Zhang** (28), BSc (Computer Science 2010). Web specialist Daniel was thrilled to connect with the alumni network just one week after shifting to Shanghai. “I’m very keen to reconnect and to help more people to reunite,” explains Daniel, who is helping to create the China Alumni Network’s web presence.



**Joby Barham** (36), BA (Design 2001). Working as a landscape architect and developing a science and design school with his wife in Shanghai keeps Joby busy – but never too busy to maintain connections and build a social and business network. “Networking is critical for foreigners in China and

the alumni network is a great way to develop relationships and reconnect with fellow alumni.”

The China Alumni Network welcomes graduates and others interested in connection with graduates to get in touch:

(WeChat ID: Otago\_Alumni).

[otago.ac.nz/alumni/networks](http://otago.ac.nz/alumni/networks)

## KEEP IN TOUCH

Address for correspondence  
Development and Alumni Relations Office  
University of Otago  
PO Box 56 Dunedin 9054

Physical address  
Alumni House | 103 St David Street | Dunedin  
Tel 64 3 479 4516 | Email [alumni@otago.ac.nz](mailto:alumni@otago.ac.nz)  
Web [otago.ac.nz/alumni](http://otago.ac.nz/alumni)



## Top QS Stars rating

**The University has been awarded the highest quality rating of five stars plus from QS stars, a quality evaluation system in which universities are assigned a stars rating based on their performance in an institution-wide review.**

The five star plus rating is awarded to universities described by QS as “an institution [that] is not just world-class, but an elite destination to which the very best students and faculty worldwide will aspire”.

The University of Otago was audited across a broad range of criteria, and scored especially highly in teaching, employability, research, internationalisation, facilities, innovation and inclusiveness.

## MoU signed

**Te Papa and the University of Otago have signed a collaborative relationship to strengthen joint efforts in research, scholarships, teaching and public lectures involving the national facility.**

The memorandum of understanding (MoU), signed between senior staff

and academics at the University and The Museum of New Zealand Te Papa Tongarewa, is designed to achieve better outcomes in education and research.

Deputy Vice-Chancellor (Research and Enterprise) Professor Richard Blaikie says he is looking forward to a long and fruitful relationship – one that complements the existing strong ties that the University has with the Otago Museum and also the strong ties that Te Papa has with other research organisations.

“The MoU is significant for the opportunities it creates for engagement with Te Papa across a number of our academic divisions but, principally, across the Humanities and in Science Communication, where both organisations share international strengths.”

## Healthier Lives challenge

**Innovative research aimed at significantly reducing the death and disease burden of some of New Zealand’s leading health problems will be pursued through the Healthier Lives National Science Challenge.**

Hosted by the University of Otago and involving partners from six other New Zealand universities and three research institutes, the challenge will tackle cardiovascular disease, cancer, diabetes and obesity with the goal of reducing their overall burden by 25 per cent by 2025.



The director of Healthier Lives, Professor Jim Mann, says that this group of diseases accounts for a majority of premature deaths and much of the

burden of serious illness among women and men in the prime of life, as well as the stark inequalities in health outcomes amongst Māori and Pacific peoples compared to other New Zealanders.

Research aimed at reducing these inequalities will be a major thrust of the challenge and will involve initiatives led by Māori researchers with strong community involvement.

Photo: Sharron Bennett



Signing the second Matariki Network memorandum of understanding: Back row (from left): Dartmouth College President Philip Hanlon, Queen’s University Principal and Vice-Chancellor Daniel Woolf, University of Tübingen President and Vice-Chancellor Professor Bernd Engler and Durham University Dean of Internationalisation Professor Danny Donoghue. Front row (from left): University of Western Australia Senior Deputy Vice-Chancellor Professor Dawn Freshwater, Otago Vice-Chancellor Professor Harlene Hayne and Uppsala University Vice-Chancellor Professor Eva Åkesson.

## Matariki agreement

A second memorandum of understanding (MoU) between the universities in the Matariki Network of Universities was signed at a meeting of the network’s executive committee, hosted by Otago in February.

The Matariki Network is an international group of seven leading, like-minded universities, each amongst the most historic in its own country, and recognised as being leaders in both teaching and research.

University of Otago Deputy Vice-Chancellor (External Engagement) Professor Helen Nicholson says the first MoU, signed in February 2011, enabled Matariki members to become trusted partners who support each other to enhance quality in all areas of institutional activity. “This MoU cements these relationships and demonstrates our willingness to continue working together.”

Healthier Lives is the latest National Science Challenge to be unveiled by the Government. The Challenges are initiated through the Ministry of Business, Innovation and Employment, and are designed to tackle New Zealand's biggest science-based issues and opportunities.

## Collaboration targets veterans' health

**The University of Otago is joining forces with Queen's University in Canada to collaborate on research aimed at enhancing veterans' health.**

The two universities have signed a memorandum of understanding (MoU) that provides a framework for researchers from Otago's Health of Veterans, Serving Personnel and their Families research theme, and Queen's Canadian Institute for Military and Veteran Health Research to work closely together on specific research initiatives.

Professor Richard Blaikie says signing the MoU is a significant milestone for the veterans' research theme and will help secure its position nationally and internationally as the key centre for this area of research in New Zealand.

## Marsden Fund success

**More than \$11.7 million in new government funding has been awarded to University of Otago researchers to undertake 20 world-class research projects pushing the boundaries of knowledge in their fields.**

Researchers from across the University will lead the new projects, which include 13 standard projects and seven "Fast-Starts" designed to support outstanding early-career researchers.

Professor Richard Blaikie warmly congratulated the Otago recipients on their success in the prestigious funding round.

"The Marsden Fund is extremely competitive and is designed to encourage work of the highest quality on topics of great value. I am delighted that the excellence of our researchers' proposals has been recognised and their world-leading studies supported."

## Heart Foundation support

**University of Otago researchers have been awarded grants to pursue six research projects in the latest annual National Heart Foundation funding round.**

The Otago projects cover biomedical, clinical and public health aspects of heart-related research.

They include studies into:

- early detection of unstable plaque in arteries
- cardiovascular health in Christchurch's Pacific communities
- improving cardiovascular risk prediction in the general population
- heart disease risk markers in healthy volunteers
- changes over time in a biomarker used to diagnose heart attacks
- physiological relevance of the cardio-protective hormone ghrelin.

## Science investment funding

**Five innovative Otago-led research programmes are being backed with \$5.7 million in new science investment funding.**

The new programmes are being supported through the Hazards and Infrastructure Research, High-Value Manufacturing and Services Research, and Smart Ideas funds administered by the Ministry of Business, Innovation and Employment.

Otago's programmes include:

- identifying compounds for pesticides that do not harm bees
- developing an ultrasonic dental diagnostic device for gum disease
- reducing damage to New Zealand's power grid by large geomagnetic storms
- developing automated genetic material extraction for point-of-care diagnostics
- developing non-invasive sensors to measure brain oxygen levels in patients.

## Awards/Achievements

University of Otago physicist Professor **Pat Langhorne** has been allocated \$1.9 million by the Deep South



National Science Challenge to lead a research project on Antarctic sea ice, which is a key element in the global climate system. The Deep South Challenge

is one of 11 MBIE-funded challenges to take a more strategic approach to science investment. Langhorne's project, "Targeted observation and process-informed modelling of Antarctic sea ice", is among the first Deep South funding allocations that will see over \$9 million spent on six projects over four years.

Two University of Otago health sciences researchers have gained Royal Society of New Zealand fellowships. Cancer researcher Professor **Antony Braithwaite** (Pathology, Dunedin) receives a two-year James Cook Research Fellowship allowing him to concentrate on a research project entitled "A strategy for targeting the cancer-associated protein YB-1 as a novel cancer therapy". Dr **Logan Walker** (Pathology, Christchurch) has been awarded a five-year Rutherford Discovery Fellowship to support research entitled "Preparing for the future of genomic medicine".



A book by Professor **Tony Ballantyne** (History), *Entanglements of Empire: Missionaries, Māori and the Question of Body*, has won

the inaugural W.H. Oliver Award for the best book published on New Zealand History from the New Zealand Historical Association.

Associate Professor **Ruth Fitzgerald** (Anthropology and Archaeology) was recently awarded the Te Rangi Hīroa Medal by the Royal Society of New Zealand, recognising her work as a medical anthropologist that has placed many health issues such as genetic testing, reproductive decisions and oral health in a New Zealand social and political context.

Professor **Jonathan Waters** (Zoology) is among 12 top New Zealand researchers and scholars recently elected as Fellows of the Royal Society of New Zealand. Waters is an evolutionary biologist working at the interface between previously distinct fields: genetics and geology; marine ecology and oceanography; and ancient DNA and archaeology.

Dr **Roslyn Kemp** (Microbiology and Immunology) was the 2015 winner of the Association for Women in the Sciences Miriam Dell Award for her work inspiring female immunologists across Australasia. The recognition stems from her work with students and for furthering the goals of the Women's Initiative of the Australasian Society for Immunology.



Dr **Christina Riesselman** (Geology and Marine Science) was awarded the inaugural L'Oréal-UNESCO For Women in Science New Zealand

Fellowship. This comes with a \$25,000 grant that Riesselman will use to study marine sediment cores that carry east Antarctica's climate record of the past 11,000 years.

Brain cancer researcher Dr **Tania Slatter** (Pathology) has gained a Sir Charles Hercus fellowship in the Health Research Council's (HRC) latest Career Development Awards. She will use her four-year \$500,000 fellowship to pursue research into improving outcomes for patients with brain tumours.

In recognition of his outstanding and significant contribution to pharmacy in New Zealand over the past 50 years, **John Fraser**, a professional practice fellow in the School of Pharmacy, was made a Fellow of the Royal Pharmaceutical Society of New Zealand.

## Appointments

Mr **Stephen Willis** has been appointed the University's new Chief Operating Officer (COO). The appointment takes effect from 11 April 2016 – the retirement date of long-time COO John Patrick. Manager of the



Capital Project Unit at the University for the past six months, Willis has an extensive 14-year background in management and property development at Mater Health Services, a large not-for-profit private health services company in Queensland, Australia.

The University of Otago has appointed Dr **Stephen Scott** to the new position of Director of First-Year Experience. The aim is to enhance the transition of students from school to the University, to optimise their chance of success in a new learning environment.

Mr **Simon Chu** has been appointed the University's Director, International, responsible for advancing the University's global visibility and reputation and ensuring that Otago is a leading destination for international students.

## Professorial promotions

Seventeen University of Otago academics – across a spectrum of research fields – were promoted to full professor, effective 1 February: **Colin Brown** (Physiology), **Peter Dearden** (Biochemistry), **Claire Freeman** (Geography), **Jonathan Hall** (Classics), **Patricia Langhorne** (Physics), **Derelie Mangin** (General Practice, Christchurch), **Sally McCormick** (Biochemistry), **Tony Merriman** (Biochemistry), **David O'Hare** (Psychology), **Holger Regenbrecht** (Information Science), **Poia Rewi** (Te Tumu: School of Māori, Pacific and Indigenous Studies), **Jacinta Ruru** (Law), **Diana Sarfati** (Public Health, Wellington), **Abigail Smith** (Marine Science), **Darryl Tong** (Oral Diagnostic and Surgical Sciences), **James White** (Geology), and **Nicholas Wilson** (Public Health, Wellington).

## New Year Honours

Alumni and academic staff recognised in the New Year Honours include:

Companion of the New Zealand Order of Merit (CNZM): The Honourable **Alan**

**Donald MacKenzie**, for services to the judiciary; Ms **Virginia Margaret Radford**, QSO, JP, for services to Girl Guides; Ms **Penelope Elsie Simmonds**, for services to education, sport and the community.

Officer of the New Zealand Order of Merit (ONZM): Emeritus Professor **Alan Russell Bishop**, for services to Māori and education; Dr **Joanne Dixon**, for services to clinical genetics; Professor **Charles Franklin Wandesforde Higham**, for services to archaeology; Professor **Helen May**, for services to education; Professor **Kevin Craig Pringle**, for services to paediatric surgery.

Member of the New Zealand Order of Merit (MNZM): Mr **Norman Donald Campbell**, for services to tertiary education; Mr **Colin Neil Smith**, for services to the community; Mr **Darren Walter Wright**, for services to the community.

Companion of the Queen's Service Order (QSO): Judge John **James Dashwood Strettell**, for services to the judiciary.

Queen's Service Medal (QSM): Mrs **Judith Ann Faris**, for services to music and the community; Dr **Cecilia Casware Smith-Hamel**, for services to mental health; Mrs **Janet Grace Tucker**, for services to the community.

## Emeritus Professors

The University Council has recently awarded the following academics the status of Emeritus Professor: Professor **G. Peter Herbison** (Preventive and Social Medicine), Professor **Kevin Pringle** (Obstetrics and Gynaecology) and Professor **David M. Fergusson** (Psychological Medicine).

## Obituary

Emeritus Professor **David Stewart** (82). Initially coming to Dunedin as an associate professor in 1971, he held several senior roles during his years at Otago including Dean of the Otago Medical School, head of the Faculty of Medicine, and Assistant Vice-Chancellor (Health Sciences) from 1991-1998.



## The Prison Diary of A.C. Barrington

*Dissent and conformity in wartime New Zealand*

By John Pratt

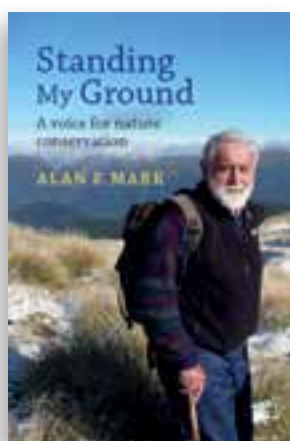
A.C. (Archie) Barrington was a leading New Zealand pacifist during World War II.

Incarcerated in Mount Crawford Prison for his beliefs in 1941, he kept an illicit diary, scrawled in the margins of books. Many years later his son John happened across the diary and painstakingly reconstructed it.

Barrington vividly recorded the squalid, rundown conditions, monotonous and exhausting labour, the intense cold from which

there was little protection, and the strategies he and his fellow pacifists adopted to enable them to cope with prison life.

John Pratt has edited the diary and provides commentary on the issues it raises in relation to prison life. He also addresses a fundamental question – what were Barrington and his like doing in prison when similar expressions of dissent would almost certainly have been ignored in Australia or Britain?



## Standing My Ground

*A voice for nature conservation*

By Alan F. Mark

For more than five decades, Alan Mark has been a voice for conservation in New Zealand. From his call in the 1960s for the establishment of tussock-grassland reserves in the South Island high country to his involvement in the 2011-13 campaign to save the Denniston Plateau from mining, he has been a passionate and effective advocate for the preservation of areas of ecological importance.

His conservation activities have paralleled – and are informed by – a distinguished academic career as a botanist and ecologist. A member of Otago University's Botany Department from 1955 until his retirement as

Professor and Head of Department in 1998, he has run and participated in numerous research projects, taught and mentored thousands of students and published 200 academic papers.

In *Standing My Ground*, Alan Mark describes the challenges and achievements, the frustrations and successes that have made up his remarkable life, now in its ninth decade. As well as providing an important record of New Zealand's conservation battles and documenting the life of an outstanding New Zealander, *Standing My Ground* is an inspiring reminder of the power of individuals to make a difference.

For further information: Otago University Press | [otago.ac.nz/press](http://otago.ac.nz/press) | [university.press@otago.ac.nz](mailto:university.press@otago.ac.nz)

## Books by Otago alumni

**Finding the Forgotten God: Credible Faith for a Secular Age**, by Ron Hay, DayStar Books, Auckland, November 2014.

**Eternity Begins Now**, by Bruce Billington, Naultinus Publishing, 2014.

**Descent into Hell: Civilian Memories of the Battle of Okinawa**, by Ryukyu Shimpō, translated by Alastair McLauchlan and Mark Ealey, University of Hawai'i Press, 2014.

**Remembering Christchurch: Voices from Decades Past**, by Alison Parr, Penguin Random House, 2015.

**The Pacific Festivals of Aotearoa New Zealand: Negotiating Place and Identity in a New Homeland**, by Jared Mackley-Crump, University of Hawai'i Press, May 2015.

**Turning Stone into Jade: The History of The New Zealand Chinese Association**, by David Fung, New Zealand Chinese Association, June 2015.

**More Than Just a Place of Work: A History of Dunedin's Hillside Railway Workshops**, by Ian Dougherty, New Zealand Railway and Locomotive Society, Wellington, December 2015.

**Drugs, Sex & Protein Shakes: the Pursuit of the Perfect Body**, by Joseph Shield, 2016.

### Alumni:

If you have recently published a book email [mag.editor@otago.ac.nz](mailto:mag.editor@otago.ac.nz)



# Pickerills' heritage



Patient images and notes including an illustration by Herbert R. Cole. MS-1620/002. Hocken Collections - Uare Taoka o Hākena.

The Pickerill papers on plastic surgery, held at the Hocken, have been inscribed on the UNESCO Memory of the World New Zealand heritage register.

These papers are highly significant, not only as a record of the development of pioneering plastic surgery techniques, but also as some of the few surviving World War 1 medical records.

Dr Henry Percival Pickerill (1879-1956) was Dean of the University of Otago Dental School before being seconded to the New Zealand Medical Corps during WW1 to treat facial and jaw injuries at No 2 New Zealand General Hospital at Walton-on-Thames and, subsequently, at the Queen's Hospital, Sidcup. An innovator among early plastic surgery pioneers who used bone, skin and fat grafting, and jaw wiring, Pickerill and his team treated nearly 300 men with severe facial wounds inflicted in the trenches.

In 1919 he returned to his work at Otago's Dental School while also providing ongoing treatment to returned soldiers. He later opened the Bassam Hospital in Lower Hutt with his wife Cecily where, together, they specialised

in the repair of cleft palate deformities in infants, pioneering post-operative and nursing practices that greatly reduced the risk of infection. He was awarded an OBE in 1919 and CBE in 1923. She received an OBE in 1958 and was made a Dame of the British Empire in 1977.

The patient records Pickerill brought back to New Zealand after WW1 are now housed at the Hocken. These include photographs, medical notes, x-rays, lantern slides and letters, as well as watercolours by artist Herbert R. Cole recording the progress of these soldier patients. Records of the Pickerills' extraordinary skills in their work at Bassam Hospital are also part of this collection.

Hocken curator of archives and manuscripts Anna Blackman says this is an important medical archive, providing an exceptional insight into, and charting the history of, plastic surgery. It is also the only such archive available for researchers in a public research institution in New Zealand. The papers of New Zealand's other plastic surgery pioneers, Harold Gillies and Archibald McIndoe, are in England.

Writing in support of the Pickerill papers' inscription into the UNESCO Memory of the World New Zealand heritage register, Pickerill biographer Dr Harvey Brown describes the papers as having "worldwide significance".

"The Pickerills were pioneers of plastic surgery in New Zealand... Their records, now held within the Hocken, are a lasting legacy to their enterprise and expertise."

*The Pickerill collection is currently being digitised and will be accessible for public access, with some caveats. This is part of the University's WW1 commemoration project, funded by a New Zealand Lotteries grant.*



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## HOCKEN EXHIBITIONS

**John Ward Knox:**  
a deep and tumbling kind  
of laughter  
Until 30 April 2016

WHATEVER HAPPENED TO ...

# ... the Leith?



Before: concrete walls were built in the 1930s to contain the Leith in flood.



During: the western retaining wall has been demolished to make way for new terracing and steps down to the stream.

**W**inding its way from the hills above Dunedin down to the Otago Harbour, the Water of Leith (or Ōwheo) has always been a defining landmark of the University of Otago campus.

However, it has also had a propensity to flood and, following a major such event in 1929, high concrete walls were built on both sides of the river to contain the occasionally rampaging waters. This construction was completed in 1939, although no record of the design and no formal reports about the decision have been found.

Now the Otago Regional Council's (ORC) Leith Flood Protection Scheme is revisiting this, with dramatic impact to the stretch of the Leith between St David and Union Streets – that which dissects the park-like gardens in front of the Clocktower and which is also, arguably, the University's most iconic view.

The western wall of the channel has been demolished, with the river bed and banks improved to prevent flooding. In line with the objectives of the University's Campus Master Plan, vastly improved public access to the waterway has been





provided with new terracing, steps down to the stream and a riverside footpath.

The St David footbridge has been extended on the western side to allow this path to pass beneath it, and decorative “heritage-style” railings have been installed on the eastern wall of the river that retains the Clocktower lawn.

The new structure received its first major test during a once-in-a-30-year flood on 3 June last year (2015) when flood water levels reached approximately 1.3 metres above the intermediate platform of the new terracing. However the ORC reported that new infrastructure performed well – as expected – with no damage to property and the scheme infrastructure remained intact.

Even the new grass remained unscathed: it has been planted inside a layer of plastic reinforcement which is secured to anchors 1.2 metres below ground, ensuring scouring cannot occur more than 50mm below the grass surface.

The next stage of the project, from the St David Street to Dundas Street bridges, is now underway.


 [otago.ac.nz/otagomagazine](http://otago.ac.nz/otagomagazine)



Photo: Graham Warman

After: the completed project.



Construction photos: Kim Connelly

The St David footbridge was extended to allow a riverside path to pass beneath it.



## Postgraduate Study

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