



# FOOD CHALLENGE

■ PAGE 5

## INSIDE

### GENERATION PASSING

The University has seen the passing in recent weeks of three distinguished figures who have each made important contributions to its community: Dame Dorothy Winstone, architect Ivan Mercep and Dr Merimeri Penfold. Dr Penfold was the first Māori woman to be elected to the University Council and for many years served as the Kuia at Graduation. Read her obituary written by colleague and friend Distinguished Professor of Māori Studies, Dame Anne Salmond.

■ PAGE 6

### STORING THERMAL ENERGY

The University is involved in an international environmental project funded by the European Commission looking at innovative ways of storing Thermal Energy. Professor Mohammed Farid from Chemical and Materials Engineering is leading the New Zealand arm with his expertise in developing encapsulating Phase Change Materials (PCM), particularly for use in timber buildings.

■ PAGE 9

### PHILOSOPHY FOR CHILDREN

Inquiring philosophically is not about just swapping opinions, but exploring, and building on, and carefully examining each other's ideas, in the search for the best answer each person can come to. This combination of open-ended inquiry, and developing the skills to do it well, is exciting and empowering for children much as adults argues philosopher Dr Vanya Kovach.

■ PAGE 12

### ANNUAL REPORT

The University's 2013 Annual Report has been published as an e-book for the first time. This year's report includes a special essay on the value to New Zealand of internationally ranked universities. It makes the point that investment per student is a key factor in determining rankings and that if New Zealand doesn't want its universities' rankings to continue to fall, then public funding must be addressed. You can view or download a copy from 1 May at : [www.auckland.ac.nz/en/about-university/official-publications/other-publications.html](http://www.auckland.ac.nz/en/about-university/official-publications/other-publications.html)



### CARTOONS, COMICS, CARICATURES

The School of Music is hosting an one-day symposium on Saturday 3 May, called "Cartoons, Comics, and Caricatures: Evidence or Ephemera?" The symposium features speakers from a range of disciplines, including well-known Australian cartoonist and historian Alan Moir. Attendance is free, but spaces are limited so online registration is required via [tinyurl.com/CartoonsRegistration](http://tinyurl.com/CartoonsRegistration). More information is available at [facebook.com/events/686942711358144](https://www.facebook.com/events/686942711358144), and specific queries should be directed to the conference convenor, Dr Nancy November [n.november@auckland.ac.nz](mailto:n.november@auckland.ac.nz)



### POET'S HEARTLAND

Professor of English Michele Leggott has just published her eighth book of poetry *Heartland*. It follows on from her 2009 collection, *Mirabile Dictu*, in its exploration of light and of gathering dark. With her "dear shapes gone to sound", Michele's textured poem-scapes are more aurally charged than ever, like a "piano in a dark room that is / quite what it is like and never the same". In 2007 Michele was appointed inaugural New Zealand poet laureate. Last year she won the Prime Minister's Award for Literary Achievement in Poetry.



### ROBB LECTURES

This year's Robb lecturers are UK social epidemiologists Professor Richard Wilkinson and Professor Kate Pickett, authors of *The Spirit Level: Why Equality is Good for Everyone*. The book argues that "In rich countries, a smaller gap between rich and poor means a happier, healthier, and more successful population." In contrast, there is no correlation between average income and social problems for these countries. **Robb Lectures 19, 21 and 23 May**. Further details here: [www.equalitytrust.org.uk](http://www.equalitytrust.org.uk)



- WHAT'S NEW ..... 3
- IN BRIEF ..... 4
- COVER STORY ..... 5  
The University is at the forefront of the Government's High Value Nutrition Science Challenge
- DID YOU KNOW ..... 7
- WHAT'S ON CAMPUS ..... 7  
The Graduation Gala Concert promises to be as exciting as ever this year with a pianist, flautist and violinist vying for the top prize and a choir performance of "Oh Fortuna".
- RESEARCH ..... 8
- WHAT AM I DISCOVERING? ..... 9  
Dr Verne Lee is exploring novel means of mitigating methane emissions from livestock in hope of contributing to reduction in New Zealand's total greenhouse gas emissions.
- IN THE SPOTLIGHT ..... 9
- FROM THE COLLECTION ..... 10
- WHAT'S COMING OUT ..... 11
- MARAMATANGA ..... 12

COVER PHOTO: Professor David Cameron-Smith, Chair in Nutrition at the University of Auckland (left) and Hon. Steven Joyce, Minister of Science and Innovation, launch the Government's High-Value Nutrition Challenge.

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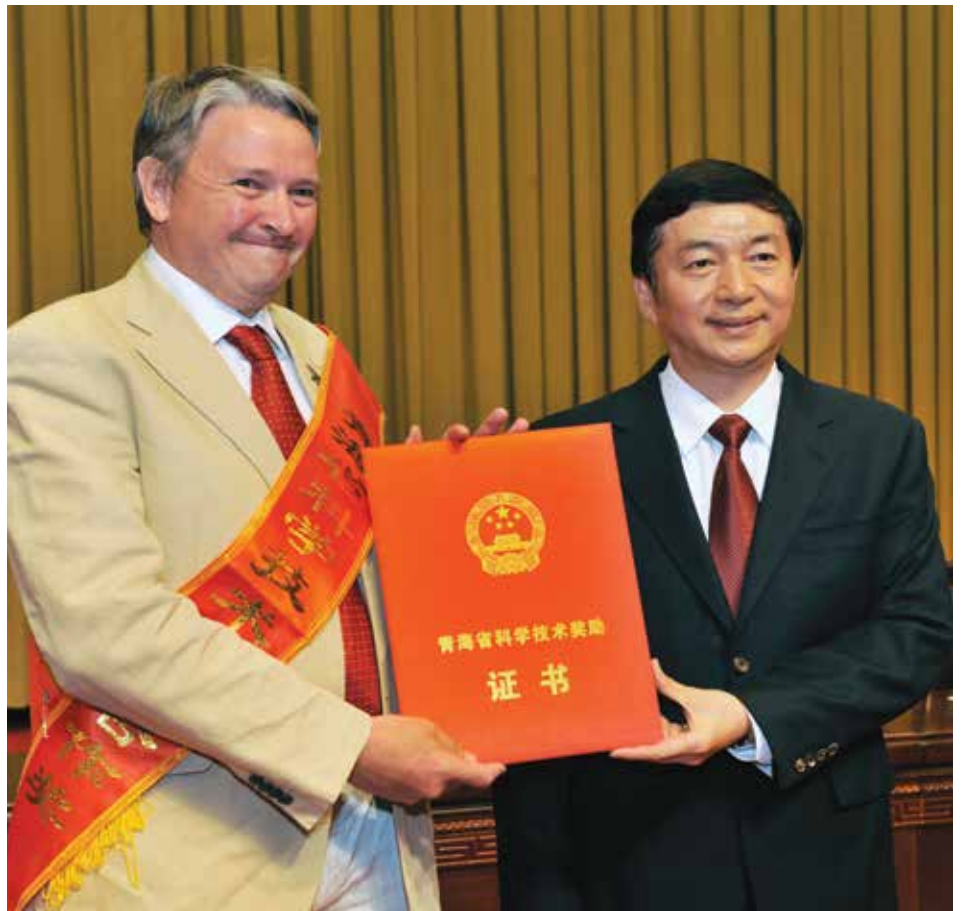
## AWARD FOR “THREE BROTHERS” WORK

Professor of Geography Gary Brierley has won an International Collaboration Award offered to foreign nationals whose work has contributed greatly to the advancement of the Chinese province of Qinghai's science and technology. Gary received the award from the party secretary Luo Huining (pictured far right) at the 2013 Qinghai Science and Technology Awards.

“I'm delighted and honoured to receive the award,” says Gary. It builds on one he received from Qinghai University (2013-2015) as a “High End Foreign Expert”, as well as visiting professorships awarded at Tsinghua University, Chinese Academy of Sciences and Qinghai University - all as part of the Three Brothers project in the Sanjiangyuan area (source of Yangtze, Yellow and Lancang Rivers).

“Four PhD students from the University are writing up their theses as products from this collaboration,” says Gary. “They are all on environmental science and one student finished a PhD on grassland science last year. Our latest work will form part of an edited book entitled *Landscapes and Ecosystems of the Upper Yellow River*.”

Gary's team also received two international grants from the Chinese Ministry of Sciences and Technology, and two grants from New Zealand Education.



## THE PASSING OF THREE UNIVERSITY ELDERS

Three people who have contributed so much to the University over the years have died in the last few weeks.

**Merimeri Penfold** died on 1 April. See Dame Anne Salmond's obituary on page 6

**Dame Dorothy Winstone** died on 3 April.

Dame Dorothy was closely associated with the University from her student days in the late 1930s. (She gained a BA in 1940 from the Auckland University College, a DipEd in 1943, an Honorary



Doctor of Laws in 1983 and a BTHEOL 1997.) She served on the University Council for 22 years, twice as Pro-Chancellor, was a member Emerita of the New Zealand Federation of University Women (NZFUW); a Distinguished Member of the Auckland Branch of NZFUW; a life member of Auckland University Students' Association; a Life Member of Auckland Girls' Grammar School Old Girls' Association; and a life Member of the National Council of Women of New Zealand. She was knighted as a Dame Commander of the Order of the British Empire in 1990. An obituary on Dame Dorothy will appear in the next *University News*.

**Ivan Mercep** died on 8 April. A well-known architect, he designed the University's Recreation Centre in 1977, the Arts Commerce building in 1984, the Waipapa marae and associated buildings in 1988, and the Fale Pasifika in 2004.

Ivan graduated in architecture from the University of Auckland in 1954 and was then a founding partner of Jasmad, which later became



Jasmax. This firm conserved and designed other campus buildings, and became one of the largest practices in New Zealand. Ivan continued working until his death on 8 April 2014, aged 83. The legacy of his buildings has made generations of students feel that they belong, and are at home. They will live on as his memorial. A family of buildings for a family of scholars.

## WRITERS ABOUND



The University of Auckland is now in its fourth year as a Gold Sponsor of the Auckland Writers Festival, which runs this year from Wednesday May 14 to Sunday May 18 (see programme <http://writersfestival.co.nz/2014-festival/index.html>). Writers included cover areas as diverse as Architecture, Art History, Biology, Economics, English, Film Studies, Fine Art, French, German, History, Islamic Studies, Korean, Maori Studies, Medicine, Music, Physics, Politics, Psychology, Sociology, and Theology, not to mention topics like food, travel and adventure.

For the first time the University is sponsoring a session, The University of Auckland Debate, on Wednesday March 14, on "Privacy is an Outdated Concept," featuring Law alumnus and former privacy commissioner Bob Stevens and international writers.

Among those taking part in the Festival who are or have been UoA alumni, teachers, and/or writing fellows, are: Felicity Barnes, Eleanor Catton, Michael Corballis, Lynley Dodd, Paula Green, Shaun Hendy, Stephanie Johnson, Anne Kennedy, Shonagh Koea, Roseanne Liang, Bill McKay, Paula Morris, Vincent O'Sullivan (see him featured in the Autumn *Ingenio*), Sharad Paul, Iain Sharp, Ngahua Te Awakotuku, Selina Tusitala Marsh, Greer Twiss, Peter Wells, and Raina Whaitiri and Siouxsie Wiles.

Apart from New Zealanders as distinguished as Eleanor Catton, Patricia Grace and Keri Hulme, there are of course people from much further afield: Reza Aslan (Iran), Jan Blake (Jamaica), Frank Dikotter (Netherlands) Yasmine El Rashdi (Egypt), Inua Ellams (Nigeria), Cornelia Funke (Germany), Lawrence Hill (Canada), Jang Jin-Sung (Korea), Eimear McBride (Ireland), Jacques Roubaud (France) and many from Australia, the UK and the US.

Vincent O'Sullivan features in *Ingenio* magazine out on campus from 5 May



## IMPROVED DATA ACCESS

Statistics New Zealand has reduced fees for academic researchers using its Integrated Data Infrastructure (IDI) platform. The IDI gives approved researchers access to anonymised data as part of the Government's drive to improve evidence-based policy making and promote the reuse of publicly held data. Improving access to data from across the public sector will lead to new insights and lift the quality of independent advice Government receives. New Zealand is one of the first countries in the world to make such data available on an integrated platform.

## INNOVATIVE BREAST CANCER RESEARCH

Two innovative breast cancer research projects at the University have gained funding from the Health Research Council. A two-year, \$200,000 project led by Dr Dong Xu Liu is investigating the fact that patients with oestrogen receptor positive breast cancer can fail to respond to anti-oestrogen treatments. Dr Liu and his research team have identified a novel protein called SHON, which plays an important role in breast cancer. Dr Jo Perry will lead a two year research project that gained \$194,000 funding. Her team seeks to discover and develop small molecule inhibitors of the growth hormone (GH) receptor and explore their use to treat breast cancer.

## RESEARCHER DEVELOPMENT



In collaboration with the Research Office and CLear, People and Organisational Development (POD) are offering a series of workshops designed for researcher development.

These academic-targeted sessions aim to offer relevant, evidence-based learning objectives which are practically applicable in the University research environment. The topic choice has been informed by canvassing academics from across the University.

"The 2012 Review of Researcher Development

helped clarify some key development needs for academic researchers, and I am delighted that POD is now presenting a new suite of workshops specifically targeted to address these," says Professor Jane Harding, Deputy Vice-Chancellor (Research). "So, for example, as well as being able to go to a general session on time management, academic staff now have the option of attending workshops that deal directly with planning and juggling research, teaching and service in a university environment."

Workshops scheduled from May-October

- Coaching conversations: essentials for academics
- Developing researcher potential: using a coaching approach
- Understanding different personalities in an academic setting
- Developing successful academic mentoring practice
- Achieving your career aspirations and balancing your life
- Polishing your research presentation style.

## SOOTY SHEARWATERS TESTED

Scientists from the University are undertaking research to test whether New Zealand muttonbirds that spend the winter off the coast of Japan may have been exposed to radiation from the damaged Fukushima nuclear power plant. The new research is being funded by the Lottery Health Research fund with \$26,028 for a pilot study to investigate whether radioactive cesium has entered the New Zealand ecosystem or food chain via the birds. Researchers will test the birds' feathers for gamma rays that indicate the presence of the radioactive isotope cesium-134. Feathers will be collected from prime muttonbird sites in the South Island, particularly Stewart Island. New Zealand sooty shearwaters or titi (*Puffinus griseus*) migrate annually, spending the summer mating and raising their chicks in New Zealand before over-wintering off the coast of Japan. "There is no evidence to indicate that the birds have been vectors of radioactivity so this research is very much about taking a precautionary approach," says Dr David Krofcheck from the Department of Physics.

## FOOD CHALLENGE



The University will play a key role in helping New Zealand companies take advantage of global demand for foods with health benefits.

At a special event at the Faculty of Medical and Health Sciences on 1 April, the Government's first national Science Challenge: High-Value Nutrition was launched by Science and Innovation Minister Steven Joyce.

The University of Auckland, Massey University and University of Otago, along with Crown Research Institutes AgResearch and Plant & Food Research, are teaming up for the Challenge.

"The Government has clearly signalled the science challenges must involve cutting-edge clinical, food and consumer science research that takes us in a new direction and we will be focused on exactly that," says Professor David Cameron-Smith, Chair in Nutrition at the University of Auckland and head of the Science Leadership Team for the Challenge.

"Food is central to our economy and we are delighted to have been given the opportunity to both enhance health and contribute significantly to this country's export success

"This will enable very significant research that spans clinical insight, biomarker discovery and validation, through to studies that focus on improved manufacturing technologies to generate foods that can positively impact on human health."

The ten-year challenge will have initial funding of \$30.6 million with a review at the end of five years and another \$53.2 million available for a second five-year period. Total funding for the High-Value Nutrition Challenge is up to \$180.8 million over ten years when co-funding is included.

Dr John Smart, University of Auckland Director of Research Partnerships, says: "The National Science Challenges require us to rethink the way research organisations and researchers work together to achieve national goals. We think we have developed a collaborative model in High-value Nutrition that will be an exemplar for others to follow."

The goals of the High-Value Nutrition Challenge are to:

- Establish a centre of research that is an authoritative voice on food-for-health claims, both nationally and internationally;
- Carry out clinically-based, biomedical research to provide new opportunities for the development of new foods that meet current and future consumer-driven health needs;
- Assist New Zealand companies in developing foods and beverages that improve health
- Provide the scientific evidence to validate health claims for high-value food products so that New Zealand companies can establish new international markets (while also providing guidelines for the New Zealand public);
- Undertake research informed by Mātauranga Māori and identify opportunities for Māori food producers;
- Help preserve the safety of the food supply chain and enable the production of consumer-valued foods for health.

Government Chief Science Advisor Sir Peter Gluckman says it is exciting to see the first of the ten National Science Challenges launched.

"The High-Value Nutrition Challenge will stretch the New Zealand research community but the potential for validated nutritional claims of foods to improve public health and to add value to New Zealand's exports is enormous."

Bob Major will chair the Board for High-Value Nutrition and will bring his considerable experience in food manufacturing and exporting to ensure the research is market-oriented and makes sense to food exporting businesses.

"Being able to scientifically demonstrate tangible health benefits for consumers and have that approved by government food regulators is one of the few ways to add value to New Zealand's primary products and will provide a competitive advantage to our food marketers so they can leverage into greater market share and margins," Mr Major says.

AgResearch Research Director Professor Warren McNabb says he is looking forward to the opportunity of taking up the Government's High-Value Nutrition Challenge.

"It's great to be part of a partnership focused on bringing together our best scientists in a collaborative approach to create economic benefit for New Zealand through science-led innovation."

### BACKGROUND

The aim of the Challenge is to increase the value of New Zealand raw materials and food exports through validating health claims for food and beverage products, leading to increased premiums for New Zealand products in global markets. Examples include a food product or ingredient that is scientifically proven to reduce the risk of heart disease or reduce a loss in cognition associated with early-onset Alzheimer's. This would be similar to current products such as ANLENE milk products that are helpful in reducing bone mineral loss (and thus osteoporosis) and Flora Pro-activ spreads which contain plant sterols, an active ingredient clinically proven to significantly lower cholesterol absorption.



The Hon. Steven Joyce, Minister for Science and Innovation launched the challenge.

## DR MERIMERI PENFOLD CNZM 26 MAY 1920 – 1 APRIL 2014



Effervescent and elegant, adventurous and inquiring, Dr Merimeri Penfold was a remarkable woman. She was an inspiring Māori leader, and an outstanding New Zealander. Of Ngati Kuri descent, she dedicated her life to the Māori language and her people.

Born and raised in Te Hapua, at the northern tip of the North Island, Merimeri was one of an extraordinary group of Māori leaders from that small settlement, including Dame Mira Szazy, Matiu Rata and Selwyn Muri.

Educated at Queen Victoria School, Auckland Girls' Grammar and the Primary Teachers' College in Auckland, she was a writer, composer, leader and educationalist acclaimed for her work in celebrating and preserving te reo Māori.

When she joined the staff of the University of Auckland as a tutor in Māori language in 1964, after a successful career in primary teaching, Merimeri became the first Māori woman academic in New Zealand.

A brilliant teacher, she taught students who included Sir Keith Sinclair, the Rt. Hon. Douglas Graham and many other leading New

Zealanders, to understand and appreciate te reo Māori.

During 24 years of service at the University of Auckland, Dr Penfold rose to become the acting Head of Department of Māori Studies, and the first Māori woman to be elected to the University Council.

She was a founding member of the Academic Women's Group, and a prime mover in the establishment of the University Marae.

Merimeri Penfold served for many years as the kuia for the University of Auckland, presiding over many graduation ceremonies and other official functions. In 1999 she was given an honorary doctorate by the University, a rare distinction.

In 2004 she and Sir Hugh Kawharu formally escorted Dr John Hood, former Vice-Chancellor of the University of Auckland, to his new role as the Vice-Chancellor of Oxford University.

Dr Penfold's creative approach to teaching te reo and her expertise in the Māori language was recognised by her appointment to a number of public bodies and committees, including the committee that produced the 7th edition of the Williams dictionary of Māori, the National

Advisory Committee for Māori Education, the Broadcasting Commission and the Māori unit of the NZ Council for Educational Research.

She wrote a novel in Māori, and translated many children's books into Māori, along with entries in the *Dictionary of New Zealand Biography*, and a number of Shakespeare's sonnets in a prestigious international publication.

Merimeri pioneered the teaching of Māori arts, including weaving, at University level. She was a distinguished poet, and a composer of haka and waiata, many of which have featured in anthologies of New Zealand poetry.

Her contributions to the arts in New Zealand were recognised by her appointment and long service on Te Toi Māori, the board of the Māori Arts Council.

Dr Merimeri Penfold was a tireless advocate for Māori people. She was the Dominion Vice-President of the Māori Women's Welfare League from 1970-78, and the first woman to chair the management committee of a Land Incorporation, Te Hapua 42, from 1976-80.

She ran sessions on tikanga Māori for the New Zealand Police, and a successful drop-in centre for young people in Pakuranga. She also served as a Human Rights Commissioner, advising the Commission wisely on many Māori matters.

She was on call for innumerable community groups and organisations, offering advice and inspiring many New Zealanders with her measured, positive counsel on race relations.

In 2001 she was made a Companion of the New Zealand Order of Merit for services to Māori. The subject of a documentary film, she was greatly admired across New Zealand.

Merimeri Penfold was a member of the Ngati Kuri Trust Board, and closely involved in Treaty issues, including the Muriwhenua Fishing and Land claims and the latest Treaty negotiations in Northland. She was present at the signing of the Ngati Kuri settlement with the Crown just two weeks before her death, an event she had done much to bring to fruition.

Merimeri was tireless, generous, gifted and engaging, a firm and faithful friend. She loved debate, song and laughter. She will be greatly missed by her Ngati Kuri people, her colleagues, her family and her many friends.

Nā reira, e te hoa aroha, e te wahine tohunga, e te manu tioriori – haere atu rā! E rere, e rere ake ki runga, e rere ake ki nga rangi tuhāhā.

■ Dame Anne Salmond  
Distinguished Professor of Māori Studies

# DID YOU KNOW

... that a famous natural spring located inside the brick wall of the Law School car park once filled water barrels on naval and merchants, ships tied up at Wynyard Pier. Apparently a flue from the Eden Crescent spring was connected with the Pier, which in 1852 was sited where Anzac Avenue meets Customs Street today.

The spring Wai Ariki, loosely translated as “water of the lord” or “chiefly water”, has achieved fame in recent years as a feature on Marcus Lush’s New Zealand travel programme *North* and then as part of the “Local Time” art contribution to the Auckland Triennial last year.

Although well hidden inside the Law School wall, Wai Ariki is an enduring remnant of early New Zealand history. In *Aerated water manufacturers of Eden Crescent 1845-1964* (available University General Library), Keith G. Rusden tells the story of how, as well as being pumped down to boats in early Auckland, the spring became the site of a manufactory of aerated drinks in the 1840s. This was established by Alexander Wilkie who made ginger ale and soda in torpedo-shaped glass bottles and in clay vessels.

In 1871 Charles Sutton took over the business, advertising himself as “Mineral Water Manufacturer, Eden Crescent, Auckland”. His clients included the Governor of the day, Sir George Ferguson Bowen, in residence at Government House up the hill on Waterloo Quadrant.

When a certain Walter Graham dug a well at the foot of the cliff beneath the Eden Crescent spring “the area surrounding the well was built up of weathered scoria stone and with its stone paved yard it had an air of old world serenity”, writes Rusden.



Custom Street 1863

By the turn of the century the Eden Crescent-based manufactory had changed hands again to John Grey, a confectionary manufacturer who modernised equipment and was soon producing 4,000,000 bottles per annum of aerated water. It was often said that no small part of this factory’s success was due to the inexhaustible supply of pure, sparkling water from the spring “Wai Ariki”. Soda water was one of the products manufactured from this source and available

both bottled and in syphons.

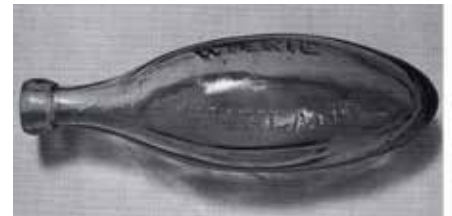
The Eden Crescent manufactory continued to grow and in 1902 John Grey and Sons merged with a Robert Menzies producing a wide range of products



John Grey

such as “Gold Top Dry Ginger Ale”. In 1916 the company purchased a spring at Paeroa and the water was carried aboard the excursion ship *S.S. Taniwha* to Eden Crescent where it was aerated and bottled under the Paeroa Water label. This was the forerunner of the now famous “Lemon and Paeroa” brand.

In 1964, the Eden Crescent factory closed but Wai Ariki remains today. Stroll into the Law School car park and five feet up the back brick wall, you can see and hear the gurgling of some of the coolest, clearest and freshest water in town.



Alexander Wilkie's Torpedo (1845-71)

■ Tess Redgrave

## WHAT'S ON CAMPUS

### GRADUATION GALA CONCERT

6 MAY 2014, 7:30 -10:45PM

Auckland Town Hall

This popular annual event which marks the culmination of the University’s Autumn Graduation Week features competition finalists: pianist Kento Isomura, violinist Hilary Hayes and flautist Hye-Won Suh. The concert will open with the famous chorus “Oh Fortuna” from *Carmina Burana*; sung by students from the School of Music and the University of Auckland Chamber Choir conducted by Karen Grylls. Each finalist will then perform a concerto accompanied by the University of Auckland Symphony Orchestra, conducted by Professor Uwe Grodd.

### COMMUNIQUÉ - ACHIEVING 20 PERCENT BY 2020

15 MAY 2014, 12 -1PM

Design Lecture Theatre, Conference Centre, 22 Symonds Street,

Reform of social and affordable housing space is in full swing in New Zealand. The Government has set the goal for 20 percent of the country’s social and affordable housing to be delivered by community housing organisations by 2020. This is a great goal but how are we going to get there? What are the policy levers we need to pull? Where will the finance come from? Scott Figenshow, Director of Community Housing Aotearoa will answer these and other questions.

### THE BUZZ ON TINNITUS

19TH MAY, 2014 7PM

AMRF Auditorium, Ground Floor  
Faculty of Medical and Health Sciences,  
Grafton Campus

What you think you hear and what the brain has to say. Tinnitus is a mystery to medical science; although commonly thought of as ringing in the ears, it is in fact the result of changes in, and processing, by the brain. This talk by Dr Grant Searchfield, Head of Audiology, will examine past and current models of how we hear tinnitus and how we might change what the brain hears.

### A COFFEE-RICH RESEARCH



Researchers and scientists pulling all-nighters and relying on caffeine boosts may have PhD researcher Charlotte Connell to thank for putting sound science behind the theory.

She's entering her second year of PhD study in the exercise metabolism laboratory, supervised by Dr Nick Gant. She is looking at how fatigue can influence the way the brain receives, processes and responds to visual information.

"The objective," she says, "is to provide insights into methods which help overcome fatigue and may help those suffering from disorders characterised by fatigue, such as chronic fatigue and mild brain injury."

Her poster, "Coffee: more than meets the

eye", won first prize at both the University-wide "Exposure" Postgraduate Research Exposition, and the Faculty of Science poster competition.

Although she describes designing the poster as "a nice extra-curricular activity", its roots reside in a conference she attended last year, the largest vision science conference in the world. There she presented the results of her BSc (Hons) research, which examined the effect of fatigue on the control of eye movements.

Her caffeine-rich research is evaluating the powerful effects of caffeine on both visual and cognitive capabilities and the dosages required to achieve this.

### STORING THERMAL ENERGY

How can we maximise the energy efficiency of our homes and work places and significantly lower CO2 emissions?

This is the broad challenge of an international environmental project funded by the European Commission called INNOSTORAGE - Use of Innovative Thermal Energy Storage for marked energy savings - to which the University of Auckland's Chemical and Materials Engineering Department, and in particular the work of Professor Dr Mohammed Farid, is a key contributor.

Led by Universitat de Lleida (Spain) and with main researcher Professor Dr Luisa F. Cabeza, known internationally for her research in Thermal Energy Storage and in renewable energies, the project includes collaborations and staff and PhD student exchanges between the partners: University of Auckland, Auburn University in USA and University of South Australia with beneficiaries Universitat de Lleida, Universitat de Barcelona (Spain), Université Lyon 1 Claude Bernard (France) and Ben-Gurion University of the Negev (Israel).

The focus of the research is Efficient Thermal Energy Storage (TES) using Phase Change Materials (PCM). Over four years, researchers will test different energy storage systems based on materials such as paraffin, salts and fatty acids, which store temperature (heat or cold) during their change from a solid state to a liquid state. Their use in efficient thermal storage systems is very interesting since they can accumulate very large amounts of available energy at a narrow temperature range, says Dr Cabeza. Implementing such systems can amount to significant energy saving and CO2 emission cuts.

As part of the first stage of the project, which

is expected to run for four years, Dr Albert Castell Casol, a researcher and associate professor from Universitat de Lleida and Cristina Dominguez, project manager for INNOSTORAGE, visited the University of Auckland during the first semester. Cristina has been fostering links and gaining experience in managing the project from another country while Albert, who is here until 2 May, has been working on concepts developed in both Auckland and Spain for capturing and storing solar energy inside buildings themselves.

"In Spain we have a system for heavy concrete buildings so I am now trying to develop it here for timber buildings using phase change materials," he says.

In 2010 Mohammed spent one of his sabbatical years in Universitat de Lleida, funded by a Marie Curie Project from the European

Commission. He has expertise in developing and encapsulating PCM, particularly for use in timber buildings and has developed an innovative micro-capsule that can be inserted inside polymers or gypsum to absorb and release heat, minimising indoor temperature variation and reducing energy needed for heating and air-conditioning.

The benefits of INNOSTORAGE will be to exchange information and knowledge between world leaders in energy storage, aiming to innovate in energy savings and environmental improvements, says Cristina.

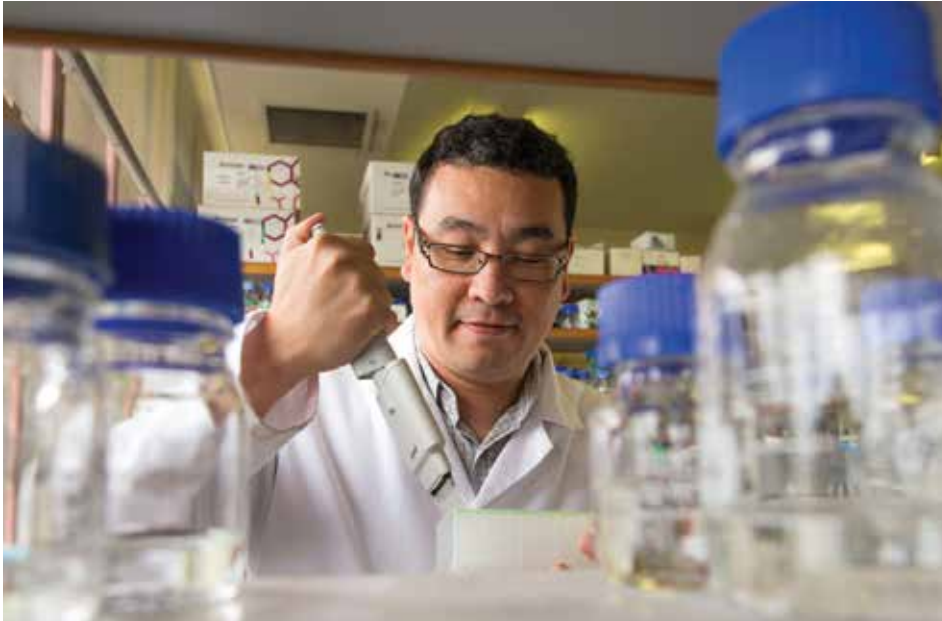
In May a Eurotherm Seminar 99 conference will be held in Lleida. For more information visit the website <http://www.eurotherm-seminar99.eu/> In June a Training School also related to the project will take place in Universitat de Barcelona: [www.innostorage.eu/joint.php](http://www.innostorage.eu/joint.php)



Albert, Mohammed and Cristina with innovative Phase Change Materials (PCM) developed at Auckland.



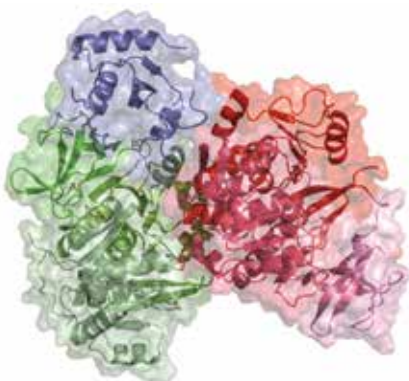
## REDUCING GAS FROM LIVESTOCK



Our research project on methane mitigation using methanogen secondary metabolites (recently funded through an MBIE Smart Ideas grant) will explore novel means of mitigating methane emissions from livestock. These methane emissions constitute about a third of New Zealand's total greenhouse gas emissions.

For this project, I am working with Associate Professor Shaun Lott (Biological Sciences), Dr Eric Altermann (AgResearch) and new PhD student Anders Jørgensen (arriving soon from Denmark).

Microbes known as methanogens are the organisms responsible for producing methane in the rumens of livestock. Like other microbes, methanogens are known to produce a number of bioactive molecules known as secondary metabolites. In other microbes, secondary metabolites have been shown to play important biological roles in signalling, nutrient acquisition and defence. However, almost nothing is currently known about the secondary metabolites produced by methanogens.



The structure of a similar megasynthase protein from previous research by team members.

Many complex and important secondary metabolites are produced in cells by a class of enzymes known as "megasynthases". Megasynthases are large proteins that assemble secondary metabolites in a manner remarkably similar to an assembly line. A set of megasynthase genes was recently identified in methanogens living in the rumens of livestock. As rumen methanogens have an extremely energy-limited lifestyle, we expect that the energetic cost of producing these large megasynthases means that the secondary metabolites that they produce play a crucial role in methanogen biology.

Our overall aim is to use purified methanogen megasynthase proteins to assemble their secondary metabolite products *in vitro*. This will allow us to characterise the secondary metabolites and determine their function. To produce the secondary metabolites we will first need to identify the chemical building blocks that are used by the megasynthases to assemble them. We will do this by determining the protein structures of key parts of the megasynthase proteins at high resolution and examining the binding pockets that the proteins use to select these chemical building blocks.

Characterising the methanogen secondary metabolites that are produced will give us an understanding of their role in methanogen biology. This will lead to novel targets for inhibiting methanogen growth in the rumens of livestock and thus reducing methane emissions from New Zealand's livestock.

■ Dr Verne Lee  
School of Biological Sciences

Thought leadership is an important part of the University of Auckland's role – we have academics, researchers and students able to speak on a vast array of topics.

Media requests for comment from our erudite experts are managed every day and are received on a variety of subjects ranging from University rankings, student enrolment figures and outstanding scholarly achievements, to requests for experts on weird addictions, fruitflies, copyright law and crowd reaction to tragedy. Recently the eruption of the Warriors debate prompted one of our senior lecturers in marketing (and a Warriors fan) to combine her field of expertise with her love for the game. Her opinion piece about how the club could rebuild its image was published in the *NZ Herald* on 15 April.

### OTHER RECENT SUCCESSES

Research on New Caledonian crows went viral after publication of a paper by PhD candidate Sarah Jelbert, Dr Alex Taylor and Professor Russell Gray from the School of Psychology. The finding that crows have an intelligence level rivalling that of five to seven year old humans featured on BBC and ABC radio, *The Guardian* UK, the *Times* of London and *The Washington Post* to name a few.

Dr Marek Tesar of the School of Learning, Development and Professional Practice, featured in the *NZ Herald* on 31 March for his thesis on "Governing Childhoods Through Stories: A Havelian analysis of childhood subjectivities".

Senior lecturer John McCaffery of the School of Curriculum and Pedagogy has had his work with the Richmond Road School's L'Archipel unit receive extensive coverage in the *Auckland City* and *Harbour News* and *North Shore Times*.

Senior lecturer Geoff Kemp (Politics and International Relations) took a look at the last 160 years of news reporting and the relative weight given to political news and the coverage of the weather in an opinion piece in the *NZ Herald* on 20 March.

Dr Avril Bell of Sociology has had two opinion pieces published, one in the *NZ Herald* on 21 March on Race Relations Day and another piece co-written with Sociology colleague Dr Louise Humpage on the cutting of funding to Māori Research Unit Ngā Pae o Māramatanga. *Dominion Post* 8 April.

# FROM THE COLLECTION

## ART COLLECTION



This art work hovers between abstraction and figuration and is called *Fāgogo* - the Samoan word used to describe the kind of storytelling where the narrator enthralled the audience with acting and vocal variation. Jagged motifs dance across the hardboard to operate like stage flats revealing the action of a play. Canvas and tapa have been shaped into energetic patterns, glued around a ghost-like face which appears to be floating to the surface of the work like a repressed memory.

*Fāgogo* are spooky tales of the supernatural, presented in a theatrical way, designed to terrify the listeners. Swirling into the subconscious through the agency of the human voice, words and ideas which make up these stories provoke images in the (often juvenile) listener's mind. This is evoked in the way the currents of blue

and green lines swarm around the torchlit green face, enlivening the surface. Printed in angular letters on the diagonal below the head is the word *FAGOGO*, each letter bigger than the one before like a voice urgently calling the name of a character in a cartoon strip.

The artist has fashioned the head at the centre after the Tahitian adolescent girl *Teha'amana*, or *Tehura* as Paul Gauguin renamed her in his book *Noa Noa*. She is immortalised in Gauguin's *The Ancestors of Tehamana* or *Tehamana Has Many Parents* (*Merahi metua no Tehamana*), a predominantly green-toned portrait in oils of a young girl in Victorian dress inscribed with its title in capital letters. Painted in 1893, it is now venerated as one of the artist's masterpieces in the collection of the Art Institute of Chicago. Alluding to Gauguin, and combining tapa cloth

with oilstick, acrylic and oil paint on hardboard in this work, Loane was inaugurating an artistic practice which has been intent on exploring the *vā* or space between cultures. He writes: "I used tapa cloth, but in a way that makes it look different, but still retains the qualities. My art works are abstract, they don't look Polynesian as far as traditional forms go, but they do as an evolution of that genre. The gist of it, its spirit, is still there, even though the form has changed."

Made from the bast or inner part of the bark of the *u'a* or paper mulberry tree (*Broussonetia papyrifera*), tapa is known as *siapo* in Samoa. Women usually harvest the bast in long strips, soaking it so that they can scrape it clean and smooth with a shell before beating it with an *l'e* (heavy wooden club) on a *tutua* (anvil) to spread the fibres and increase the width of the strips. Loane has preserved both the natural texture and colour of the tapa, shaping the pieces to look like the markings on carving but also to be reminiscent of flora and fauna found in a South Pacific Island. By contrasting the material reality of the skilled work that women do in preparing bark to make *siapo* with the Gauguin's fantasy of his Polynesian child-bride, Loane conjures the French artist as a foreign devil, and his relationship with the Pacific Islands as exploitative. Collaging real and fictive elements together like a cubist pasting a newspaper masthead into a tabletop still-life, Loane is mindful of the gap between what is imagined from tales that are told, and real or lived experience.

■ Linda Tyler

John Herbert Loane, born 1962, *Fāgogo*, 1986, Oil, oilstick, acrylic, tapa and canvas on hardboard, 795 x 1190mm.

## CLASSIFIEDS

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## BEYOND THE STATE: NEW ZEALAND STATE HOUSES FROM MODEST TO MODERN

This beautifully designed book, published by Penguin, presents a well researched and comprehensive history of NZ's state houses from their beginning through to their heyday in the 1930s and '40s. Divided into two parts, the first is by Bill McKay, Associate Head, School of Architecture and Planning.

In 1905 Prime Minister Richard Seddon passed the Workers Dwellings Act making NZ the first government in the Western world to build public housing for its citizens. Accompanied by beautiful historic photos, designs, and plans, a 1906 image of the Liberal Government's first housing development on the Petone foreshore is revealing, with all the houses apparently still in existence today.

The second half of the book 'The State House Today' by Andrea Stevens focuses on 14 former state houses, now in private ownership, and the ways they have been adapted for modern living. Accompanied by enticing photographs by Simon Devitt, Stevens introduces us to the owners and outlines the unique way each house has been transformed to suit their needs.



## VOICE OF THE SOUL

Associate Professor Dr Karen Grylls ONZM as the Artistic Director of Voices NZ Chamber Choir and Musical Director conducts this newly released CD. It is a metaphor for a journey of traditions, storytelling and passionate music of the senses. For the listener, this CD experience is rather like walking around a gallery, where the exhibits are musical rather than visual. The voices of the instruments seduce us into the world of each new piece and fill us with expectation.

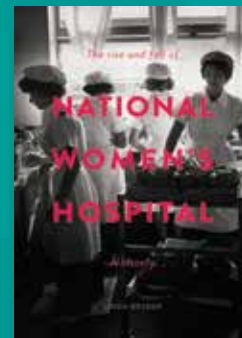
Viridissima Virga, **Hildegard von Bingham**; Salve Regina, **David Childs**; Pounamu, **Helen Fisher**; Five Flower Songs Op.47, **Benjamin Britten**; To the Horizon, **Christopher Marshall**; Six Fire Madrigals, **Morton Lauridsen**; Karakia of the Stars, **David Hamilton (world premiere) with traditional Maori Taonga Pūoro compositions by Horomona Horo**; 16 singers from Voices NZ Chamber Choir.



## THE RISE AND FALL OF NATIONAL WOMEN'S HOSPITAL

This is a history of National Women's Hospital. Hailed around the world as a leader in medical care of mothers and the newborn during the second half of the twentieth century, the hospital is now chiefly known for the 'Unfortunate Experiment' and the resulting Cartwright Inquiry of the 1980s. Linda Bryder's earlier book, *A History of the 'Unfortunate Experiment' at National Women's*, examined that latter episode. This book, coming out of her Marsden Grant, is the larger story of the hospital's history and — by extension — the story of reproductive health in the second half of the twentieth century.

A *New Zealand Listener* article, which appeared in the mid-1980s before all the publicity surrounding the Cartwright Inquiry, declared: "National Women's is news; always has been. Over the last two decades, women's health has become a hot topic and women's bodies have been the focus for some ferocious power struggles, and some of the messiest battles going - abortion, the politics of birth, the status of women's bodies in a teaching hospital, contraceptive crises like the Dalkon shield debacle."



"This history," says Lynda "sets out to investigate some of these "messy" social and ethical issues through the lens of National Women's Hospital. experience."

## MISCELLANEOUS

**CINEMA GROUP:** This is a group for University staff and students interested in filmgoing to attend European movies on a regular basis at the Lido and Academy Cinemas. Meet for coffee. All welcome. Contact film.group0012@mail.com

**CITY LEGAL SERVICES.** Rainey Collins Wright is a small law firm centrally located at L1 Princes Court, 2 Princes Street. We are near the University, with good parking. We can assist with property transactions, trusts, wills, administration of estates, enduring powers of attorney and relationship property matters. Please phone our senior solicitor Nichola Christie on 379 5828 to discuss your needs, or email nchristie@rainey.co.nz Visit www.rainey.co.nz

**MEDENTRY UMAT PREP:** Government accredited and internationally trusted registered training organisation offers quality focused training for UMAT. Aspiring doctors and dentists, year 13 students and first-year health science students, please visit www.medentry.co.nz

**TRAVEL.** I have 12 years experience in booking all aspects of personal travel for university staff and lecturers. I pride myself in ensuring that your travel plans are sourced at the lowest possible costs and are tailor-made to your requirements. Contact Karen at Karen.embleton@mondotravel.co.nz or 940 0064 (wk) or (021) 188 7781.



# PHILOSOPHY FOR CHILDREN

Everyone who knows children knows that they can come out with the most profound questions and statements. It's no surprise when someone claims that children are natural philosophers. Philosophy for Children, originated by US philosopher Matthew Lipman in the 1960s, develops that capacity, with amazing results.

This is not done by lecturing children about Aristotle, but by presenting them with stories – purpose written or in familiar picture books – and with images, film clips and activities that stimulate thinking about philosophical ideas. Children pose their own questions in response to these stimuli, and are assisted to pursue their own inquiry into those questions. This “philosophical community of inquiry”, is intellectually rigorous, and also caring and collaborative. It develops critical thinking skills, so children can think together effectively about things that have meaning for them. Most kids who do it think it is the coolest thing they do in school. Which is great, because it is also very important.

Here are some questions to which we need answers, as individuals and communities: “What is the best way of distributing material and social goods?” “How certain do we have to be of something, before it is reasonable to act on it?” “What does loyalty demand of us?” “What counts as theft of intellectual property?” And here are some related questions that children might discuss: “Is it fair that doctors and lawyers get more money and respect than checkout operators and rubbish collectors?” “Do you have to be completely sure that there is nothing wrong with a car before you get into it? What about

a roller coaster?” “Should you always protect your friend, even when they’ve done something wrong?” “If you go into a book shop every day and read a bit of a book until you have finished it, have you stolen the book?”

Even children as young as five can do philosophy, addressing such deep questions as “How would we find out if something was real?” (*Mahy’s Lion in the Meadow*) “When is a reason a good reason?” (*A Pet for Mrs Arbuckle*). Less deep questions are also opportunities to philosophise: “Can anything be a pet?” (*Hemi’s Pet*).

## “Is it fair that doctors and lawyers get more money and respect than checkout operators and rubbish collectors?”

What is the value of Philosophy for Children? As philosophical questions cannot be settled solely by science, or appeals to tradition or authority, questions under discussion are genuinely open. Inquiring philosophically is not about just swapping opinions but exploring and building on, and carefully examining each other’s ideas, in the search for the best answer each person can come to. This combination of open-ended inquiry and developing the skills to do it well, is exciting and empowering for children.

In the community of inquiry a disagreement is a gift that sharpens thinking, and a breakdown of process is an opportunity for the children to

work out what went wrong, and to try out ways of fixing it. It is a reflective, self-responsible, dynamic, embodied, real time exchange about things that we humans have a great need and desire to think about, but seldom find the time. (A useful antidote to Facebook, Twitter, computer games and television?) It reinforces values of respect for others, perseverance, open mindedness, intellectual courage AND humility, while acknowledging values themselves as particularly worthy objects of inquiry.

It seems to benefit most children – “gifted”, “ordinary” and those who sometimes struggle in school. International studies have shown that philosophy for children improves reasoning, questioning, reading, listening, language skills, interpersonal skills, confidence, self-esteem and engagement. ERO recently reported of Balmoral School: “The school’s curriculum is highly effective in promoting and supporting student learning... ‘Philosophy for Children’ is a cornerstone of the curriculum...”. And let’s not forget the enthusiasm that children have for it. To quote an email from a teacher: “We did our first inquiry at the end of the morning, and they were so into it, they refused to go to lunch!”

Dr Vanya Kovach is Senior Tutor in Philosophy. She lectures in undergraduate ethics courses and is an active philosopher in the community, in professional ethics and philosophy for children. She also is the co-ordinator and principal trainer for Philosophy for Children New Zealand. More information about philosophy for children is available at [www.p4c.org.nz](http://www.p4c.org.nz)