



# Tāmaki Update

June 2013

A newsletter for  
Tāmaki Campus

## Growing Up in New Zealand - The Next Steps!



Associate Professor Susan Morton says the key driver behind Growing Up is to benefit the health and wellbeing of New Zealanders.

Associate Professor Susan Morton, Director of the Centre for Longitudinal Research – He Ara ki Mua - and leader of the high profile Growing Up in New Zealand study is 'very pleased' at the announcement of a boost of \$6.4m in government funding

over the next two years for the study.

### **Independent Review**

In November 2012, the government commissioned an international independent review of Growing Up in New Zealand to determine the value of the study to New Zealand. The international review panel recognised and endorsed the value of this longitudinal research and recommended five years of funding to ensure that the study is able to continue to inform on the developmental pathways of children's health and wellbeing seen in New Zealand under existing, new and future policies.

### **In the Beginning**

The study recruited pregnant mothers in 2009 and 2010, to track the development of nearly 7,000 children from before their birth through to young adulthood. The research team has collected four sets of data during the children's first two years of life,

with remarkable success in the recruitment and retention of often 'hard to access' populations. A new round of pre-school interviews with parents, carers and the children themselves is about to embark.

### **Government Partnership**

The Growing Up study was initiated by a group of 16 government agencies, led by the Ministry of Social Development. The study research team continues to work in partnership with these agencies to plan and implement the study to ensure that the information collected can contribute to policy prioritisation and evaluation.

This year, the lead agency managing these partnerships between the study and multiple government agencies will move from the Ministry of Social Development to the newly established Social Policy Evaluation Research Unit at the Families Commission.

Dr Morton said although this new arrangement is in its infancy, she hoped it would assist the study to work more effectively with many government agencies, as well as assist the agencies to work more effectively together. "It has always been our key driver to deliver valuable research data to help inform and strengthen the development of policies and strategies to benefit the health and wellbeing of New Zealanders."

### **The Data**

Dr Morton said that data has been gathered at the antenatal, birth, nine month and two year old stages. It is, she said, the first time that such a wealth of information has been captured. The current workload of the team is now focussed on the next contact with the families as well as cleaning and collating the data, with further analyses on outcomes expected later this year.

Continued on page two



## Message from Head of Tāmaki Campus

Dear Colleagues

On 31 May, The University of Auckland settled the sale and purchase of the former Lion Breweries site marking the beginning of a period of long-term development of the Newmarket Campus. This event also signifies the beginning of the divestiture of the Tāmaki Campus by the University, underpinned by the **Principles for the withdrawal from Tāmaki** (adopted by the University Council as part of the Newmarket approval).

It is anticipated that over time activities at the Tāmaki Campus will be relocated to the City, Grafton or Newmarket campuses. Planning is underway to bring about the best possible transition to minimise disruption. Please be assured that I will be providing you with detailed progress reports as information comes to hand via email and the Tāmaki Intranet (due to go live soon).

Throughout the predicted lengthy transition, the University and Tāmaki Campus Management are committed to maintaining a vibrant active community on campus and a high level of engagement with students, staff, industry partners, and community representatives. Campus services will be maintained, and a number of seminar rooms are being upgraded during the inter-semester break by the Learning Environment Support Unit, with some lecture theatres earmarked for next year. Campus life activities will continue, including the Head of Campus Seminar Series and networking events.

The University of Auckland is undergoing a great deal of change which is both exciting and challenging, and accompanied by many new opportunities. I encourage you to discuss and debate these opportunities widely and to express any concerns through department, unit and section heads, and at upcoming fora.

Please join me in warmly congratulating recent recipients of external research funding from the Health Research Council for 2013. Recipients from the Tāmaki Campus are Associate Professor Cliona Ni Mhurchu (National Institute for Health Innovation), Dr Daniel Exeter (Epidemiology and Biostatistics), Professor Peter Thorne (Audiology), Dr James Stinear (Sport and Exercise Science), and Dr Pat Neuwelt (Te Kupenga Hauora Māori).

I would also like to congratulate Associate Professor Susan Morton and her team from Growing Up in New Zealand. The continuation of their funding over the next two years is testament to their hard work and passion for this project which will benefit the health and wellbeing of New Zealanders. You can read about the progress of Growing Up in New Zealand on Pages One and Two of this edition of the Tāmaki Update.

Best wishes

**Associate Professor Greg Anson**

Head of Tāmaki Campus



## The Next Steps

Continued from page one

Each set of data gathered from the study has been designed to provide scientifically robust information that will help shape future government policies and strategies for children and families.

“The study was set up this way, in collaboration with government agencies, because they were crying out for this type of information about contemporary New Zealand children and their families,” says Dr Morton. “We have been able to start providing this key information and hope to build on this significantly in the near future.”

“The University of Auckland has given strong support throughout, and is an important home for the study with its range of experts and connections to other institutions and colleagues, both nationally and internationally,” said Dr Morton.

### Release of the Pregnancy Data

The newest development in the Growing Up study is the release of the antenatal data for use by other research organisations to further their own work connected to children’s development in New Zealand. The data is cleaned, anonymised and prepared for external use via a set of secure and controlled processes.

A series of data access workshops are scheduled for Auckland and Wellington where interested parties have been invited to attend and learn how they can work with and benefit from this product of the study.

### Summary

The Growing Up in New Zealand study is moving swiftly forward as it follows the development of the children at its focal point. The team of experts, researchers, biostatisticians, interviewers and technical support staff are producing some fantastic work.

Dr Morton says they look forward to further data and associated analysis that can improve the future for children and families in New Zealand.



## Study targets road safety for Aucklanders



Dr Jamie Hosking's work focuses on the linkages between transport policy, health equity and climate change, and he was the lead author on a 2011 World Health Organization report on transport, health and the 'green economy'.

A recently released report on 'Social and Geographical Differences in Road Traffic Injury in the Auckland Region' shows road crash injury rates across all age groups increase with levels of deprivation.

Dr Jamie Hosking and colleagues from the Section of Epidemiology and Biostatistics in the School of Population Health carried out the study, commissioned by Auckland Transport. It indicates Māori of all age groups have the highest road crash injury risk, and Pacific children are also at high risk, but risk is lowest among Aucklanders of Asian ethnicity.

Findings also show that youth (15 to 24 years) and older adults (65 years and above) have higher crash injury rates than adults aged 25 to 64 years. Pedestrian injuries are more common among children than adults, while cyclist injuries are as common among children as in adults. In general, males have higher injury rates than females, except among older adults.

The research analysed the background of Aucklanders who died or were taken to hospital after road crashes between 2000

and 2008. It looked at rates of crash injury by age, gender, ethnicity and deprivation, as well as mapping these associations for Auckland's 21 Local Board areas.

Results have highlighted those Auckland communities where people are more likely to be involved in road crash deaths and injuries, suggesting people from the South Auckland urban area have amongst the highest injury rates. The crash injury risk is also higher for those living in rural areas.

Dr Hosking says a key finding from the study is that there are large inequalities in injury risk across Auckland's communities. His research will assist Auckland Transport to work more closely with those communities which have a higher risk of injury, making improvements to road safety.

Dr Hosking's report is already helping to prioritise road safety engineering and education efforts with an increased focus in urban south and rural schools.

The paper is published in the Australia and New Zealand Journal of Public Health (ANZJPH) and a copy of the full research report is at [www.aucklandtransport.govt.nz](http://www.aucklandtransport.govt.nz).

## Commericalisation excellence recognised



Professor Mark Taylor (right) receiving his award from the Hon Steven Joyce.

Professor Mark Taylor has recently been awarded the Vice-Chancellor's Commercialisation Medal sponsored by UniServices at The University of Auckland's Research Excellence Awards.

The Medal was awarded in recognition of his work in light metals, and as founding director of the Light Metals Research Centre. Professor Taylor and his team have built a globally significant research capability with 40 researchers and 10 adjunct academic staff.

"The Centre has contracts with partner companies on every continent and 40 clients with breakthrough energy-saving technologies in commercialisation, including new control systems, heat exchangers and novel approaches to aluminium smelters and national electricity grids," said UniServices CEO, Dr Andy Shenk.

"Professor Taylor also works as a special advisor providing management guidance to more than a dozen companies in the Netherlands, Germany, Japan, the United States, China, Australia and the Gulf States."

Professor Taylor is the Director of The Materials Accelerator based at Tāmaki.



## World Voice Day a first



Soprano Morag Atchison (right) with New Zealand's World Voice Day National Coordinator, Sylvia Leão.

Our unique place on the world clock meant New Zealand (through the School of Psychology's Speech Science at Tāmaki Campus) became the first country to take part in a global concert.

The concert was part of World Voice Day, an annual worldwide event that demonstrates the significance of the voice in daily life and raises awareness of the importance of a healthy voice. Global concerts were scheduled to start at 7.30pm in each of the 46 countries (local time), so ran continuously.

Attended by speech language therapists, students, singers and other professionals, Soprano Morag Atchison and pianist Dean Sky-Lucas gave a recital, followed by a lecture looking at the technical and physical demands required by singers.

World Voice Day originated in Brazil around 15 years ago, but this is the first time New Zealand has participated. Speech language therapist/pathologist and PhD candidate Sylvia Leão is New Zealand's World Voice Day National Coordinator and mastermind of the inaugural event.

Professor Suzanne Purdy, head of Speech Science, says a healthy voice is a critical part of everyday life, not only for artists, but for everyone. Teachers, for instance, are often unaware of how to maintain good voice habits or be on the alert for factors that could have a negative impact.

## Tāmaki a hub for aphasia support

The Aphasia New Zealand Charitable Trust (Aphasia NZ) has been based at the Tāmaki Campus since 2010. It provides support services, information, and resources to people affected by aphasia, their caregivers and whanau, and health professionals working with people with stroke and head injury acquired aphasia.

More common than Parkinson's disease and affecting more than 17,000 New Zealanders, aphasia is the partial or total loss of the ability to articulate ideas or comprehend spoken or written language, resulting from brain injury or disease.

Aphasia NZ's goal is to counter the lack of knowledge of the condition with New Zealand wide initiatives such as education and awareness workshops, and providing a stroke and aphasia handbook. Executive Officer, Emma Castle says, "A new resource for customer service environments, such as banks and post shops, supporting people with aphasia to communicate, is the most recent and welcome addition to the services we provide."

Aphasia NZ's work addresses issues of isolation, frustration and lack of confidence of people with aphasia through their acquired communication problems, and provides a number of different ways for people to access both formal and informal support. Aphasia Hubs, a type of support group, are facilitated at Tāmaki Campus and at a number of other locations throughout New Zealand.

"The Tāmaki Campus location is particularly beneficial for people with aphasia, as they are able to easily access other allied groups and services," says Emma.

Other groups based at Tāmaki Campus who are working with people with aphasia include Speech Science (School of Psychology) and the Centre for Brain Research's Brain Recovery Clinic. Speech Science Master of Speech Language Therapy Practice (MSLTPrac) students see people with aphasia at The University of Auckland Clinics at Tāmaki – many of these clients also attend Aphasia NZ's coffee groups and other activities.

Aphasia NZ's efforts to raise awareness of aphasia and develop resources for people with aphasia and their families and members of the community are creating opportunities for collaborations between members of the community and researchers, students and highly skilled clinical teachers in Speech Science.

The Centre for Brain Research's CeleBRation Choir meets at Tāmaki every Monday afternoon and offers those with communication difficulties associated with a neurological condition the opportunity to participate in group singing.



## Doing the numbers on stoats

When PhD researcher Patrick Garvey was asked what triggers his interest in 'all things stoat', he said understanding the relationships that organisms have with one another and their environment has enthralled him since childhood.

It took a trip to South America in 2007 to turn his back on the world of accountancy and undertake postgraduate studies in environmental management and conservation.

"My initial interest was zoology, especially ethology (the study of animal behaviour), but I realised if trends in species loss continued, there would soon be little wildlife left to observe."

Undertaking his doctorate at The University of Auckland's Tāmaki Campus alongside Landcare Research, has given Patrick the opportunity to work in an area he particularly enjoys, combining a feel good factor with contribution to natural heritage conservancy.

An Irish upbringing saw him spending a lot of his childhood wandering the local peat lands, which were 'terrible for agriculture, but a haven for wildlife'.

"Although my family have always been involved in business, my parents encouraged me to follow my passion. Even with their support, I took the scenic route to my chosen career, as a degree in accountancy is not generally viewed as a natural stepping stone into science. Still, having these two disparate careers does have its advantages, as now I know both the price and the value of everything," he says.

Patrick says luck and good fortune has also been on his side. "I have been lucky enough to travel extensively around the world, which influenced my perspective on life. I volunteered at a centre for confiscated wildlife in the Amazon jungle; spent three months in Kruger National Park monitoring bird communities; and have mapped coral reefs in Mozambique. I thought, given the presence of international volunteers, that the future for wildlife at these locations would



A trip to South America inspired Patrick Garvey to turn his back on accountancy and undertake studies in environmental management and conservation.

have been secure, but unfortunately the situation has greatly deteriorated."

Volunteering solidified a long held wish to work in conservation biology, with a particular interest in the consequences of introducing predatory mammals into New Zealand's ecosystem.

"To conserve native wildlife, invasive species must be controlled, but managing them in isolation from each other can have unforeseen consequences. I'm looking at the role that competition plays in shaping invasive mammal communities."

To date, he has undertaken pen trials at Landcare Research evaluating the behavioural responses of stoats to two larger invasive animals, the feral cat and the ferret.

"Clearly stoats increase vigilance, reduce food harvesting and significantly avoid interactions with the larger predators. These responses directly influence the distribution and abundance of stoats, which in turn

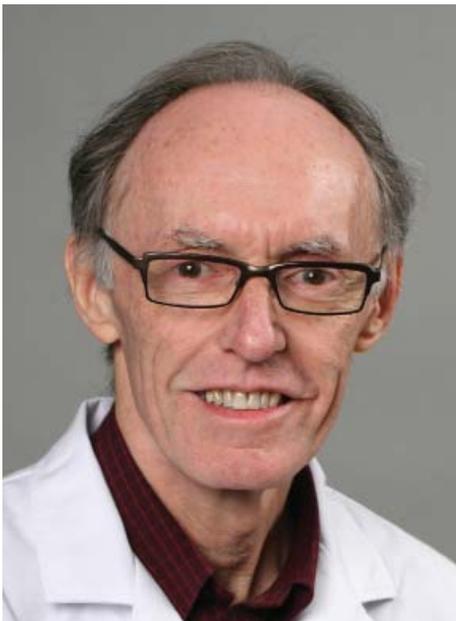
has direct consequence for native species. Competition plays an important role in influencing the demography of predator communities and needs to be considered in conservation management."

Nearly 40% of New Zealand birds are endangered, with the stoat considered to be 'public enemy number one' by the Department of Conservation (DoC). Patrick's behavioural information will help improve capture rates.

Eighteen months into the project, Patrick is hoping the end result will be a coherent picture of competitive interaction between stoats and other invasive animals. Next he will look at trapping data already collected by Landcare Research and DoC. Modelling and analysing this will reveal the distribution of stoats, in comparison to other invasive species. The final step will be to undertake fieldwork to confirm observations made during the first two stages.



## Home-based stroke therapy study funded



Dr Jim Stinear's research could lead to a new model of therapy for stroke survivors.

A Health Research Council (HRC) funded feasibility study could lead to a new model of therapy for stroke survivors, introducing a home-based protocol to improve rehabilitation success.

The research has the potential to revolutionise the delivery of long-term rehabilitation services in New Zealand, and consequently has high public health relevance.

Dr James Stinear, from the Department of Sport and Exercise Science, says only 11% of the 58,000 people recovering from stroke in New Zealand receive any rehabilitation therapy after they leave hospital. This is despite research showing rehabilitation therapy is capable of improving hand and arm function months or years after stroke.

He says there are tens of thousands of people living with stroke in New Zealand, who have an untapped capacity to recover.

Animal and human studies indicate the amount of rehabilitation therapy that

humans receive is well below the dose that is necessary to help the brain re-wire itself. Dr Stinear says studies in rats that induce an experimental stroke followed by rehabilitation, use many hundreds of repetitions of a task on a daily basis to achieve a recovery. These studies reveal new nerve growth in the rat brain.

“However, humans get very roughly ten or less repetitions of a specific task on a daily basis. Yet there are some rehab settings that deliver hundreds of repetitions to humans, suggesting that some stroke survivors can cope with high dose therapy.”

He says in New Zealand the main barrier to high dose therapy in humans is the availability of therapists and inadequate funding.

The HRC funded study will allow Dr Stinear to test the feasibility of delivering high dose therapy in the comfort of the patient's home.

“The objective of the feasibility study is to test and design a ‘home therapy’ protocol. This will involve a study physiotherapist assessing the therapy needs of a person with stroke and training a family member, friend, or other volunteer as a ‘home coach’ to implement high dose daily therapy including exercise therapy in the home,” he says.

The prevalence of stroke is higher in Māori than non-Māori. Importantly, strategies that support Māori with stroke and their whanau to ‘take charge’ of long-term recovery have been shown to be effective at improving quality of life and reduced strain on caregivers. As a consequence, Māori may obtain particularly large benefits from the proposed ‘home coach’ approach to rehabilitation.

The feasibility study outcomes will inform the design of a subsequent clinical trial.

The study grant was one of six awarded by the HRC to help improve the prognosis of New Zealanders with brain injuries.

## Tinnitus study results



Giriraj (Raj) Singh Shekhawat

Several months ago we featured Audiology PhD student Giriraj (Raj) Singh Shekhawat and his research project on tinnitus.

This is now complete, and results indicate this insidious and chronic condition can benefit from transcranial direct current stimulation (tDCS) intensity and the use of hearing aids.

He explains the background. “The perception of sound in the absence of an external sound is tinnitus and it can have a severe negative impact on quality of life.”

Raj worked with 40 participants, who had experienced chronic tinnitus (minimum two years), in a seven month long double blind clinical trial. His conclusion is that, after three months of hearing aid use, there were significant improvements in tinnitus which were sustained after six months of use. The hearing aid effects achieved were mainly independent of tDCS, and Raj believes it warrants further investigation of tDCS - or other neuromodulators - priming the auditory system for sound therapy based tinnitus.

This is one of the first reported attempts to prime the auditory central nervous system for hearing aid based tinnitus relief. Hearing aids (without tinnitus counselling) irrespective of tDCS lead to significant reduction in tinnitus handicap at three months and six months of sustained use.