



Tāmaki Update

June 2015

A newsletter for
Tāmaki Innovation
Campus

World class audiology research excites funder



Dr David Welch is excited about the world class research programmes that he and his colleagues are involved in, as they prepare to celebrate the 25th anniversary year of the Section of Audiology.

Tāmaki Innovation Campus is home to the Hearing and Tinnitus Clinic, part of the Section of Audiology established in 1990 to provide a New Zealand based graduate programme for clinical audiology.

Audiology, which sits within the School of Population Health, has both a public and academic face. The Clinic is where patients interact with students and postgraduate professionals on a variety of hearing issues, while the academic side, according to head of section Dr David Welch, benefits the Clinic. Academic staff and students contribute to the Clinic and conduct research projects aimed at reducing hearing disability.

Over the years, Audiology research has covered a wide variety of topics, including investigating the anatomy and physiology

of the ear, mechanisms of inner ear disease, psychoacoustics, acoustics, hearing aids, cochlear implants, tinnitus, psychosocial issues of deafness and auditory evoked potentials.

But Dr Welch is understandably excited about the current research programmes; in particular relating to cochlear implants.

Australian company, Cochlear, has recognised the world class research coming out of Tāmaki and funded investigations into the relationship between cognition and hearing in people with cochlear implants. Severe hearing loss can affect cognitive ability and its insidious arrival can increase isolation without being recognised.

“We believe there may be more strain on cognitive faculties when someone is

struggling to hear all the time, especially in difficult situations,” says Dr Welch. “Along with isolation, it could be a contributing factor when a person is going gently downhill and tip them over the edge into dementia.”

The first study looked at whether cochlear implants with a noise reduction algorithm work well for people with different cognitive abilities. Dr Welch is collaborating with Professor Suzanne Purdy from Speech Science on the project.

He is also investigating the more esoteric ‘Soundscape’ concept and trying to promote it societally. The concept is aimed at encouraging people to stop and listen and appreciate what they are hearing with the hope that it will teach people to value their hearing more.

“Surprisingly, people seem not to be concerned even when they know that exposing their ears to sound will cause hearing loss,” says Dr Welch. “We think that people simply don’t value their hearing because they take it for granted, but we know that after people have lost their hearing, they bitterly regret it. Some describe it as a living death!”

The ‘Soundscape’ work is part of a larger programme investigating and trying to reduce noise-induced hearing loss with a team also including Professor Peter Thorne and Dr Ravi Reddy, who has recently graduated with a PhD in the prevention of noise-induced hearing loss in industry.

The Section of Audiology celebrates its 25th anniversary this year starting with a cocktail function on 10 September, followed by a two day symposium of leading research from around New Zealand.



Message from Head of Tāmaki Innovation Campus

Dear Colleagues

The Tāmaki Update exemplifies the “business as usual” perspective of the Tāmaki Campus’s significant contribution to activities and events of the whole University. The “Update” is crafted by Suzanne Mitchell, a member of the Campus Management Team and I would like to take this opportunity to acknowledge Suzanne’s contribution to an excellent professional, always informative, and frequently entertaining publication.

The announcement in 2013 of the University’s plan to disestablish the Tāmaki Campus was accompanied by a commitment from the Vice-Chancellor to the Tāmaki Campus community to provide regular updates about the disestablishment process. Most will be aware that our colleagues from the Faculty of Engineering were the first to relocate and moved to Newmarket towards the end of last year. At the end of 2014 and early this year colleagues from Counsellor Education and Computer Science relocated to Epsom and the City Campus’s respectively – moves that were independent of the disestablishment process. On Friday 19 June at 3.30pm as part of our regular communication plan the Vice-Chancellor and Director of Property Services will provide an update on the vast array of building activities planned and taking place across the University. I encourage you to come along to this session and afterward to join us for a networking event in the Function Room.

This year the Head of Campus Seminar Series got off to a colourful and energetic start. Already we have hosted two excellent speakers in Professor Will Hayward from Psychology and Professor Ngaire Kerse from Population Health. I thank them both for their stimulating and thought provoking contributions. Our next seminar will be on 24 July at 3.30pm with guest speaker Dr Lester Levy, chairman of the Auckland and Waitemata District Health Boards. I am also extremely pleased that Dr David Whitehead, chief scientist at Landcare Research has agreed to be our speaker on 21 August at 3.30pm. Dr Whitehead will provide an overview and highlights of the work that Landcare is involved in. I’m sure that both seminars will provide fascinating insights into their respective areas of expertise, so update your diaries and save the dates now!

On a sad note, I would like to take this opportunity to acknowledge Dr Zaid Saleh from the Faculty of Engineering, who set up the food processing laboratory at Tāmaki and was based primarily on this campus. Dr Saleh died suddenly of complications following surgery. His death is a significant loss to the University of Auckland, and we send our deepest condolences to his wife and young family.

In closing, to all those involved in examinations over the coming weeks I wish you and your students all the best.

Best wishes

Associate Professor Greg Anson

Head of Tāmaki Innovation Campus



What’s been happening?

Drive for business events growth



Seven University of Auckland representatives are among 14 distinguished thought leaders in their fields who have been selected to represent Auckland on the world stage, including School of Population Health senior lecturer Dr Peter Huggard. As part of a new Auckland Business Events Advocate Programme, the advocates will work closely with the Auckland Convention Bureau when the city bids for international business events. The aim is to generate more leads, more bids and a higher conversion rate of winning bids.

Dr Huggard’s teaching and research interests include compassion fatigue; resilience; caring for one-self emotionally and therapeutic communication.

Green fingers to the fore



A group of enthusiast volunteers gathered for a working bee in mid-April at the Tāmaki organic garden. Events co-ordinator, Suzanne Mitchell says, “The idea of the working bee was to clear any weeds and grass that had grown over summer and plant for the winter. This way there has been little need to manually water and with all the recent rain, the seedlings planted have been thriving.” Plantings included winter vegetables such as cauliflower, cabbage, kale and silverbeet. There are also herbs: thyme, parsley, rosemary, sage and oregano. All campus staff and students are welcome to tend the garden, plant their own seedlings and harvest the produce.



Finding your voice



Members of the CeleBRation Choir and guests on World Voice Day, including Tony Petrosich (centre front) who says that taking part in the Choir is like exercise - if you do heaps of exercise, your body will get better.

The CeleBRation Choir’s special open choir session, at the Tāmaki Innovation Campus in April, opened the World Voice Day (WVD) Global Vocal Concert; 24 hours of vocal performances that continued around the world ending in Hawaii.

More than 600 events were organised in 56 countries, five from New Zealand with varied vocal performances, and all spreading the message that voice matters.

Alongside vocal warm-ups and songs, led by music therapists Alison Talmage and Shari Storie, the choir welcomed guest soloist Madeleine Casey-Ashton, University of Auckland student and member of the Auckland Youth Choir.

The choir was joined via skype by Dr Sarah Hoskyns and music therapy students from Te Kōkī New Zealand School of Music, Victoria University of Wellington and three speech items were presented by choir members Elizabeth Donovan, Tony Petrosich and Roger Hicks.

The CeleBRation Choir is a social singing group for people with neurological conditions like stroke or Parkinson’s disease. Warm-ups include voice and breathing exercises to help maintenance of vocal function, with research showing that singing may also help to ‘rewire’ the brain after brain injury.

In 2014, Tony Petrosich was interviewed by speech language therapy masters

student, Martin de Lisle and described his participation.

“I like the singing, because I’ve never had singing before and it’s good for your speaking. I can only do it in the group. It’s just now that I’m starting to do solos. My speaking is better, if I concentrate, it’s better. I know everyone, so you can laugh a bit. And I can do it myself. The most useful part is following [hand gestures and pitch] up and down, and songs. I do singing, chess and Gavel Club, it’s better for you than staying home. It’s like exercise, if you do heaps of exercise, your body will get better. It’s the same with talking. It’s different techniques, singing is one thing, Gavel Club is a different one, and chess is a different one. Choir is a really good way of making friends.”

Alison Talmage says the importance of singing is being studied by the University. A research programme called SPICCATO (Stroke and Parkinson’s: Investigating Community Choir Engagement and Therapeutic Outcomes) is underway, led by Professor Suzanne Purdy, head of speech science in the School of Psychology.

Sylvia Leao, WVD national coordinator and a University of Auckland PhD candidate says, “Voice is like your fingerprint; it is unique. Our challenge is to expand and get more people involved in World Voice Day next year.”

In brief

Coming up - Head of Campus Seminar Series

24 July, 3.30-4.30pm, 731.201

Guest Speaker - Dr Lester Levy



Dr Lester Levy is chairman of the Auckland and Waitemata District Health Boards. He is best known for leading a number of organisational performance transformations, as

a chairman, chief executive and entrepreneur, in both the public and private sectors. He has previously been seconded to the Department of the Prime Minister and Cabinet as a strategic adviser. In the 2013 New Year’s Honours List, Dr Levy was appointed as a Companion of the New Zealand Order of Merit (CNZM) for services to health and education.

Most in advanced age rely on pension

A survey of people in advanced age has shown that for most people (89 percent), New Zealand Superannuation (NZS) is the main source of income. The LiLACS NZ study, led by Professor Ngaire Kerse, also shows a significant difference between Maori and non-Maori people reporting that the NZS pension is their only source of income. Twice as many Maori (41 percent) as non-Maori (21 percent) reported NZS as their only income.

Weight management study

A weight management programme delivered via rugby clubs may help curb New Zealand’s growing obesity problem, particularly among Māori and Pacific men. Associate Professor Ralph Maddison has received an HRC \$150,000 grant to assess if a weight management and healthy lifestyles programme developed in Scotland for football fans could work in New Zealand. He says men do not typically engage with traditional weight loss programmes and professional rugby provides an ideal way to deliver weight management programmes.



Advocacy, leadership and advice



The Gay Men’s Sexual Health research group may be small, consisting of director Dr Peter Saxton (left) and research assistant Adrian Ludlam, but it has made impressive inroads into what can sometimes be a difficult subject.

Stigma, taboo and stereotyping shroud their subject matter, but Dr Peter Saxton, Director of the Gay Men’s Sexual Health research group in the Section of Social and Community Health, is seeing positive outcomes.

The GMSH group was established in 2013 with seeding grants from the New Zealand AIDS Foundation (NZAF) and UniServices Ltd, and aims to promote research into HIV and sexual health among gay, bisexual, takataapui and other men who have sex with men (MSM) in New Zealand.

Dr Saxton explains its background, “Thirty years into the HIV epidemic there was still no university position in New Zealand dedicated to HIV and sexual health behavioural research, policy and prevention. Gay and bisexual men are the population most at risk, so it was natural to begin here. A bequest from NZAF seeded the group, meaning we’re community and NGO focussed, providing practical advice direct to decision makers.”

The group’s remit includes investigator-driven research and behavioural surveillance, advocacy, strategic advice and leadership. However, there can be a reluctance to engage in conversations about sexual health at a policy level, and a sense that it can be deprioritised because few are prepared to champion it says Dr Saxton. “It’s rare for individuals affected by STIs to publicly identify themselves, despite how common they are.”

“Socially, narratives also increasingly position sexual health decision making as individualistic - and people themselves as consumers of products like new tests or drugs - whereas HIV and STIs are by definition epidemics caused by human connectivity and consenting behaviours, and therefore are fundamentally relational phenomena involving partners, communities and populations. That’s the challenge but why it’s exciting,” he says.

He rates the HIV behavioural research programme as one of the significant achievements to date. It has the largest

database of sexual partnering among gay and bisexual males in New Zealand, and is well regarded internationally.

The Gay Auckland Periodic Sex Survey (GAPSS) and Gay men’s Online Sex Survey (GOSS) are anonymous repeat cross-sectional programmes that monitor trends in HIV risk behaviours among gay, bisexual, takataapui and other MSM.

The surveys are funded by the Ministry of Health and undertaken collaboratively by the University of Auckland, the University of Otago’s AIDS Epidemiology Group, and NZAF. They are guided by UNAIDS/WHO principles of second-generation HIV behavioural surveillance and have three main aims: to explain patterns in HIV diagnoses in New Zealand; to evaluate HIV prevention by monitoring condom use and testing, including disparities between subgroups of MSM; and to forewarn of emerging HIV and STI risks and enable a timely response.

Dr Saxton goes on to say, “We’re expanding into HPV (human papillomavirus) research among males. We’ve led several symposia on HIV and STIs in the last year, including the 30th Anniversary HIV Conference this month, and assisted with an HIV-themed contemporary art exhibition in January.”

“We continue to press for improved recognition of the health needs of sexual orientation minorities - legal equality should be followed by health equity - and we’ve made multiple submissions. There’s an appetite for our input - we’re now on the blood donor review group, New Zealand Sexual Health Society executive and are formal advisors to Body Positive and NZAF.”

The list of achievements within two years is extraordinary, considering the engine power comes from just two staff members, Dr Saxton and Adrian Ludlam, and a masters student. However, the group collaborates closely with NZAF, the Ministry of Health, the AIDS Epidemiology Group at the University of Otago, and the Immunisation Advisory Centre (IMAC), and is working with students on two hot topics - HPV vaccination for males, and recreational drug use.



National favourite at risk

PhD student, Josie Galbraith, was profiled in the December 2014 issue of the Tāmaki Update and this article updates the research she has been undertaking.



Backyard bird feeding is great for some birds but not so good for one popular tiny native, a new study has found.

The research, by PhD Candidate Josie Galbraith, Senior Lecturer Margaret Stanley and Associate Professor Jacqueline Beggs of the School of Biological Sciences, builds on earlier research into New Zealanders' backyard feeding habits.

The latest study, published in the Proceedings of the National Academy of Sciences (PNAS), looked at the effects of common bird feeding practices on particular species of birds and whether supplementary feeding of bread and seeds favours some species over others.

It found two introduced species in particular benefitted most: the common sparrow (*Passer domesticus*) and spotted dove (*Streptopelia chinensis*). Sparrow abundance was 2.4 times higher at feeding sites and spotted dove 3.6 times higher.

But the native grey warbler (*Gerygone igata*), voted New Zealanders' Bird of the Year in 2007, significantly decreased in abundance at feeding sites, with numbers dropping by more than half.

The findings on the diminutive grey warbler, one of the most commonly-heard songs in New Zealand's forest, is concerning, says Ms Galbraith. "They typically forage on insects in the tree canopy but their ability to forage efficiently may be being affected by the disruption of higher densities of other birds at feeding sites," she says. "There is some evidence their numbers are declining anyway, so this study does add to that concern."

The researchers monitored 23 North Shore gardens over 18 months. They found the abundance of spotted doves in particular increased rapidly within two months of the start of feeding, suggesting the birds were moving to feeding sites from surrounding areas.

"This work certainly suggests bird-feeding favours introduced birds such as spotted doves over native birds, which mostly eat insects, nectar and fruit," Dr Stanley says.

Tribute to Dr Zaid Saleh

Dr Zaid Saleh passed away tragically on 14 March 2015 following complications associated with a surgical procedure.

Originally from Iraq, Dr Saleh completed his doctorate in Chemical Engineering via a joint research programme between the Universities of New South Wales and British Columbia in 2005.

In April 2004, he joined Plant & Food Research and was instrumental in developing and leading a major research programme in the area of 'food and ingredient engineering'.

Following his appointment as senior lecturer in Chemical and Materials Engineering at the University of Auckland in October 2012, Dr Saleh set up a food processing laboratory at the Tamaki Innovation Campus in collaboration with Plant & Food Research.

Dr Saleh's particular interest was in developing new technologies to recover phytochemicals from food waste and by products. He was also interested in scaling up and optimising new ingredient processing technologies to improve yield, throughput and biological activity of food manufactured products. His expertise in separation and purification technologies was recognised by the American Separation and Filtration Society (AFS) as world leading.

Dr Saleh's colleagues in the Department of Chemical and Materials Engineering have the following to say about their valued colleague:

"Two things stand out so impressively in Zaid's academic and research achievements: first was his desire to teach good science and innovative technological principles in the food processing area. Second, through his research Zaid sought to create new technologies, both biological and physical, aimed at assisting the food processing industry to achieve healthier, less artificially-modified and less wasteful production. Zaid was deeply conscious of the stream of waste generated by the food industry and in this he had the ability and knowledge to both see the health value of ingredients that could potentially be recovered and their commercial value. Zaid was committed to good food engineering principles and good economics."

Dr Zaid Saleh will be greatly missed.





Activities and interventions in cognitive health research



Kristina Zawaly's research project is being funded by a University of Auckland Doctoral Scholarship and she is passionate about the opportunity she has to potentially make a change for the better for the ageing population.

Kristina Zawaly began her PhD in 2014 investigating non-pharmaceutical interventions, specifically the effects of physically and cognitively challenging activities, on the cognition of older persons. The outcome, she believes, will guide development of effective recommendations and interventions to improve cognitive health and quality of life for advanced age Māori and non-Māori.

Cognitive decline is a continuum, with normal cognition at one end and dementia at the opposite, with subjective memory complaints followed by mild cognitive impairment in the middle, as phases. With the ageing of the global population, prevalence of cognitive decline is projected to increase dramatically. This has epidemic potential and there is no effective treatment or prevention to stop the progression of dementia. It is timely, says Kristina, to identify potential modifiable risk factors that can be targeted prior to onset.

Her research project, in the School

of Population Health's General Practice and Primary Health Care, is funded by a University of Auckland Doctoral Scholarship and comprises two parts which are separate but mutually related.

The first section will analyse data gathered from Life and Living in Advanced Age: a Cohort Study (LiLACS) NZ. LiLACS NZ is a longitudinal study started in 2010 and led by Professor Ngaire Kerse. It aims to determine predictors of successful advanced ageing and understand the trajectories of health and wellbeing in advanced age for older Māori and non-Māori. Kristina will be analysing data, specifically about different types of activities and how they predict change in cognition over time. The second component is a feasibility study for a randomized control trial (RCT) where novel physically and cognitively challenging activity programmes will be tested.

"We want to establish the effectiveness of two music-based treatments in preventing progression of mild cognitive impairment

using RCT methodology," she says. "We will be looking at two cognitively and physically challenging activity programmes: Ronnie Gardiner Method, which incorporates music, rhythm, colour, language training, symbol recognition, coordination, endurance, attention, memory, and social interaction, and which may promote neuroplasticity."

"The second will focus on dance therapy using standard dance techniques. These two programmes will be compared with a social control who will listen to the same music without movement. The intent of our study is to establish the efficacy of 12 week cognitive and physical intervention in participants with mild cognitive impairment in maintaining or improving cognition and physical health."

Findings from LiLACS NZ will provide knowledge to this unique and growing subset of the older population. Kristina says it is significant to study the relationship between onset of dementia and stimulating activities, as following retirement these activities constitute a large portion of one's daily activities.

Findings from the RCT component will enable larger trial testing of an intervention that has the potential to support an innovative programme that may assist in decreasing the prevalence of dementia.

Kristina is hoping that by identifying activity risk factors, new preventative and therapeutic approaches will be possible for older persons experiencing cognitive decline.

She admits a personal interest in the research project, as her grandmother has mild cognitive impairment and provides her with first hand experience about how this condition affects her and the ones who love her.

"I'd like to continue research focusing on minority populations, to assist them to age successfully and independently. I am excited to be in a field where there is so much concern about the rising tide and this is an opportunity to make changes."