



Tāmaki Update

July 2014

A newsletter for Tāmaki Innovation Campus

SPARX ignites self-help e-therapy for young New Zealanders



The SPARX team with Prime Minister John Key at the launch of the latest tool to support young people experiencing mild to moderate depression or anxiety.

An innovative research tool developed at the University of Auckland and deployed by the National Institute for Health Innovation (NIHI), has been launched with accolades from the Prime Minister and support from the PM's Youth Mental Health Project.

A self-help computer based e-therapy program, SPARX is a clinically tested tool designed to help young New Zealanders cope with feeling down, depressed, bullied or stressed.

SPARX was developed by a team of researchers and clinicians led by Associate Professor in Child and Adolescent Psychiatry, Dr Sally Merry, evolving from a successful

pilot study carried out by Dr Karolina Stasiak as part of her PhD.

Set in a fantasy world and looking like a 3D animated game, SPARX teaches young people cognitive behavioural therapy techniques for dealing with symptoms of depression, such as negative thoughts, problem solving, activity scheduling and relaxation.

The self-help therapy is designed to fill a treatment gap with young people who may not currently be seeking help. Users can access, register and start using it independently and anonymously in their own time.

It can also be used as part of a care plan and fits neatly alongside other forms of mental health treatment including face to face therapy, medication, family therapy and working on other issues in the young person's life, such as bullying, and alcohol and drug abuse.

NIHI led the deployment of the online version and is responsible for hosting the program and website.

Business Development Director, Malcolm Pollock says the program has been live for over two months and is rated as leading-edge in the global toolkit for adolescent depression. A study in the British Medical Journal in 2012 found the use of SPARX resulted in a 'clinically significant' reduction in depression, anxiety and an improvement in quality of life.

"It talks to adolescents in a language and genre they understand," he says. "We are reaching young people through channels like Lifeline and Youthline as well as social media but we know there are still more avenues to explore to reach the estimated 50,000 potential young people who might want to access the service.

"SPARX shows how academic knowledge of serious health issues can be applied to create positive benefits in the community. It also highlights the world-leading innovative capability within the University, where researchers can develop initiatives that respond to our own domestic health issues, but which subsequently are seen to have significant international application."



Message from Head of Tāmaki Innovation Campus

Dear Colleagues

A number of our Professional Staff are currently experiencing a stressful and uncertain time due to the Faculty Administration Review (FAR). I would like to thank everyone on campus for their support and consideration of staff affected by the review and for their engagement in the comprehensive consultation process that took place recently. I would also like to acknowledge the outstanding work undertaken by all Professional Staff to ensure that staff, students and visitors at the Tāmaki Innovation Campus receive a high level of service and support. Your efforts are very much appreciated and valued by us all.



As promised, we will be updating you on a regular basis as to progress associated with the relocation of activities from the Tāmaki Innovation Campus as the sale process continues. If you have been to Newmarket lately, you will have seen that the Newmarket Campus is being transformed at a rapid pace. The work on the refurbished facilities is progressing well and the Faculty of Engineering research groups, including those from Tāmaki, will be undertaking a staged move later in the year. We hope to have another update presentation from the Vice-Chancellor and Director Property Services in a few months' time.

Our congratulations to the Tāmaki staff who have recently been awarded Health Research Council funding; Professor Winston Byblow (Sport and Exercise Science); Dr Helen Petousis-Harris (School of Population Health) who received funding for two projects; Professor Boyd Swinburn (Epidemiology and Biostatistics); and Dr Ruth Teh (General Practice and Primary Healthcare). This is a very pleasing achievement and totals almost \$2.8 million and shows the quality and competitiveness of the research undertaken by people at Tamaki.

I am very excited that we have been able to secure Academy Award winner (that's an Oscar!) Associate Professor Mark Sagar for the next Head of Campus Seminar Series on 25 July - mark your diaries now! Mark is responsible for the technology behind films such as Avatar and The Curious Case of Benjamin Button, and his presentation "Expressive Machines" will look at innovative research taking place at the Auckland Bioengineering Institute.

Also speaking at the Seminar Series on 22 August is our own Professor Alistair Woodward, who led the chapter on human health for the latest report from the Intergovernmental Panel on Climate Change (IPCC). Read more about this on Page Five, and don't forget to add the seminar to your diary, as this will no doubt be a fascinating insight into a global issue.

It is intended that the Head of Campus Seminar Series covers interesting, broadly-based topics with wide appeal, and is part of our commitment to you to ensure that Tāmaki remains a vibrant and active campus. So regardless of which department or group you belong to we strongly encourage you to take part in this campus-wide event, and value the contribution you make to this end.

Professor Peter Thorne

Acting Head of Tāmaki Innovation Campus

What's been happening?

Inequality a hot topic



The School of Population Health hosted the writers of **The Spirit Level: Why Equality Is Better for Everyone**. In New Zealand for the Sir Douglas Robb Lectures, Professors Kate Pickett and Richard Wilkinson, joined a panel of experts who provided insightful commentaries from the coalface. "It was wonderful to see academics, researchers and students from across the University as well as many visitors from the community attend this event," says organiser Professor Shanthi Ameratunga. "The audience interacted with energy and enthusiasm discussing opportunities to address complex and challenging local and regional issues with health and income inequalities."

Intelligent Transportation Systems



Internationally recognised academics and leading industry experts descended on Tāmaki campus for the **International Symposium on Intelligent Transportation Systems (ITS) Research**. The symposium focused on integrated technologies to improve the safety, capacity and efficiency of transportation systems, and introduced various international cutting-edge research and applications in ITS. The symposium was co-organised by Dr Bok-Suk Shin (Computer Science, Tāmaki), Dr Prakash Ranjitkar (Civil and Environmental Engineering), and Dr Takeshi Oishi (University of Tokyo).



On-campus clinic a boost for local community



Clinical Director Julia Sekula (right) with MHS in Nutrition and Dietetics student, Elize van Drimmelen.

A Nutrition and Dietetic Clinic is the latest addition to the University of Auckland Clinics at the Tāmaki Innovation Campus and it is believed to be the first of its kind in New Zealand offered in such an academic training environment.

In a win-win scenario, it gives the University’s Master of Health Sciences (MHS) in Nutrition and Dietetics final year students, additional practical clinical experience, allowing them to develop their assessment, intervention, education, and counselling skills in an outpatient environment.

And it’s also good news for the local community; easily accessible in Colin Maiden Park, affordable and open to anyone.

Clinical Director Julia Sekula explains, “The new clinic accepts self-referrals, referrals from health professionals and other University clinics, staff or students. We offer personal nutrition assessment, advice and counselling, resources, eating plans and recipes and also group classes and activities - all with our final year postgraduate students, supervised by a senior registered dietitian.”

She says an important part of the clinic is being able to provide ongoing support to clients.

“We work with each person to determine their goals and then devise their specific programme, often over a few sessions. For example, with weight loss, just one session is not going to be effective, so we have developed a package that they might consider - an initial hour-long assessment and three follow-up appointments.”

The clinic also provides teaching sessions at Glendowie’s Dove House and in July will start nutrition education sessions with the ADHB cardiac rehabilitation group. And in the pipeline are group sessions for both weight loss and eating in pregnancy.

A New Zealand registered dietitian, Julia Sekula studied at the University of Otago and completed her Masters through the University of Auckland. She has worked as a clinical dietitian at Auckland City Hospital, has expertise in kidney disease, and has a passion for improving the nutritional status of people with chronic conditions.

“A crucial aspect of being a dietitian is understanding what’s in our food, how to shop, prepare and cook food, how to enjoy it with family and friends and then link it with current scientific evidence to work practically with clients to make sense of it all.”

In brief

Coming up - Head of Campus Seminar Series

25 July, 3-4pm, 731.201

“Expressive Machines”

Associate Professor Mark Sagar



Academy Award winner, Dr Mark Sagar, will present on research taking place at the Auckland Bioengineering Institute’s Laboratory for Animate Technologies.

Young people can prevent bullying

Encouraging students to take action may reduce the prevalence of bullying in schools, according to recent research. Study leader Assoc Prof Simon Denny says this requires leadership and support from teachers, alongside interventions that develop young people’s empathy, problem solving skills and support positive relationships between peers. In schools where students reported teachers taking action to stop bullying, there was no decline in victimisation or bullying, supporting whole school approaches.

The human body can’t be fooled

A study led by Dr Nick Gant from Sport and Exercise Science and the Centre for Brain Research says the mouth is able to detect the presence or absence of carbohydrate even when a liquid tastes and smells identical to the real thing. Liquid solutions used in the study were sweetened artificially but when carbohydrate was present, there was increased activation in the brain that is not seen when only sweetness is present. This helps explain the ‘kick’ people complain is absent in diet beverages or products.



Doing the right thing?



Svetlana Feigin says her three year project kept her attention high all the way through, however writing up the research took an emotional toll, and was both challenging and upsetting.

From mercy killings to animal liberators; the subject of altruistic offending has captured, fascinated and changed Svetlana Feigin's life. It has also formed the basis of her PhD at Tāmaki Innovation Campus in the Faculty of Science.

The idea arose from a conversation with supervisor Professor Glynn Owens, who had looked at the subject early on in his own career and suggested Svetlana pick it up. "The more I thought about it, the more I just fell in love with the idea," she says.

Her research took her across the gamut of altruistic offending - illegal acts committed out of selfless motivation - such as assisted suicides or euthanasia. All of her subjects had faced legal consequences for their acts and this aspect caught her attention.

"There had been nothing done on altruistic offending, and so in the eyes of the law, it doesn't exist. Motivation plays a big role in crime - the selfish versus the unselfish and lack of remorse."

"Altruistic offending and its lack of remorse has significant impact on something like sentencing, where a person could not admit to remorse for actions they felt philosophically and morally correct, even though it may have led to mitigation in sentencing.

"It was clear from my studies that people who had offended in a legal sense, say, by assisting in a suicide of a loved one, had come to that point from the purest of motives and had no remorse about their actions. That was, in the main, not because they had eased or stopped the suffering but because they had followed the wishes of their loved one. In their eyes, they were motivated strongly by the concept that it was the right thing to do."

All seven participants in her study reported their lives had changed as a result of their actions. Svetlana hopes that her research will continue to highlight the issue. "It would be wonderful if it had an impact on the law but it would be just as valuable if

it can snowball the debate. It would appear there is a distinct motivation and difference in altruistic offending."

Although starting with human to human altruistic offending, the subject led her to question whether it could cross species. That in turn led to adding animal liberators to her research, despite it being a spontaneous twist and change in direction.

In both cases - assisted euthanasia and animal rights - there was a clear message that offenders felt strongly that they were doing the right thing on behalf of another, no matter what 'the system' said.

Svetlana says the three year project, now in its final months, kept her attention high all the way through. It also impacted on her life, both emotionally and practically, with an increased awareness in the inherent human and animal rights violations across the spectrum of New Zealand society.

It raised her concerns for animal rights, and she helped form the University of Auckland animal rights group to educate and spread awareness of issues relating to animal rights such as reducing the number of animals used, and re-used, in research and testing at the University.

She is also involved in spreading information on cruelty-free practices with the aim of raising the profile amongst students.

Writing up her research took an emotional toll. She rationalises this as having approached the research with an open mind and ensuring objectivity during the interviewing phases. However, transcribing and listening to people telling and re-telling their experiences, became both challenging and upsetting.

Svetlana's next challenge is likely seeing her write a book, combining her PhD learnings with personal experience. Her short-term goal is to stay in research with the prospect of another degree not discounted, nor potential work at the Department of Corrections.



Eru Pomare fellow finds research life changing



Karen Brewer is the recipient of the Health Research Council's Eru Pōmare Research Fellowship in Māori Health.

Māori speech language therapist, and postdoctoral research fellow in the Tōmaiora Māori Health Research Group, Karen Brewer intends to trial interventions and resources benefitting Maori with post-stroke communication disorders.

It is, she says, a way of honouring those who assisted her PhD research, describing experiences of Māori with aphasia and their whānau.

Karen's first degree was a BA in Linguistics and Spanish at Victoria University, but she found speech language therapy and its practical application of linguistics, a better fit. After completing the Master of Speech Language Therapy Practice at the University of Auckland, Karen worked as a speech language therapist at Waikato Hospital before beginning her PhD study.

It was here the journey took some unusual twists. "Initially my PhD was going to be about quality of life for people with aphasia. However, even after acceptance of my proposal, I had a nagging feeling that there was something else I should be doing.

"I kept thinking about all the Māori patients I had seen in the stroke ward, and whether quality of life meant different things in different cultures."

A meeting with Dr Sue Crengle in Te Kupenga Hauora Māori, subsequently her supervisor, led to an introduction to Dr Matire Harwood, who later also became a supervisor, and the initial plan took another turn.

"By the time I left the room I had agreed not only on Māori experiences of aphasia but to undertake it within a kaupapa Māori research framework. I quickly learnt that identity is integral and a researcher must be grounded in who they are. This meant an important part of my learning about kaupapa Māori research would involve working out my own identity.

"The story of this thesis is the story of me beginning to do just that - finding my place as a Māori woman and kaupapa Māori researcher."

Climate impact report highlights need for change



Professor Alistair Woodward

Professor Alistair Woodward is passionate about climate change impacts on human health, and his contribution to the latest report from the Intergovernmental Panel on Climate Change (IPCC) has just been released.

The second part of the fifth assessment report considers climate change impacts on people and the natural world, and Professor Woodward, whose area of interest is epidemiology and

biostatistics, led the chapter on human health and an accompanying paper subsequently published in the *Lancet*.

He says the report paid close attention to so-called high-end climate scenarios, given recent trends and the persistent failure of international negotiations to make credible progress toward substantial reduction in emissions. The health chapter highlighted effects of high temperatures on workers' health and labour productivity.

"We may see warming over land of 4 - 7°C by the end of the century, which means the hottest days will exceed present temperatures widely. In these circumstances many people will be living in conditions so extreme that the ability of the human body to maintain heat balance is compromised and unprotected outdoor labour is no longer possible," he says.

Our present consumption of energy is taking us further into the danger zone, but we are not yet committed to a plus four degree world. There are many opportunities to bend the climate curve, for example in energy policies and interventions that favour foot, bicycle and public transport.

"The key message is that climate change is a huge risk to health and all human activity, and boosting public health services in vulnerable, low-income countries is needed."

Professor Woodward says there are positive signs, such as President Obama's decision to cut greenhouse emissions from US power plants, and China's intent to price carbon for trading internally. He notes the present New Zealand government is not as keen to take strong action, although the outlook is brighter in Auckland with moves towards a balanced transport system, a healthy start on a long journey.

The IPCC assessment will be the focus of the Head of Tāmaki Innovation Campus Seminar Series on 22 August, 3-4pm, 731.201.



Brain research CoRE draws on Tāmaki strengths



Professor Peter Thorne (left) and Professor Richard Faull

Associated staff at the Tāmaki Innovation Campus will be contributing to one of the four Tertiary Education Commission's Centres of Research Excellence (CoRE) to be known as 'Brain Research New Zealand - Rangihou Roro Aotearoa'.

Professor Peter Thorne, acting Head of Campus and an associate director of the Centre for Brain Research, says their involvement is a testament to Tāmaki's multidisciplinary and innovative approach.

He says the spread of experience amongst the staff on the campus - in the University of Auckland Clinics, Faculty of Science and School of Population Health - who are involved with the Centre for Brain Research and Brain Research New Zealand in a variety of ways, contribute to a broad multidisciplinary approach to understanding brain disorders.

"It brings together people across a variety of disciplines, such as Toni Ashton, health economist; Ngaire Kerse and her interest in the health of older people; Winston Byblow

and his internationally-regarded stroke research; Suzanne Purdy in hearing and speech, and audiology and tinnitus work from Grant Searchfield."

They will become part of the national partnership between the Centre for Brain Research at the University of Auckland, the Brain Health Research Centre at the University of Otago, and researchers at AUT University and the NZ Brain Research Institute in Christchurch.

A key focus of the new CoRE is to unlock the secrets of the ageing brain and develop new therapies and better clinical and community care to enhance lifelong brain health for all New Zealanders.

Like all developed nations, New Zealand has an ageing population and a rapidly increasing number of people with ageing-related brain disorders like stroke, Alzheimer's, Parkinson's and Huntington's diseases.

According to co-directors Distinguished Professor Richard Faull (University of Auckland) and Professor Cliff Abraham (University of Otago) one in four New Zealanders aged over 65 will be affected by an ageing-related brain disorder by 2036. These disorders can result in profound and long-term impairment and place huge physical and emotional strains on individuals, family, and whanau.

"The mission of Brain Research New Zealand is for our scientists, clinicians and the community to work together to unlock the secrets of the ageing brain so that we can develop new therapies and better clinical and community care to enhance lifelong brain health," say Professors Faull and Abraham.

"The vision of this CoRE is to enable people to age well with a healthy brain. Developing a truly national, collaborative response to this issue is of critical importance. Direct costs associated with these disorders are estimated to be more than \$1 billion per year and are rising by more than 5 per cent per year."

'Now we are two'



The latest report from Growing Up in New Zealand, 'Now We Are Two: Describing our first 1000 days' provides new insight into the lives of two-year-olds in New Zealand - describing health and safety, emotional and behavioural development, and early learning of the nearly 7000 children that are part of this longitudinal research project

"Our third comprehensive report 'Now we are two' provides an overview of the milestones the Growing Up in New Zealand children have reached at this point, and the environment within which they live, learn and play. We are building an understanding of what has shaped our children's development and how their families are supported to help them reach their potential," says Study Director Associate Professor Susan Morton.

Many things are going well for these toddlers and their families. However, this report also highlights areas where New Zealand could do much better.

"Infectious diseases are common, and hospital admissions for respiratory and other illnesses are also high," explains Dr Morton. "We are hopeful that the information we are collecting from the families and the children themselves will help us to understand how we can improve these statistics, and importantly how we can reduce the inequities in outcomes some groups of children experience."