

MAPrc GAZETTE

Monash Alfred Psychiatric Research Centre Newsletter
Spring 2016



ACQUIRE LEARNING de CASTELLA RUN 2 MEND MINDS



It was a crisp and fresh morning on the last Sunday of August, perfect running conditions for the **Acquire Learning de Castella Run 2 Mend Minds!** More than 1500 runners and walkers gathered at Burke Hall in Kew to hit the scenic route of the Kew Boulevard in the **Vision PT 5km, Mizuno 10km** and **Nostra Homes 15km** events. The **Vision Personal Training** crew were there to motivate participants with a warm up at the start line and the **Lululemon** cheer squad were positioned along the course to encourage and entertain participants.

Meanwhile on the tennis courts, the **Run Ready** program for kids was in full swing, the highlight being the 80 metre dash across the finish line. No doubt followed by a visit to the petting zoo, jumping castle and our fabulous face painters!

As the first finishers crossed the line they were rewarded with a delicious piece of fruit courtesy of **The Fruit Box**, some essential hydration from Aquaforce and of course a show bag jam packed with goodies. The **Runner's World Mind and Body Expo** was warming up...

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Vision PT jumping for joy



**Left: Fun for the whole family
Top: Participants soak up the atmosphere**

Bottom: Post run fruit at the Mind and Body Expo



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DEVELOPING TREATMENTS FOR COGNITIVE IMPAIRMENT



The Cognitive Therapeutics Research team at work

The Cognitive Therapeutics Research Group at MAPrc, lead by Associate Professor Kate Hoy, is focussed on developing new treatments for the cognitive symptoms of psychiatric and neurological illnesses.

Cognitive impairments (i.e. difficulties with attention, memory, problem solving, decision making) are core features of a number of neurological and psychiatric conditions, they are largely untreated and can have devastating impacts on daily functioning. Our research uses cutting edge neuroscience techniques to

develop brain stimulation treatments for cognitive impairment.

We are currently conducting three clinical trials in this area, namely

Investigating patterned brain stimulation to treat the cognitive symptoms of mild to moderate Alzheimer's

- Trialling a new non-medication approach to improving cognition in people with schizophrenia
- stimulation on cognitive aging in healthy older adults.

The Cognitive Therapeutics Group is also conducting research into the neurobiological basis of cognitive impairment in head injury and mild cognitive impairment, as well as investigating ways to optimise efficacy of brain stimulation techniques for improving cognition.

The ultimate aim of our work is to develop new biomedical approaches to treatment for patients with cognitive impairment.

For more information please email kate.hoy@monash.edu

MESSAGE FROM THE DIRECTOR



Welcome to this edition of the MAPrc *Gazette*. In this edition you will read the compelling story of “Nina” and the devastating effect of mental illness on her family and how our research such as Assoc Prof Kate Hoy’s team on page 2 and Prof Susan Rossell’s work on page 6 directly translates into solutions for those living with the distress of mental illness.

I am proud to lead the Monash Alfred Psychiatry research centre (MAPrc) and our broad mission is to improve outcomes for people with mental ill health.

Our Centre is the largest Australian clinical research centre working with people of all ages who experience a range of mental illnesses. Women’s Mental Health and Therapeutic Brain Stimulation are our two biggest areas of research, although we have a total of 134 clinical studies across a range of conditions.

At MAPrc we are fortunate to combine real world clinical experience with cutting edge research innovations. We constantly learn from and with our patients as we listen to people’s lived experiences of mental illness and then formulate new ways forward.

There are so many challenges for us to tackle in providing new approaches and treatments for people with mental health conditions. Together we can utilise the latest developments in neuroscience, healthcare delivery and many other diverse areas of medicine, science and technology with compassion, empathy and respect to truly innovate mental health research and improve the lives of people with mental illnesses and their loved ones.

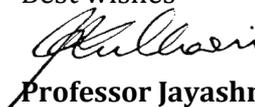
MAPrc is a part of the Alfred Hospital where we provide vital services to outpatients, as well as conducting research as part of the

Monash University community. We receive no government funding and rely on philanthropy and community fundraising such as the Acquire Learning de Castella Run 2 Mend Minds (page 1) as well as support from Monash and the Alfred.

MAPrc is committed to finding new and innovative treatments for those experiencing the effects of mental illness, will you join us in leading the fight to mend minds and make a gift to us this Christmas?

Making a donation is simple, you can send a cheque or money order made out to *The Alfred Foundation/MAPrc* to MAPrc, Level 4, 607 St Kilda Road, Melbourne 3004 or to use a credit card, visit us online at <http://www.maprc.org.au/support-us>

Best wishes


Professor Jayashri Kulkarni

COMING OUT OF THE DARKNESS: MEET 'NINA'



Nina is a 51 year old specialist nurse who worked in a senior role in a large hospital. She was in charge of a busy medical ward and had worked in the same hospital for 22 years, achieving many promotions over this period of time. She enjoyed her work and was a highly respected member of the Hospital. She and her husband of 24 years had two sons aged 17 and 14 years.

Nina had enjoyed a warm, nurturing early family life, a stable, loving marriage and her energetic, caring sons. She had no mental ill health, no serious physical illnesses and coped appropriately with the death of her father six years earlier.

Over 2 years, Nina's life changed drastically. Insidiously but steadily, Nina developed depression and anxiety symptoms that worsened over six months. She began to have episodes of crying and sadness for no reason, became irritable and hostile at work and experienced great difficulties with her memory and concentration.

One day, she was about to give a patient the wrong dose of medication and was stopped in time by a nursing colleague. Nina felt devastated, ashamed and guilty about her error, and then started to have panic attacks on her way to work. She lost her confidence and avoided having to give medications to patients. Nina was asked to take leave, and interpreted this as punishment for the recent incident. She stayed at home and became increasingly irritable, angry and resentful of her busy family. At the same time, she noted that she had gained four kilos in weight despite her usual healthy diet, was sleeping very poorly and felt exhausted a lot of the time. Initially her family tried to soothe her but after some months began to respond negatively to her. Her oldest son, a bright student, was doing his final year at high school, and began to refuse to have dinner with his family, saying that it was too difficult to be around his mother. Previously, Nina had taken a great interest in both of her son's schooling – often helping with homework. Her

younger son became isolative and said that he didn't know why his mother "seemed to hate him now".

At this time, Nina's mother insisted that her daughter see her doctor. Nina was diagnosed with depression and commenced on a large dose of an antidepressant. She developed a number of adverse effects to the medication, such as agitation, increased weight gain with worsened self-esteem, increased anger and generally feeling "wired". She was tried on two different antidepressants and then an antipsychotic medication was added to her treatment. Nina continued to feel angry, agitated, and tearful and now had an increasing sense of pessimism about her future. Her oldest son was suspended from school for using street drugs and he decided to leave school and travel with his friend. Feeling guilty about her son, one night she drove to a secluded spot and took an overdose of medications with alcohol. Leaving a suicide note for her family in which she apologised profusely, and she stated that she felt they would be better off without her. By chance, a passer by found her and called an ambulance.



Nina was seen in the MAPrc Women's Mental Health Clinic after a referral from her treating psychiatrist. She had been started on a different antidepressant, with partial response but she still felt agitated, extremely guilty (now about her suicide attempt as well as previous issues), sad and had problems concentrating. Nina felt



that her future was bleak and also could not believe how different her life was now compared to just 2 years previously.



We diagnosed Perimenopausal Depression. Nina joined one of our clinical trials of a particular hormone treatment (tibolone) and after a few weeks, she had improved greatly. After the trial, she continued to take the tibolone treatment and has ongoing breast screening and other general health tests with her GP. At six months after the trial, she felt like her old self.

NEUROIMAGING RESEARCH INTO VOICE-HEARING EXPERIENCES

People with psychosis often experience myriad interpersonal difficulties in their everyday lives, with comorbid hallucinations and delusions as well as widespread cognitive problems. The Cognitive Neuropsychiatry team at the Monash Alfred Psychiatry research centre (MAPrc), headed by Prof Susan Rossell, is dedicated to discovering how and why these experiences occur, and look to a future where these symptoms are better understood and treatment options more targeted and effective.

The study of auditory verbal hallucinations (AVHs), or hearing voices, is one of our team's key focus areas. These experiences occur when a person hears one or more persons speaking, but there is no corresponding external stimulus. People commonly find these experiences quite distressing, often affecting their daily functioning and quality of life. Current treatments are helpful for some individuals, however approximately a third do not gain relief from existing interventions, and continue to experience persistent voices.

Our team is currently working toward a better understanding of AVHs, from their onset (i.e. how and why they start), through to how new scientific knowledge can be harnessed to develop improved treatment options. Funded by the National Health and Medical Research Council (NHMRC), one of our latest projects involves using the latest neuroimaging advances to elucidate the antecedents of AVHs, and shed further light on the functional deficits involved.

Using functional magnetic resonance imaging (fMRI) and magnetoencephalography (MEG), our study aims to highlight structural and functional changes occurring during AVHs, as well as map out temporal activation patterns, tracking AVHs from origin through to completion, and identifying the brain regions involved at each stage.

To date, our participants have been extremely generous with their time and assistance, sharing their personal experiences, which at times could have been confronting to remember or speak about. We would like to take this opportunity to express our appreciation to these participants, without whom our research would not have been possible. In turn, many of our participants have expressed how much they enjoyed being a part of our study.

Some have found it personally meaningful to contribute in their own way so others may benefit from their experiences, whereas some have simply enjoyed adding structure to their day and feeling productive.

You can read more from one of our study participants who described her experience of being a research participant for a day here:

<http://www.divine.vic.gov.au/lifestyle/health-and-wellbeing/playing-my-part-science>

If you or someone you know would like to find out more about our research, or be involved in any way, please contact the Cognitive Neuropsychiatry team on (03) 9076 5172 or via email: cogneuroteam@gmail.com



Simulated research session with MEG technician Johanna Stephens at Swinburne University.

ACQUIRE LEARNING de CASTELLA RUN 2 MEND MINDS



(Continued from page 1)

...the smell of the MAPrc sausage sizzle enticing competitors and spectators to a post run snag, along with a delicious treat from the ever popular MAPrc bake stall.

Participants, families and friends happily browsed the stalls, while place getters were announced and spot prizes and raffle prizes were drawn. All in the name of raising awareness and funds for mental health research at MAPrc.

Combined with the generous support of our \$30K matching donor we are delighted to announce that the de Castella Run has raised over \$60K! This will fund scholarships for PhD students to undertake vital mental health research.

Thank you to our sponsors, partners and participants, we couldn't have achieved this without you. Looking forward to seeing you again next year on Sunday 27th August!

Want to join in next year? Then visit our website www.decastellarun.com.au

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RUN READY



MENTAL HEALTH WEEK 2016



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Every year, the 10th October marks World Mental Health Day. MAPrc was proud to be a part of the Mental Health Week Launch event on Tuesday 17th October at the Deakin Edge Theatre in Federation Square.

Co-ordinated by the Mental Health Foundation of Victoria, the event provided a number of activities including community festivals, art exhibitions, music, theatre and seminars - all in the name of broadening our community's understanding of mental health issues and reducing the stigma that is all too often attached to mental illnesses.

The MAPrc team were a strong presence at the launch. As the only research centre participating, staff were ready to answer questions and educate attendees on the range of studies at the centre and the different approaches and developments in our research.

Awareness around mental health is growing but more focus needs to be placed on how to fix these existing conditions which impact not only the individuals suffering from mental illness but their families, carers and the community at broad.