Innovating Psychiatry through Transcranial Magnetic Stimulation (TMS) training workshops run throughout the several transcranial magnetic stimulation (TMS) training workshops run through the several transcranial magnetic stimulation (TMS) training workshops run by Professor Fitzgerald and his group, as well as in the workshops and conferences held about women’s mental health throughout the year.

In October 2015, MAPrc was honoured by the presence of Dame Quentin Bryce at a public lecture given by me for the Central clinical school. Dame Quentin formally launched the Australian Consortium for Women’s Mental Health at this public lecture. The aim of this consortium, directed by me and run through MAPrc, is to bring together researchers, clinicians and other advocates of women’s mental health in order to recognise women’s mental health as a national priority and hence improve outcomes for women.

MAPrc continues to be a centre that encourages innovation, provides a great platform for testing new ideas as well as being an excellent translational nexus between research and clinical practice. Thank you for your continuing support.

Professor Jayashri Kulkarni
Director, The Monash Alfred Psychiatry research centre

In the MAPrc annual report for 2014 I described how I had at the time been reviewing data from clinical trials we have been conducting with TMS in the 10 years leading up to that time. I was struck by both the number of patients we had included in clinical trials of TMS in depression over this period of time and how this has translated into a large number of these patients having substantially improved lives. As I was reflecting for this report, I realised that the data from that analysis has just recently been accepted for publication, at least 12 months since we commenced looking at that information.

What struck me most from that observation was not how long it took from initially seeing the data until it was published but how this length of time is by no means unusual. Generally speaking, conducting research is a slow and usually quite drawn-out process. From the time when one first comes up with a good idea, to developing a protocol, to obtaining funding, to getting ethics approval, establishing administrative structures and staffing, actually doing the research itself and then analysing the data and writing it up — this is a process that usually stretches over many years. The actual conduct of the research itself can be lengthy, but sometimes takes up a relatively small proportion of the overall time it takes from the conception of an idea to publication. The publication process itself is frequently drawn-out and often a painful one. Manuscripts submitted to journals are reviewed over at least several months and not uncommonly rejected, only for the process to start again. If you are overly ambitious in the journals that you approach, or your research is somewhat unusual and doesn’t fit easily into the way reviewers like to see things, this process can become extremely prolonged and often leads to articles being filed in the bottom drawer, as it becomes all a little bit too hard.

Having the persistence to navigate these processes and the commitment to see them through is a critical aspect of being a successful researcher. Most importantly, however, is that one needs to be surrounded by a motivated and supportive team. The people that you work directly with, and the broader institutional environment, need to be sympathetic to the ups and downs that this process inevitably produces, both practically and emotionally.

I believe we are fortunate at MAPrc in that we have a great team of people. We have a team of people who are both personally and professionally supportive and this is an absolutely critical element of successful research. It is easy to be caught up in the stress of day-to-day work (I am certainly guilty of this frequently enough) and we forget about, or lose focus on, the great things that are being done by people around us. Getting the day-to-day work of research done, grinding it out at times, is critical to the development of new knowledge, new treatments and new hope for people with medical conditions, especially in troubling areas such as the psychiatric disorders that we focus on. These efforts should be constantly acknowledged and recognised.

Professor Paul Fitzgerald
Deputy Director
Monash Alfred Psychiatry research centre
We are privileged to have as our patron His Excellency General the Honourable Sir Peter Cosgrove AK MC (Retd). We are grateful for his continued patronage and support of our centre, and were delighted when, accompanied by Her Excellency, Lady Cosgrove, he visited our centre and met with our team in September 2014.

MAPrc is the Monash Alfred Psychiatry research centre. Our name reflects our position within two major institutions — Monash University’s Central Clinical School, and the Alfred Hospital’s Department of Psychiatry.

Our focus is on world class, translational, clinical research. The location of our centre within the Alfred Hospital Precinct in Melbourne provides a vital impetus, connecting our work with the real issues facing people with mental illness.

We have many national and international collaborative partners including consumers & carers, advocacy organisations, biotechnology companies and researchers from a number of diverse fields.

Our goal is to improve the lives of people suffering with serious mental health illnesses such as schizophrenia, bipolar affective disorder, major depression and major anxiety. These severe mental illnesses impact hugely on the quality of a sufferer’s life, and impose a huge cost on families and on our wider community.

Research at MAPrc is extraordinarily diverse. Our projects include experimental neuroscience studies which are recognised around the world for the breakthrough insights they provide into brain structure and function, in health and illness. In addition, new and effective treatment approaches are being developed at MAPrc. These include Transcranial Magnetic Stimulation as a treatment for depression, and Estrogen as a treatment for schizophrenia.

Our team of over one hundred researchers is a multidisciplinary team from various backgrounds including medicine, nursing, psychology, engineering, allied health, neuroscience, and health information services.

Our research is funded by independent competitive grants and a range of other philanthropic funding bodies. These grants typically provide only a portion of the funds required to fully cover the total cost of each individual research study or trial. Therefore we also rely on donations, and on our own fund raising events to ensure that we can continue to undertake valuable and innovative research in our pursuit of improving the outcomes and quality of life of people living with mental illness.

MAPrc’s Executive team is supported by our Research Fellows, Clinical Research Assistants, our teaching staff, our post-graduate and under-graduate students, our enthusiastic team of volunteers and our dedicated administrative staff.
The Women’s Mental Health team at MAPrc focusses on developing new approaches for women with a number of different mental illnesses. We utilise a broad range of methodologies and collaborate with researchers in basic, preclinical science areas, clinicians from many different disciplines, anthropologists and sociologists, as well as consumers and carers. Our broad aim is to highlight the special needs of women with mental ill health across the life cycle and develop new treatments, better understanding of mental health conditions in women, and to provide new services tailored for women.

This year, we have begun a study into the poorly understood condition of “Borderline Personality Disorder”. We prefer to call this condition “Complex Trauma Disorder” and in many cases there is a link between early life trauma and the development of symptoms such as very poor self-esteem, suicidal thinking and actions, poor self-identity, rage, mood swings and even psychosis symptoms. We are conducting a clinical trial with a medication - Memantine- that is a cognitive enhancer, aiming to improve the symptoms of this disabling condition that affects nearly 6% of the population, mainly women.

Our earlier work into the impact of reproductive hormones on mental health remains both a research and clinical focus for us. Conditions such as premenopausal depression, premenstrual depression and postnatal disorders are all real entities due to hormone changes. Different oral contraceptives can also affect mood. Another important, ongoing project is NRAMP, the National Register of Antipsychotic Medications in Pregnancy. This is the first register of its kind worldwide. NRAMP is a large database of information about the effects of antipsychotic medications, taken during pregnancy and the postnatal period, on mother and baby. This is a precious resource, and clinicians worldwide ask our advice about optimal and safe antipsychotic drug management during pregnancy.

Our Women’s Mental Health Clinic is an active clinical translation of our research findings and continues to be a very highly sought after service for women seeking new approaches for mental illnesses. Many women who attend the Clinic choose to participate in our research studies and in this way there is an important nexus between research and clinical practice.

Professor Kulkarni gave evidence at the Victorian Royal commission into Violence Against Women in 2015. This is an example of our advocacy work, which is an important role for our team. Women’s Mental Health is not a national priority, which is not good enough. We urge you to help us make women’s mental health everyone’s business.
The Australian Consortium for Women's Mental Health was founded by Professor Jayashri Kulkarni, Professor of Psychiatry and Director of the Monash Alfred Psychiatry Research Centre (MAPrc). The Consortium aims to address the lack of awareness, support, treatments, services and translational research which currently surround women’s mental health by developing a national agenda focused specifically on this area of healthcare. It will establish integrated physical and mental health strategies and approaches to care as a national focus, putting women’s mental health on the map and ultimately optimising robust outcomes.

The Australian Consortium for Women’s Mental Health is the collaboration of organisations who are leading the way in understanding women's mental health throughout a woman’s lifespan. The one day conference was attended by 100 general practitioners from both metropolitan and rural areas all over Australia.

The key topics covered included:

• Understanging Women’s Mental Health and Making it a Priority: Prof Jayashri Kulkarni (Professor of Psychiatry and Director of MAPrc)
• A Personal Story: Mariska Meldrum (Participant and Patron of the National Register of Antipsychotic Medication in Pregnancy - NRAMP)
• Premenstrual Dysphoric Disorder and Menopause and Mental Health: Dr Roisin Worsley (Endocrinologist)
• Perimenopausal Depression: Ms Emmy Gavrilidis (Women’s Mental Health Team Coordinator, WA)
• Polycystic ovary syndrome (PCOS)
• Borderline Personality Disorder (BPD)
• Motherhood and Mental Health
• Perimenopause/Menopause — Endocrine Aspects, Anxiety and Depression
• Assessment of Violence against Women

The Women's Mental Health team from MAPrc presented the latest research and understanding about key issues impacting on women’s mental health.

The areas covered included:

• Poly cystic ovary syndrome (PCOS)
• Premenstrual dysphoric disorder (PMDD)
• Understanding and Managing Borderline Personality Disorder (BPD)
• Motherhood and Mental Health
• Perimenopause/Menopause — Endocrine Aspects, Anxiety and Depression
• Assessment of Violence against Women
Adjunctive Hormone Therapy for Treatment Resistant Depression in Peri and Post menopausal Women

RESEARCHERS
Ms Emmy Gavrilidis
Dr Roisin Worsley

CHIEF INVESTIGATOR
Prof Jayashri Kulkarni

FUNDING
$699,514.44 — NHMRC Project Grant.

AIM OF PROJECT
To investigate the effectiveness of a hormone treatment (Tibolone) for women with depression related to menopause.

PARTICIPANTS
Women with depression aged between 45-65.

START AND END DATES
2013 -2016

METHODOLOGY
The study employs a 12 week, double blind, randomised, placebo-controlled, adjunctive treatment trial design. Participants are tested fortnightly in regards to depression and monitored for any medication effects. Currently recruiting.

Memantine in the Treatment of Borderline Personality Disorder

RESEARCHERS
Ms Emmy Gavrilidis
Dr Jasmin Grigg
Dr Roisin Worsley

CHIEF INVESTIGATOR
Prof Jayashri Kulkarni

AIM OF PROJECT
To investigate the effectiveness of adjunctive memantine, a cognitive enhancing agent, in improving symptoms of Borderline Personality Disorder.

PARTICIPANTS
Men and Women with Borderline Personality Disorder aged 18-65.

START AND END DATES
2015 -2017

METHODOLOGY
This is a double-blind, placebo-controlled, randomised pilot study conducted over an 8 week period. Participants are tested fortnightly in regards to BPR symptoms, cognition and medication effects. Currently recruiting.

Selective Estrogen Receptor Modulators - A New Adjunctive Treatment for Men with Schizophrenia

RESEARCHERS
Dr Jasmin Grigg
Ms Emmy Gavrilidis
Dr Roisin Worsley

CHIEF INVESTIGATOR A
Prof Jayashri Kulkarni

CHIEF INVESTIGATOR B
Prof DA Barton,

CHIEF INVESTIGATOR C
Dr C Gurvich

FUNDING
$788,419.13 — NHMRC Project Grant.

AIM OF PROJECT
To examine the impact of adjunctive SERM treatment (Raloxifene) on the psychopathology and cognitive functioning of men with schizophrenia.

PARTICIPANTS
Men with schizophrenia aged between 18 and 60.

START AND END DATES
2013 — 2016

METHODOLOGY
The study employs a 12 week, double blind, randomised, placebo-controlled, adjunctive treatment trial design. Participants are tested fortnightly in regards to psychopathology, cognition and monitored for any medication effects. Currently recruiting.
**Psychiatric Neurotechnology**

Psychiatric Neurotechnology research uses advanced neuroscience technology to investigate brain function and to develop innovative treatments for Depression, Schizophrenia, Autism and Asperger’s syndrome, Bipolar disorder, Obsessive Compulsive Disorder (OCD), Fibromyalgia, Traumatic Brain Injury, Dementia and Mild Cognitive Impairment.

Our novel treatments include the following Brain Stimulation techniques, which are being increasingly used as effective non-invasive ways of studying and modifying brain function:

- Transcranial Magnetic Stimulation (TMS)
- Transcranial Direct Current Stimulation (tDCS)
- Transcranial Random Noise Stimulation (tRNS)
- Magnetic Seizure Therapy (MST)
- Deep Brain Stimulation (DBS)

We also use advanced imaging techniques, including Electroencephalography (EEG), Near infra-red spectroscopy (NIRS), Magnetic resonance imaging (MRI), Diffusion tensor tomography (DTI) and Positron emission tomography (PET) to study the effect of these new treatments on brain function.

In 2015 we conducted 11 separate clinical trials across depression, autism, fibromyalgia, head injury, schizophrenia and OCD. We did over 1400 individual TMS treatments and over 500 clinical reviews and interviews. We also conducted 13 experimental studies, published 43 papers, ran four clinical and experimental training courses and were successful in applications for 13 grants. In addition, we had six students complete their degrees.

**Research Collaborations**

**Brain Stimulation Research:** We have a strong and highly productive research collaboration with the Centre for Addiction and Mental health, Department of Psychiatry, University of Toronto. It includes close links with the Temerty Centre for Therapeutic Brain Intervention and the Temerty Centre for Therapeutic Brain Intervention. This collaboration involves the joint development of research protocols, strategic planning and research projects and has generated a considerable number of joint publications.

**Deep Brain Stimulation:** This is a collaboration with Associate Professor Richard Bitar (Neurosurgeon) and Associate Professor Dennis Velakoulis (Royal Melbourne Hospital and University of Melbourne), which involves a novel program involving the use of Deep Brain Stimulation in the treatment of patients with severe treatment resistant depression.

**National TMS Clinical Trial Network:** We have an established national network of TMS trial centres in 6 private psychiatric hospitals around Australia. This network has been engaged in the conduct of multiple multi-site clinical TMS trials.

**Research**

**Psychiatric Neurotechnology Team**

**OUR RESEARCH**

**Selected Projects**

**Repetitive transcranial magnetic stimulation for the treatment of fibromyalgia**

**PRINCIPAL INVESTIGATORS**

- Dr Bernadette Fitzgibbon
- Professor Paul Fitzgerald
- Dr Kate Hoy
- A/Professor Geoffrey Littlejohn
- Dr Emma Guymet

**ASSOCIATE INVESTIGATORS**

- Dr David Elliot
- Ms Susan McQueen
- Ms Lenore Wambeek

**FUNDING**

- NHMRC early career research fellowship ($200,000)
- Arthritis Australia ($10,000)
- Monash University Advancing Women’s Grant Scheme ($11,000)

**AIM OF PROJECT**

To investigate the clinical efficacy of a 4-week rTMS treatment course applied to the left dorsolateral prefrontal cortex (DLPFC) in patients with fibromyalgia.

**BACKGROUND**

Fibromyalgia is a complex chronic disorder with current treatments limited in their efficacy. One promising new treatment option is repetitive Transcranial Magnetic Stimulation (rTMS); a non-invasive technique that can change the activity of neurons in the brain. Preliminary studies support the use of rTMS for pain relief in people who suffer from fibromyalgia; however treatment courses have been brief (~two weeks) therefore potentially limiting the therapeutic benefit.

**METHODOLOGY**

In this double-blind, randomised, placebo-controlled trial, participants undertake a four-week (Monday to Friday) treatment course of high-frequency (10Hz) left-hemisphere DLPCF-rTMS. The primary outcome measure is average pain intensity and unpleasantness over the last 24 hours. Secondary outcome measures are taken to assess the impact of the treatment on broader symptoms.

**PRELIMINARY FINDINGS**

In a preliminary analysis of 11 participants, eight underwent active treatment. Within this group, we observed a significant reduction in pain unpleasantness from baseline to final treatment, as well an improvement in a number of secondary measures including pain interference and impact, anxiety, and pain catastrophisation. This was not observed in the three participants who underwent sham rTMS.

**CONCLUSIONS**

The results of our preliminary analysis demonstrate a four-week rTMS treatment course applied to the DLPCF to significantly reduce symptomatology in a small sample of patients with fibromyalgia. These results support the potential role of a 4 week rTMS course as a pain management option for fibromyalgia.

**Current Status**

Recruitment ongoing.
The Cognitive Therapeutics Group, led by Dr Hoy, is focused on the development of novel biological treatments for cognitive impairment, in both psychiatric and neurological illnesses. Specifically, the group investigates the cognitive and neurobiological effects of brain stimulation techniques such as transcranial Direct Current Stimulation (tDCS), transcranial Alternating Current Stimulation (tACS), transcranial Random Noise Stimulation (tRNS), Transcranial Magnetic Stimulation (TMS), and Theta-Burst Stimulation (TBS).

### Investigating a novel approach for improving cognition in schizophrenia

**PRINCIPAL INVESTIGATOR**
Dr Kate Hoy

**ASSOCIATE INVESTIGATORS**
Ms Hannah Coyle
Ms Caitlyn Rogers
Prof. Paul Fitzgerald

**FUNDING**
NHMRC Career Development Fellowship ($411,768)
NHMRC Equipment Grant ($95,000).

**AIM OF PROJECT**
To investigate the clinical efficacy of a 5 session course of tDCS for the treatment of cognitive impairment in schizophrenia. We are also examining brain changes underlying any improvements.

**BACKGROUND**
People with schizophrenia can experience difficulties with attention, memory and problem solving; these are referred to as cognitive symptoms. There are currently no effective treatments for these symptoms.

**METHODOLOGY**
In this double-blind, randomised, placebo-controlled trial, participants undertake a five-session course of tDCS treatment over a single week. The primary outcome measure is cognitive performance 24 hours and one month following treatment. Secondary outcome measures include neurobiological and functional outcomes of treatment.

**PRELIMINARY FINDINGS**
In a preliminary analysis of 14 participants, seven in active treatment, seven in sham, we found a greater improvement in cognitive performance at 24 hours post treatment in the active group (Cohen’s d = 1.07). This improvement was maintained at the one month follow up (n = 6, 4 in active, 2 in sham).

**CONCLUSIONS**
The results of our preliminary analysis indicate that tDCS may be a promising treatment for cognitive impairment in schizophrenia.

**CURRENT STATUS**
Recruitment ongoing.

### A2: Accelerated rTMS in the treatment of depression

**RESEARCHERS**
Prof Paul Fitzgerald (PI)
Dr Kate Hoy
Ms Susan McQueen
Mr David Elliot
Ms Julia Quirk
Mr Rodney Anderson
Ms Melissa Kirkovski
Ms Hannah Coyle
Ms Cassandra Thomson

**FUNDING**
NHMRC Project Grant, $470,000, 2013-2016

**AIM**
To investigate whether accelerated rTMS has efficacy in the treatment of patients with a major depressive disorder.

**PARTICIPANTS**
Persons with treatment resistant depression between the ages of 18 and 75.

**METHODS**
It is a randomised control trial where participants have a 50/50 chance of being in either a standard treatment arm (single treatments, Monday to Friday, for four weeks) or to the accelerated treatment arm (three treatments per day on six days spread over three weeks).

**PROJECT STATUS**
Recruitment is complete.
119 participants have consented, with a recruitment target of 120.

**Current Clinical Trials**
1. Investigating Transcranial Direct Current Stimulation for treating cognition symptoms in people with schizophrenia.
2. Investigating Theta-burst Stimulation to treat the cognitive symptoms of mild to moderate Alzheimer’s Disease.
3. Investigating transcranial direct current stimulation and cognitive training to improve memory and attention in people who have had a mild to moderate traumatic brain injury.

**Selected Current Experimental Research Projects**
1. Exploring the neurobiological correlates of cognitive performance in healthy young adults, healthy older adults and people with mild cognitive impairment.
2. Investigating optimal methods of enhancing plasticity and working memory using transcranial direct current stimulation.
The Cognitive Neuropsychiatry lab aims to examine the relationships between mental illness, cognitive data to specific combinations of genes. We also collect genetic information so that, in time, we may link the cognitive, eye-tracking and neuroimaging disorder and major depressive disorder. We use techniques involving a full battery of cognitive assessments, by our research group will complete this battery. Thereafter, they may wish to further participate in specific projects, for instance neuroimaging sessions conducted at Swinburne University, or therapies aimed at strengthening specific thinking skills, such as attention, memory and organisation.

THE MENTAL HEALTH TEAM

TEAM LEADER: PROF SUSAN ROSSELL
Susan Rossell is a Professorial Research Fellow at Brains and Psychological Sciences Research Centre, Swinburne University and holds adjunct positions at the Monash Alfred Psychiatry research centre and Psychiatry within St Vincent’s Health. Her research has focused on understanding the cognitive and neurobiological processes involved in psychosis and related disorders. Prior to coming to Australia, Susan studied at the University of Manchester, the Institute of Psychiatry (part of Kings College London) and Oxford University. She gained experience in neuroimaging whilst undertaking a position at the world renowned Functional Imaging Lab, Queens Square, London, UK. In 2000, she was awarded a prestigious International Wellcome Post-doctoral Fellowship during which she spent part of her time at Macquarie University in Sydney. From 2004 to 2007, she was Head of the Cognitive Neuropsychiatry Department at the Mental Health Research Institute in Melbourne. In 2008, she moved to Monash Alfred Psychiatry Research Centre, and in 2010 joined Swinburne University. Susan has published extensively and has received the International and European awards for Young Investigator in schizophrenia.

OUR RESEARCH
In the Cognitive Neuropsychiatry lab group, focus is placed on a large-scale research program, with a series of smaller studies subsumed under the umbrella of this project. These individual studies are often run by students to fulfill the research component toward attaining their postgraduate qualifications (see Figure 1). Our large-scale research program ‘Genes and Cognition’ requires participants to complete a set battery of tasks designed to evaluate clinical symptomatology, cognitive function and eye movements. The majority of participants assessed by our research group will complete this battery. Thereafter, they may wish to further participate in specific projects, for instance neuroimaging sessions conducted at Swinburne University, or therapies aimed at strengthening specific thinking skills, such as attention, memory and organisation.

STUDENT RESEARCHERS
Imogen Bell (PhD)
Rachel Brand (PhD)
Shayan Bryce (D.NeuroPsych)
Sean Cunlithers (PhD)
Natalia Contreras (PhD)
Sarah Lancaster (PhD)
Stephanie Louise (PhD)
Maree Reser (D.ClinPsyCh)
Jacqueline Riddiford (PhD)
Monique Scott (D.ClinPsyCh)
Philip Sumner (PhD)
Lizzie Thomas (PhD)
Nicole Brownfield (Honours)
Daniela Calafiori (Honours)
Riana D’Netto (Honours)
Eleni Lysikatos (Honours)
Andrew McCann (Honours)
Ellen West-Dawson (Honours)

2015 HIGHLIGHTS/ AWARDS/DISTINCTIONS
Prof Rossell was bestowed the International Women’s Day Award, selected as Swinburne’s Significant Woman, and was a keynote speaker at the International Women’s Day celebration in March.

Dr Tamryn Van Rheenen (early career researcher and ex-student of Prof Rossell) was also recently awarded the 2015 Victorian Young Tall Poppy Science Award in November.

PUBLICATIONS
To date in 2015, the Cognitive Neuropsychiatry team has had a large number of publications accepted in prominent academic and scientific journals, spanning various areas of mental health research. These include schizophrenia and related psychotic disorders (eight publications), mood disorders (four publications), genes and cognition (five publications), neuroimaging (two publications), body image and eating disorders (six publications), anxiety disorders (1 publication) as well as research involving non-clinical populations (six publications). Furthermore, Dr Gurvich hosted the research topic for Frontiers in Psychiatry that was turned into an e-book, “Cognition across the psychiatric disorder spectrum: From mental health to clinical diagnosis”.

STUDENTS COMPLETED IN 2015
Four doctoral students completed their degrees supervised/co-supervised by Prof Rossell.
• Peter Goodin, “Immunological responses in depression and psychophysiological correlates”, PhD (Swinburne University).
• Chris Groot, “Are auditory verbal hallucinations related to auditory processing deficits and prosodic impairment in schizophrenia?”, PhD (University of Melbourne).
• Andrea Philippou, “Investigating the neurobiological and cognitive features of anorexia nervosa”, PhD (University of Melbourne).
• Eric Tan, “Neurocognition and language in the causes and consequences of formal thought disorder in schizophrenia”, PhD (Monash University).

In addition, Honours students Nicole Brownfield, Riana D’Netto, Eleni Lysikatos, Andrew McCann, and Ellen West-Dawson completed their undergraduate degrees at Swinburne University, with Prof Rossell as their primary supervisor.
Our research

Cognition and neuroimaging studies

**Chief Investigator**
Prof Susan Rossell

**Associate Investigators**
Dr Caroline Gurvich
Dr Wei Lin Toh
Dr Erica Neill,
Dr Rachel Batly,
Dr Eric Tan,
Sean Carruthers,
Sarah Lancaster,
Phillip Sumner,
Lizzie Thomas

**Funding**
NHMRC; Barbara Dicker Brain Sciences Foundation

**Background**
Psychotic disorders, involving schizophrenia, schizoaffective disorder, and bipolar disorder, are characterised by a broad range of symptoms, including hallucinations, delusions, and thought disorder. People who experience psychosis are also likely to exhibit noted cognitive difficulties, specifically in the areas of language, memory and executive function. There is a need to further investigate how these cognitive deficits are linked to particular psychotic symptoms, such as ‘hearing voices’, unusual beliefs or impaired thinking patterns. In some cases, the cognitive deficits have also been coupled with specific brain abnormalities. In a similar way, multiple genes have been found to be related to the presence of certain observed symptoms. Our hope is that a better understanding of cognition, neurobiology and genetic contributions underlying these disorders will spur the development of effective and novel pharmacological and psychological interventions.

**Aims**
Study 1 aims to examine the genetic and functional magnetic resonance imaging (fMRI) underpinnings of semantic memory deficits associated with thought disorder in schizophrenia. Study 2 aims to specifically investigate the influence of a genetic polymorphism of the M1 receptor gene on cognition as well as structural networks connecting key brain regions involved in cognitive function in schizophrenia.

**Method**
Participant groups are individuals with schizophrenia (n=50), including those with thought disorder as well as age-, sex-, and IQ-matched healthy controls (n=50). Participants are asked to undergo a standard clinical and cognitive assessment battery, blood-taking for genetic testing, followed by a two-hour non-invasive functional and structural magnetic resonance imaging (fMRI) session.

**Current Status**
Ongoing until end 2018.

Auditory verbal hallucination studies

**Chief Investigator**
Prof Susan Rossell

**Associate Investigators**
Dr Neil Thomas
Dr Wei Lin Toh
Sarah Lancaster
Monique Scott

**Funding**
NHMRC; Barbara Dicker Brain Sciences Foundation

**Background**
Auditory verbal hallucinations, also known as ‘hearing voices’, refer to the perception of verbal utterances in the absence of corresponding external stimuli. Whilst auditory verbal hallucinations are regarded as a hallmark indicator of psychosis, they are encountered in various diagnoses. Yet only limited research has considered them in the presence of bipolar disorder and major depressive disorder, despite recognition of their frequency in these conditions. These gaps in knowledge therefore need to be addressed, and it is imperative to identify how voice characteristics differ in the mood disorders, and also fluctuate according to diagnostic subtype or illness phase.

Whilst the phenomenology of auditory verbal hallucinations has been well-documented in schizophrenia, its specific neurobiological mechanisms and genetic underpinnings remain unknown. Emerging research indicates that individuals with auditory verbal hallucinations show auditory and cortical abnormalities not present in other individuals with psychosis who do not ‘hear voices’. As such, neuroimaging techniques involving MRI and magnetoencephalography (MEG), with millisecond ‘real-time’ resolution, will be employed to elucidate the specific neuroanatomical brain regions as well as cerebral activation patterns implicated in ‘voice-hearing’ experiences.
Clinical intervention studies

CHIEF INVESTIGATOR

Prof Susan Rossell

ASSOCIATE INVESTIGATORS

Dr Neil Thomas
Shayden Bryce
Natalia Contreras
Stephanie Louise
Manee Reser

FUNDING

MZAID: St Vincent’s Hospital Research Endowment Fund

BACKGROUND

Cognitive Remediation Therapy (CRT) comprises a set of cognitive drills or compensatory interventions designed to improve cognitive abilities such as attention, working and verbal memory, flexibility and planning, and executive function, which in turn lead to improved social functioning. There is increasing empirical support regarding the benefits of CRT for people with schizophrenia. These positive effects on cognitive performance are noted to persist, even after the interventions have ceased. In fact, these cognitive gains have been linked to advances in securing and maintaining gainful employment. There is wide variation in existing CRT programs in terms of their focus (e.g. psychosocial vs. vocational), frequency/duration of sessions, or appropriate outcome measures. Ongoing research has tried to identify the ‘active ingredients’ promoting a positive treatment response as well as motivational enhancements indicative of intervention success.

Mindfulness-based therapy seeks to interrupt automatic cognitive processes and teach individuals to focus less on reacting to incoming thoughts and feelings, but instead become aware of, observe and accept them without attachment or judgment. This mindfulness practice allows one to notice when these involuntary responses are occurring and to alter their reaction to form more of a reflection. There has been scant neuroimaging research in this area, but preliminary fMRI data has shown increased activation in the prefrontal cortex, signifying a greater degree of self-control.

AIMS

Studies 1, 2 and 3 all seek to evaluate various aspects pertaining to the efficacy of CRT in individuals with schizophrenia or schizoaffective disorder. Study 1 aims to evaluate whether visual processing training influences outcomes in CRT. Study 2 aims to examine the efficacy of a top-down cognitive remediation program (COGPACK) relative to an active videogame control. Study 3 aims to identify specific factors influencing the efficacy of CRT outcomes. Study 4 is a mindfulness-based treatment for people who experience auditory verbal hallucinations, and comprises a group therapy program designed to help people cope better with these experiences.

METHOD

For Studies 1, 2 and 3, participants are asked to attend a set number of hour-long group CRT sessions per week for a predetermined number of weeks. Baseline, mid-intervention, end-intervention, and follow-up assessments will be conducted, with cognitive performance (MATRICS) and self-reported independent living skills as the main outcome measures.

For Study 4, participants attend a mindfulness-based group therapy program targeted at ‘voice-hearers’. Prior to and following this intervention, they are asked to undergo a neuroimaging session to explore whether such therapy can lead to brain changes.

CURRENT STATUS

Study 1 has been completed. Studies 2, 3 and 4 are ongoing until end 2018.
The Psychopharmacology team at the Monash Alfred Psychiatry Research Centre (MAPrc) provides high quality clinical trials in adults with mental health issues. The team is led by Professor Jayashri Kulkarni, who is the Director of MAPrc and an internationally renowned expert in the field of clinical psychiatry and research. We have a dedicated group of highly experienced doctors and researchers who have extensive knowledge of Good Clinical Practice (GCP), Case Report Form (CRF) management and patient recruitment and retention. Our outstanding track record of industry-sponsored research has led to significant contributions to new and innovative treatments for people suffering from mental health issues.

MAPrc is in a unique position as it is part of both Alfred Health and Monash University. These internationally renowned institutions provide access to world class clinical and academic staff. We have a dedicated Human Research Ethics Committee that supports our researchers in conducting ethical, safe and high quality research.

Patients who have participated in our clinical trials often comment on the personable, caring, non-judgemental and kind nature of the team and are surprised at the team’s ability to go above and beyond to make them feel supported throughout their patient journey in a clinical trial.

Consequently, the Psychopharmacology team at MAPrc is at the cutting edge of researching new and innovative treatments for mental health and wellbeing. The team offers hope to patients who have frequently exhausted all commercially available treatment options.

Our vision is to continue to provide high quality research outputs within psychopharmacology, and to offer clinicians new and innovative treatment options for their patients.

2015 Highlights/Awards/Distinctions

2015 was an exciting year for the MAPrc Psychopharmacology Team. We were praised for our performance as the top recruiting site in Australia, and the top global recruiting site during active recruitment, for a new study in depression. In addition to this, the team randomised the first subjects in Australia for two of our studies one looking at new treatments for social anxiety disorder, and one looking at treatment resistant depression. With some exciting studies in the pipeline for 2016 we were the first site to open recruitment for the Social Anxiety study, for which we are currently screening our first subjects.

Our team is looking forward to the opening of two new studies in early 2016.

The AMARANTH study will be looking at a treatment for early Alzheimer’s, while an additional new trial will investigate the safety and efficacy of intranasal esketamine. In preparation for the intranasal esketamine study, members of the team travelled to Taiwan for training on the ESKETINTRD0004 study protocol and procedures.

In 2015 the Psychopharmacology team was awarded a $200,000 VicHealth grant, with the aim of decreasing cigarette smoking in people with severe persistent mental illness. The study will investigate the use of vaporsed nicotine replacement products, including nicotine e-cigarettes, as a harm reduction intervention. This study is due to start recruitment in early 2016.
ONDANSETRON
A Double-blind, Placebo Controlled, Randomized Investigation of Ondansetron in Chronic Residual Schizophrenia

RATIONALE
Ondansetron, a serotonin 5HT3 receptor antagonist, has shown promising results in the treatment of schizophrenia symptoms in a number of small scale studies. In particular, ondansetron has shown benefits in reducing the persistent cognitive and other symptoms experienced by many patients with schizophrenia.

OBJECTIVE
To evaluate the effectiveness of ondansetron as an adjunct to antipsychotic medication, in the treatment of positive, negative and cognitive schizophrenia symptoms.

Stanley Medical Research Institute (US) — Research Grants ($998,405)

DURATION OF STUDY
This study consists of five patient visits over 12 weeks.

MAIN INCLUSION CRITERIA
• Ability to provide informed consent
• Men and women aged between 18 and 65 years
• Current DSM-IV-TR diagnosis of schizophrenia, schizoaffective or schizoaffective disorder
• Current treatment with a stable and standard dose of an antipsychotic medication, oral or intramuscular (minimum 8 weeks)

MAIN EXCLUSION CRITERIA
• Currently pregnant or breastfeeding
• Unstable medical condition, neurological disorder or unstable seizure disorder
• Current DSM-IV-TR diagnosis of substance abuse or dependence disorder or another Axis I disorder
• Regular use of another 5HT3 antagonist (e.g. Cocaine)

ALK5461-208
A Phase 3 Multicenter Study of the Long-term Safety and Tolerability of ALKS 5461 for the Adjunctive Treatment of Major Depressive Disorder in Adults who Have an Inadequate Response to Antidepressant Therapy (the FORWARD-2 Study)

OBJECTIVE
To assess the long-term safety and tolerability of ALKS 5461 for use as an adjunctive therapy to antidepressants for the treatment of major depressive disorder.

DURATION OF STUDY
This study runs for up to 56 weeks, consisting of 52 weeks of dosing and a 4 week follow-up period.

MAIN INCLUSION CRITERIA
• Men or women aged between 18 and 64 years
• Primary DSM-5 diagnosis of SAD
• BMI between 18 and 35 kg/m²
• Women who are not able to bear children

MAIN EXCLUSION CRITERIA
• History of more than two unsuccessful adequate pharmacological treatment trials for SAD
• Concurrent use of psychotropic medications
• Untreated thyroid disease or dysfunction

STUDY STATUS
This study is currently recruiting participants.

STUDY COORDINATOR
Mirjana Stojkovic

SOCIAL ANXIETY STUDY
Phase 2a Randomized, Double-blind, Placebo-Controlled, Parallel-Group, Multi-center Study Investigating the Efficacy, Safety, and Tolerability of JNJ-42165279 in Subjects with Social Anxiety Disorder

OBJECTIVE
To investigate the efficacy of JNJ-42165279 for treatment in subjects with Social Anxiety Disorder (SAD).

DURATION OF STUDY
This study runs for up to 20 weeks, consisting of 12 weeks of study treatment.

MAIN INCLUSION CRITERIA
• Men or women aged between 18 and 65 years
• Primary DSM-5 diagnosis of SAD
• BMI between 18 and 35 kg/m²

MAIN EXCLUSION CRITERIA
• History of more than two unsuccessful adequate pharmacological treatment trials for SAD
• Concurrent use of psychotropic medications
• Untreated thyroid disease or dysfunction

STUDY STATUS
This study is currently recruiting participants.

STUDY COORDINATOR
Vicky Tilley

TEAM LEADER
Professor David Barton

RESEARCH THE NEUROPSYCHIATRY TEAM

Our research

RESEARCH

THE NEUROPSYCHIATRY TEAM

Our team 2015

The Neuropsychiatry team specialises in neuropsychiatry, old age psychiatry, acquired brain injuries, and comorbidities with mental illness, in particular cardiovascular disease. Our current research is directed towards understanding the pathophysiological mechanisms underlying depression, and their relation to cardiovascular disease and sleep apnoea. Our overall aim is to improve the survival rate of those who experience psychiatric illness through pioneering new and effective treatment. In addition, we wish to improve prognosis methods and quality of life for people with acquired brain injuries.
A randomised trial examining the effectiveness of sympathetic nervous system activity in patients with major depressive disorder: understanding the link between the brain and the heart

**PRINCIPAL INVESTIGATOR**
Professor Gavin Lambert

**ASSOCIATE INVESTIGATORS**
Professor David Barton

**FUNDING**
NHMRC Project Grant - $509,250

**AIM**
This study aims to explore the role of the sympathetic nervous system and its association with cardiovascular and metabolic risk factors. It also aims to determine the efficacy of moxonidine in reducing the metabolic side-effects of antipsychotic medications. Research has shown a link between antipsychotic medications and obesity, with patients having increased risk of cardiovascular disease. Moxonidine is designed to treat hypertension and is an experimental treatment for the side-effects of antipsychotics. It also aims to reduce the metabolic risk factors. It also aims to inhibit in alleviating the metabolic effect of sympathetic nervous system activity in patients with major depressive disorder (MDD). This project aims to identify the role of the 5-HTT gene on cardiovascular risk factors associated with increased sympathetic activity in patients with MDD. In addition, we aim to assess the effect of selective serotonin reuptake inhibitors in these patients.

**COLLABORATIONS**
Professor Jayashri Kulkarni

**Funding**
NHMRC Project Grant - $461,250

**2015 HIGHLIGHTS/ AWARDS/DISTINCTIONS**
Professor Barton’s ABL unit at Caulfield Hospital (where he is a Senior Psychiatric Consultant) has completed its first twelve months of operation. Our team has been accepted to present a snapshot of this first year at the 2016 International Royal Australian and New Zealand Psychiatry Congress in Hong Kong.

**TEAM LEADERS**
Associate Professor Simon Stafrace
Ms Sandra Keppich-Arnold

**TEAM RESEARCH COORDINATOR**
Dr Stuart Lee

**RESEARCHERS**
Professor Jayashri Kulkarni
Ms Philippa Thomas
Dr Lisa Hopkins
Associate Professor Steve Ellen
Associate Professor Yitzchak Hollander
Ms Kathryn Henderson
Ms Lynda Katora
Dr Birgit Pfitzer
Ms Susanne Birks
Ms Glenda Pedwell
Ms Emily Scammell
Mr Anthony de Castella

**STUDENT RESEARCHERS**
Mr Shaydan Bryce
Mr Ross Anderson
Mrs Elizabeth Pattison

**Research**
Monash Alfred Psychiatry Research Centre (MAPrc)

**Our Research**
Selected Projects

**Operating as a partnership between Monash Alfred Psychiatry research centre (MAPrc) and The Alfred Department of Psychiatry, the Mental Health Service Research Team operates to contribute to the measurement of the effectiveness of local practice and promote evidence-informed practice innovation.**

This is achieved through three primary mechanisms: 1) Quantitatively and qualitatively measure whether current practice is efficient, effective or meeting the needs of stakeholders of The Alfred Department of Psychiatry and other allied mental health services; 2) Use research and evaluation to inform practice improvement or service redesign and measure whether practice changes have resulted in improved effectiveness, efficiency or experience of provided care; and 3) Enhance the understanding of service, staff, consumer and carer / family member factors that contribute to better outcomes for individuals with a mental illness as well as service performance.

The Mental Health Service Research Team is led by Simon Stafrace (Director – Alfred Psychiatry) and Sandra Keppich-Arnold (Associate Director of Nursing and Operations – Alfred Psychiatry), with expert academic input from Professor Jayashri Kulkarni (Director – MAPrc). The team works collaboratively with the Consultation Liaison and Emergency Psychiatry Services, Adult Acute and Community Programs and Child and Youth Mental Health Services of Alfred Psychiatry in developing and conducting research.

Delivered or newly commencing projects have focused on: exploring how consumers and carers have experienced the operation of a joint police-mental health clinician mobile response unit, state-wide review of the operation of high dependence units for Victorian inpatient psychiatry services, implementation and evaluation of single session family intervention approaches in child and youth and adult community mental health settings, measuring the psychosocial outcomes following a burn injury, implementation of a pilot providing screening and access to a physical health nurse for case-managed consumers of two mental health services, and exploring the prevalence and impact of homelessness in people presenting to the Emergency Department of The Alfred.

Members of the team had 12 new papers accepted for publication in peer-review journals in 2015, and gave four conference or invited research presentations. At TheMHS Conference 2015, Alfred PACER was presented with the Assessment and/or Treatment Program or Service award based on the research data collection collaborative between MAPrc, Alfred Psychiatry and Bayside Medicare Local. Dr Stuart Lee was also awarded a National Health and Medical Research Council Early Career Fellowship to conduct projects aimed at addressing barriers to social inclusion for people with a psychotic illness.
**Piloting the effectiveness of physical health nurses in community based mental health services**

**Chief Investigator**
Dr Stuart Lee

**Researchers**
Mr Troy Macris  
Ms Susanne Birks  
Mr Kent Burgess  
Ms Jessica Fyshe  
Ms Anna Thomas  
Mr Alan Murnane

**Funding**
Funding from the Victorian Department of Health.

**Aim of Project**
To assess whether a physical health intervention led by a physical health nurse for case managed community mental health consumers produced greater improvements in physical health indicators compared to support as usual, and whether staff encountering the physical health nurse had experienced benefits from this project.

**Participants**
Individuals with a mental illness, case managed by Alfred Psychiatry and Inner South Community Health Service, who completed a developed physical health screen pre-intervention and at 6 month follow-up, and staff working in the intervention teams.

**Methodology**
After implementing the use by case managers of a 1-page physical health screen with associated referral options, one case management team of Alfred Psychiatry and Inner South Community Health Service had access to a physical health nurse for 4 hours per week to promote assessment and management of physical health issues for consumers. Completed physical health screens pre- and 6 months post-intervention were assessed for consumers in intervention and support as usual teams. Staff completed a questionnaire exploring their contact with and use of project resources.

**Project Status**
This project was completed in 2015.

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**State-wide High Dependence Unit Project**

**Chief Investigator**
Dr Stuart Lee

**Researchers**
Ms Phillipa Thomas  
Ms Sandra Keppich-Arnold  
Associate Professor Simon Stafrace

**Funding**
$49,632 – Victorian Department of Health and Human Services.

**Aim of Project**
To explore how high dependence unit care is operated, processes governing this practice, demand and usage patterns, and the environments within which high dependence care is offered.

**Participants**
People with a mental illness who commenced a period of high dependence unit care during a 28 day audit period in participating services.

**Start and End Dates**
2015-2016

**Methodology**
Within participating Victorian public inpatient psychiatry services, an observation occurred of the high dependence unit environments along with collection of information relating to new episodes of high dependence unit care in a 28 day period. The high dependence unit staffing profiles and suite of practice guidelines or support documents were also assessed more broadly across Victorian public inpatient psychiatry services.

**Project Status**
This project will be completed in 2016.
The Perceptual and Clinical Neuroscience Laboratory Research Team is headed by Dr Steven Miller, a clinician in occupational and pain medicine, and a researcher in clinical neuroscience, visual neuroscience and consciousness science. The lab is engaged in basic science and clinical research and has also recently entered the virtual research environment, with wide national and international collaboration for its new Binocular Rivalry Online (BRO) project.

In preparation for the BRO project, the lab has recently concluded a large study (by PhD candidate, Phillip Law) on the psychophysics of binocular rivalry in controls and subjects with bipolar disorder. An additional arm of this work was eye movement research in control and bipolar subjects. Other clinical work of the lab includes examination of vestibular neuromodulation as a novel, safe, and inexpensive therapy, to treat persistent pain conditions (and other clinical disorders). Finally, Dr Miller has performed detailed analyses of empirical and conceptual foundations of consciousness science, recently proposing new foundations for this nascent discipline.

Dr Miller was awarded two grants from Monash Institute of Medical Engineering and a Defence Health Foundation Booster Grant. This year also saw (i) publication of a book on the science and philosophy of consciousness, edited by Dr Miller, with contributions from international scientists and philosophers (cited prominently in a 2016 Nature Reviews of Neuroscience article on consciousness science), and (ii) completion of a NARSAD Young Investigator Grant awarded to Dr Miller (2013-2015).

Collaborating centres for the Binocular Rivalry Online project include Monash Faculty of Information Technology (K. Ellis), QIMR Berghofer Medical Research Institute (N. Martin, T. Ngo), Queensland Brain Institute (M. Wright), Black Dog Institute (P. Mitchell), Bipolar Disorder Research Network (N. Craddock/X. Caseras; UK) and Institute of Psychiatric Phenomics and Genomics (T. Schulze; Germany). Eye movement research is in collaboration with C. Gurvich.

Current collaborators for the CVS work include Monash Arts Design and Architecture (D. Flynn) and Monash Engineering (A. Nunn), and for the completed CVS study included T. Ngo, W. Barnsell, C. Arnold, M. Chou, P. New, S. Hill, A. Nunn, D. Brown and S. Gibson.
The constitution of phenomenal consciousness: Toward a science and theory

**Researchers**
S. Miller

**Collaborators**
T. Ngo, M. Wright, N. Martin

**Funding**
Nil

**Background**
This project ran over several years and aimed to examine the theoretical and empirical foundations of consciousness science. This was achieved by garnering a large number of national and international authors to contribute papers on such issues to a volume edited, and contributed to, by Miller which was published in 2015.

**Current Status**
Publications are expected from this work in 2016.

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Genetics of binocular rivalry

**Researchers**
S. Miller, T. Ngo, P. Law, M. Wright, N. Martin

**Collaborators**
P. Fitzgerald, M. Berk, P. Mitchell, X. Caseras, T. Schulze, N. Craddock

**Funding**
Narsad Young Investigator Grant $60,000 over 2 years (2013-2015)

**Aim**
This project aimed to examine binocular rivalry in healthy individuals and subjects with bipolar disorder to ascertain which stimuli are most suitable for subsequent use in large-scale clinical and genetic endophenotype studies.

**Background**
The project builds on earlier work by Miller and colleagues showing the rate of binocular rivalry to be slow in bipolar disorder. The project also determined that eye movements do not confound the slow binocular rivalry rate trait. Sixty control subjects and 20 subjects with bipolar disorder were assessed.

**Current Status**
The project is now complete and generated a data paper in 2015, with three further data papers to be submitted for publication in 2016.

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Binocular rivalry online

**Researchers**
S. Miller, P. Law, K. Ellis

**Collaborators**
T. Ngo, M. Wright, N. Martin

**Funding**
Defence Health Foundation ($25,000) Monash Institute of Medical Engineering ($20,000)

**Aim**
This project aims to move the testing of binocular rivalry to the online environment so as to facilitate the very large sample sizes (N=1000’s to 10,000’s) required to assess the clinical and genetic endophenotype utility of the trait.

**Background**
The project builds on the two projects listed above and, with funding secured in 2015, has commenced building of the prototype website for this work.

**Current Status**
Roll-out and quality assurance of the online test is expected in 2016.

---

Vestibular neuromodulation in persistent pain and other clinical conditions

**Aim**
This long running project (since 2007) aims to examine the therapeutic efficacy of caloric vestibular stimulation, a simple, safe and inexpensive neuromodulation technique.

The initial focus has been on neuromodulation of persistent neuropathic pain conditions and the first effectiveness trial of the technique in 34 patients has been completed with promising results. The trial will be submitted for publication in 2016.

**Current Status**
The second stage of this work has commenced and is seeking to develop a self-administration device to assess the therapeutic efficacy of daily treatments over a number of weeks. This new work is in collaboration with Monash Arts Design and Architecture. Application of this device in further clinical trials of pain conditions, and in other clinical conditions, will follow device development.
The early results on depression were successful application of sensory oto- acoustic features toward diagnosing and measuring the symptomatology of major depression. The peer-reviewed evidence referred to can be seen in the publications reported in this year’s report. In addition, and partly as a result of achieving this evidence, the Research Team was nominated as a Finalist in the prestigious 2015 Australian Museum’s “EUREKA” Awards for Excellence in Interdisciplinary Scientific Research. The team was entered and sponsored by the University of New South Wales.

The Team is continuing with its recent efforts to publish similar results for detection of Biomarkers for Bipolar Disorder, and to raise research funds to clinically validate the ability of EVestG to classify those suffering from either Bipolar or Major Depression in randomised blinded studies using a simpler yet more sensitive measurement technology.

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The Team is continuing with its recent efforts to publish similar results for detection of Biomarkers for Bipolar Disorder, and to raise research funds to clinically validate the ability of EVestG to classify those suffering from either Bipolar or Major Depression in randomised blinded studies using a simpler yet more sensitive measurement technology.
The Women’s Mental Health Clinic provides a tertiary medical, psychiatric, and endocrine consultation service. We advise on new treatment approaches for women experiencing a range of mental illnesses, including schizophrenia, schizoaffective disorder, bipolar affective disorder, borderline personality disorder, menopause and menstrual-related depression and anxiety.

The clinic operates on the principle of empowerment of our women clients, and we combine physical health examinations with mental health assessments. We also provide an information and education service for the treating clinicians involved with our clients. Importantly, an assessment letter with new management suggestions is sent to the referring doctor and the woman herself, to further her central role in her own management. We also encourage her to bring family members/friends to the consultation so that an education process is undertaken, not only with our client but also with her loved ones.

"Professor Kulkarni is exceptional. Her approach and understanding of mental health and how to balance issues with everyday life is brilliant."

"I suffered severely for seven years not finding the right help, until I found [the Women’s Mental Health clinic] with Prof Kulkarni and Dr Rosie Worsley. They saved my life."

"I was treated with respect and dignity. I felt like I was treated as a person who happens to have a reoccurring mental illness and not treated as a result of research statistics. The information given to me was up to date and relevant to my lifestyle."

"The best part of the Women’s Mental Health clinic is that it provided me with a whole new perspective on treating my symptoms, all of which were very progressive and helpful."}

"Thorough examination and an exceptional knowledge of PMDD"

"All staff members were exceptionally friendly and compassionate"

"Welcoming, supportive, approachable, friendly staff and doctors"

"Professor Kulkarni is exceptional. Her approach and understanding of mental health and how to balance issues with everyday life is brilliant."

"I was treated with respect and dignity. I felt like I was treated as a person who happens to have a reoccurring mental illness and not treated as a result of research statistics. The information given to me was up to date and relevant to my lifestyle."

"The best part of the Women’s Mental Health clinic is that it provided me with a whole new perspective on treating my symptoms, all of which were very progressive and helpful."

"I have found the service provided by MAPrc’s [Women’s Mental Health Clinic] to be exceptional. I have been treated with the utmost respect and the staff in general have been extremely helpful, positive and committed. I respect enormously the work being undertaken at MAPrc."

"The support and clinical staff were extremely helpful, compassionate and genuinely caring. The service made a dramatic difference and helped me and my family function and maintain a normal life."

"It made me feel safe about the anti-anxiety drugs I was taking during my pregnancy."

"Real people helping real women in need."

"The clinic is led by Dr Neil Thomas, an expert on psychological therapy for voices, as part of the Cognitive Neuropsychiatry Lab headed by Professor Susan Rossell.

The Voices Clinic is a specialist psychological treatment and research clinic for people who hear voices or have similar experiences. The clinic provides consultation to people who experience persisting hallucinatory experiences such as hearing voices, and offers courses of sessions of psychological therapy approaches to help people self-manage these experiences as effectively as possible. Provision is integrated with training of postgraduate clinical psychology students from Swinburne University of Technology, and with research to develop new therapeutic approaches. As part of a program of research into developing more targeted interventions for persisting hallucinations, we support five PhD students conducting research on processes and intervention approaches that will advance treatment.

As well as researching psychological therapies, the clinic conducts research on the experience of voices, on adaptation to hearing voices, and on their causes and mechanisms. Our team has been collaborating with researchers internationally to develop a better understanding of what voices are like across different clinical and nonclinical groups, and to develop better assessments. Our international collaborations include some of the world’s leading hallucination research centres including the University of Durham, Sussex University, University of Bergen, and University Medical Centre Utrecht, as well as with the voice hearer-led International Hearing Voices Network. We are also part of the International Consortium on Hallucinations Research.
The Brain Stimulation Course for researchers has been designed for researchers who are new to techniques such as TMS and tDCS, as well as medical and nursing graduates, with options for those new to TMS as well as those with previous TMS experience. In 2015 we conducted five training courses. These comprehensive and intensive courses included a series of didactic lectures given by experts in the use of TMS for clinical and research purposes, as well as hands-on training and assessment.

These courses were attended by clinicians and researchers from Australia, Hong Kong, Singapore, Thailand, New Zealand and the USA.

Demand for the courses has been growing over the years from both clinicians and researchers, in line with the expansion of TMS treatment services and interest in TMS research.

The Clinical TMS Certification Course provides training in the provision of TMS for the treatment of Major Depression. This course has been designed for medical and nursing graduates, with options for those new to TMS as well as those with previous TMS experience.

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These comprehensive and intensive courses included a series of didactic lectures given by experts in the use of TMS for clinical and research purposes, as well as hands-on training and assessment.

The current structure of the program reflects a review and remodelling process which aims to achieve several things: to research new and vibrant models for teaching psychiatry; to encourage, recruit and reward vibrant teachers; to use staff and materials more efficiently; and to smooth the process by which students acquire the psychology and psychiatry knowledge they will need to be doctors.

Medicine of the Mind continues to identify opportunities to improve students’ learning experience. Student feedback and assessment indicates that these initiatives are having dramatic effects in increasing satisfaction with the course and quality of learning.

In late 2015 we were very pleased to announce the establishment of an agreement with Malvern Private Hospital for our Year 4 MBBS students to attend clinical placements at the residential Drug and Alcohol Addiction Recovery Treatment program. This is a valuable addition to our teaching program and our students will begin clinical placements at Malvern Private Hospital in 2016.
Monash University MBBS Year 5 Clinical Supervisor/Selectivity MED5091
Prof Jayashri Kulkarni

Monash University Year 5 MBBS medical students are required to complete a final year Advanced Clinical Practice 1 unit. The aim of this unit is to broaden their knowledge and skills in areas of clinical practice of their own choosing in a series of six-week clinical placements.

Students nominating to undertake a Year 5 Psychiatry Specialty or Selective at the Alfred Hospital have their time split between shadowing Professor Kulkarni at her clinical work (particularly the MAPrc Women’s Mental Health Clinic), and supervision under a Consultant and a Registrar on the Alfred Hospital Inpatient Unit.

Under Prof. Kulkarni’s supervision the students give a weekly case presentation, attend the Women’s Mental Health team weekly case meeting, and assist the team by following up pathology test results.

In 2015 we had ten students complete their MED5091 Psychiatry selective or specialty with Professor Kulkarni. Three of these students subsequently published papers in peer-reviewed journals.

Bachelor of Medical Science (Honours)
The Monash University Bachelor of Medical Science (Honours) is a twelve month degree programme for MBBS students and graduates. The programme embeds students in a research setting with Australian and internationally recognised researchers. This introduces them to research practice. Students learn skills relating to data analysis and the communication of scientific ideas in oral presentations and a written thesis. The Bachelor of Medical Science (Honours) programme offers candidates a range of projects across an array of research streams, matching student interests to projects respectively.

MAPrc offers BMedSci students a broad array of research projects to choose from. In 2015 our senior researchers supervised nine Bachelor of Medical Science (Honours) students at our centre.

As a not for profit research and teaching centre, MAPrc increasingly relies on donations and fundraising to generate funds to help us achieve our goals and outcomes. We are extremely grateful to all those who have donated to MAPrc either directly or via one of our fund raising events. While these donations make up a relatively small proportion of our total annual budget, they are critical funds that support a wide range of activities which would otherwise be unfunded. Some of these include:
- Supporting our many post graduate research students and their projects
- Generation of pilot data (from small versions of a full study) which is required for submission to most competitive research grant schemes
- Top up funding for MAPrc funded projects where the amount awarded in a grant might not cover the full cost of completing a project or trial
- Dissemination of research findings at conferences and in refereed journals.
- MAPrc special projects and events

We gratefully acknowledge all those who donated to MAPrc during 2015. Our donors are listed in the back of this report.

2015 ACQUIRE LEARNING DE CASTELLA RUN 2 MEND MINDS

MAPrc is proud to be the exclusive charity partner to this iconic Melbourne running event. Held continuously since 1981 when it was first held as a tribute to Australian Marathon Champion Robert de Castella, MAPrc has partnered and helped to organise and grow the event over the last 6 years. We were extremely excited in 2015 to welcome on board our event naming sponsor, Acquire Learning. The event now also aims to raise awareness about mental illness and the work being conducted at MAPrc to develop new treatments. It also raises invaluable funds to support our ongoing research.

Held in Kew on Sunday 28th August, 2015 another big field of just over 1900 runners and walkers assembled to take on one of:
- 1. The Elk at Falls Creek 5km Walk/Run
- 2. The Runners World 10km
- 3. The Mizuno 15km or
- 4. Run Ready Kids Activity Program for kids under 10 years.

In addition to the run and walk events, a growing feature of this event is the accompanying Mind and Body Expo on the oval surrounding the finish area which was buzzing with something for everyone including; our MAPrc mental health information stand, petting zoo, jumping castle, face painting, food stalls, clothing stalls, physio, osteopathy, podiatry treatments and a recovery yoga station to name just a few! We were overwhelmed by the generosity from all our event sponsors, partners and local traders who supported in various ways, from raising funds in store, to donating prizes for our raffle and our event winners, as well as spot prizes.

Without the wonderful support and enthusiasm from sponsors, donors and volunteers, we wouldn’t be able to hold such an event. We are thrilled to announce that in 2015, upwards of $85,000 was raised. These funds will go directly to funding a new PhD Scholarship, allowing the important research here at MAPrc to continue.
In May 2015 MAPrc held our inaugural fund raising trivia night, entitled “The A to Z of MAPrc” with the magnificent venue at the North Melbourne Meat Markets being donated via a community grant from the City of North Melbourne. It was a great night with a splendid turn out of more than 60 supporters. With our trivia savvy MC Louise Crawford entertaining the audience, each table, dressed in the theme of a nominated letter, fought it out for the trivia title and raised almost $5,000 to support MAPrc research.
FINANCIAL STATEMENT
JANUARY 1 – DECEMBER 31
2014 & 2015

INCOME CATEGORY 2014 2015
Higher Degree Supervision & Teaching $625,300 $446,093
Competitive Research Grant Funding $1,740,780 $1,775,151
Commercial Research Funding $597,700 $405,068
Government / Institutional Grants $1,779,610 $1,588,017
Short Courses / Conferences $98,140 $140,753
MAPrc Clinics Revenue $71,510 $71,060
Fund Raising & Donations $101,920 $113,035
Partnerships $175,000
TOTAL $5,014,260 $4,364,117

EXPENDITURE CATEGORY 2014 2015
Salary Related Costs $2,906,200 $2,794,551
Infrastructure / Administration $415,720 $340,780
Direct Research Costs $590,380 $663,908
Depreciation $5,230 $16,683
Institutional Overheads & Charges $1,043,820 $723,874
TOTAL $4,962,070 $4,539,797

NET SURPLUS / (DEFICIT) $52,900 $175,680

Notes
1. Surplus for the calendar year 2015 is carry forwarded into 2016 and beyond for ongoing projects grants.
2. Competitive research grant funding includes NH&MRC, ARC and other government and philanthropic grants.
3. Commercial income includes industry related research contracts.
4. Government / Institutional grants include the Victorian Department of Health funding for academic positions at Alfred Health and other operating / infrastructure funding, as well as Monash University dispersed federal government funding generated on the basis of (i) category one competitive research dollars ii) HDR supervision and iii) MBBS undergraduate teaching activities by MAPrc.
5. Institutional Overheads and Charges refers to Monash University central, faculty and school charges for central support and services provided to MAPrc.

Cindy Yu
We are forever grateful to all the wonderful people who volunteer their time to support MAPrc, both at our many external community events, and on-site at MAPrc, assisting with the day to day operations of the Centre. As a not-for-profit organisation, volunteers provide MAPrc with the ability to achieve more and therefore make a bigger impact on the lives of people living with mental illness. Our volunteers come from a wide range of backgrounds, and range from members of the general community to undergraduate medical, and other students. Whether it be the one volunteer who assists us with entering the backlog of data for a current research project, or the 150+ volunteers who enable us to hold an event as big as the Acquire Learning de Castella Run 2 Mend Minds, we couldn’t do it without you!

MAPrc is also proud of the work of our large number of Research Affiliates who, although not employed by us, are a critical part of our research team. Our Affiliates include health professionals employed in clinical roles within the Alfred Health Service who choose to become involved in supporting a particular research project of interest, as well as researchers from other organisations. We are able to acknowledge them as valuable members of our wonderful research team with a Monash University Affiliate appointment. Other affiliates have input into MAPrc teaching activities and again often perform these roles in addition to their paid appointments in departments outside MAPrc.

To all our volunteers and affiliates, we thank you for helping to mend minds.
### 2015 RESEARCH GRANTS & FUNDING

<table>
<thead>
<tr>
<th>NHMRC</th>
<th>CHIEF INVESTIGATOR/S</th>
<th>AMOUNT ($) RECEIVED IN 2015</th>
<th>YEARS OF FUNDING &amp; TOTAL FUNDING FOR DURATION OF GRANT</th>
<th>ADMINISTERING INSTITUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women’s Mental Health Research Team</td>
<td>Adjunctive Hormone Therapy for Treatment Resistant Depression in Menopausal Women, NHMRC (APP1044904), Project Grant.</td>
<td>Kulturni J. N/A</td>
<td>2013–2016 $595,514</td>
<td>Monash University</td>
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<td></td>
<td>Accelerated rTMS in depression</td>
<td>PB Fitzgerald K Hoy</td>
<td>2015–2019 $961,353</td>
<td>Monash University</td>
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<td>Neuropsychiatry Research Team</td>
<td>Fibromyalgia: Investigating the prefrontal cortex and its role in novel treatment approaches. NHMRC, Peter Doherty Biomedical ECR Fellowship.</td>
<td>Fitzgibbon B.</td>
<td>2014–2018 $303,000</td>
<td>Monash University</td>
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<tr>
<td></td>
<td>A randomised trial examining the effectiveness of sympathetic nervous inhibition in alleviating the metabolic side effects of antipsychotic medications in patients with schizophrenia. NHMRC (APP1022794), Project Grant.</td>
<td>Lambert G., Barton D., Dixon J., Stramisky N. N/A</td>
<td>2012–2015 $461,250</td>
<td>Baker IDI/Monash University</td>
</tr>
<tr>
<td></td>
<td>Interactions between the serotonin transporter and sympathetic nervous system activity in patients with major depressive disorder: understanding the link between the brain and the heart. NHMRC (APP1022791), Project Grant.</td>
<td>Lambert G., Barton D. N/A</td>
<td>2012 to 2015 $509,250</td>
<td>Baker IDI/Monash University</td>
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<tr>
<td>EVeStG™</td>
<td>To research, develop and validate Electrovestibulography as an electrophysiological measurement instrument for biomarkers that facilitate the classification and detection of symptoms of mental illness [Major Depression, Bipolar Affective Disorder and Schizophrenia], as well as mild Traumatic Brain Injury. NHMRC, Career Development Award Fellowship.</td>
<td>Maller J.J.</td>
<td>$11,000</td>
<td>2011–2015 $240,000</td>
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</table>

### 2015 RESEARCH GRANTS & FUNDING

<table>
<thead>
<tr>
<th>MONASH UNIVERSITY GRANTS</th>
<th>CHIEF INVESTIGATORS</th>
<th>AMOUNT ($) RECEIVED IN 2015</th>
<th>YEARS OF FUNDING &amp; TOTAL FUNDING FOR DURATION OF GRANT</th>
<th>ADMINISTERING INSTITUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Targeted Treatment for Cognitive Impairment Following Traumatic Brain Injury: Combining Transcranial Magnetic Stimulation with Cognitive Training. CCS Strategic Fund: NHMRC Near Miss Funding, Monash University.</td>
<td>Hoy K.</td>
<td>$100,000</td>
<td>Jan 2015–Jan 2016 $100,000</td>
<td>Monash University</td>
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<tr>
<td>1st International Brain Stimulation Conference; 15th International Congress on Schizophrenia Research. Central Clinical School, Monash University, Travel Grant.</td>
<td>Hoy K.</td>
<td>$3,000</td>
<td>2015</td>
<td>$3,000</td>
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<tr>
<td>Monash University, Advancing Women’s Research Success Grant Program.</td>
<td>Fitzgibbon B.</td>
<td>$11,000</td>
<td>2015</td>
<td>$11,000</td>
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<tr>
<td>Does emotional regulation differ between individuals with chronic low back pain and healthy controls? A Functional Magnetic Resonance Imaging (fMRI) study. Monash University, Platform Access Grant.</td>
<td>Fitzgibbon B.</td>
<td>$9,000</td>
<td>2015</td>
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<table>
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<tr>
<th>OTHER UNIVERSITIES</th>
<th>CHIEF INVESTIGATORS</th>
<th>AMOUNT ($) RECEIVED IN 2015</th>
<th>YEARS OF FUNDING &amp; TOTAL FUNDING FOR DURATION OF GRANT</th>
<th>ADMINISTERING INSTITUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cerebral Palsy and Developmental Coordination Disorder: A continuum of motor impairment or distinct motor disorders? Deakin University, Central Research Grants Scheme.</td>
<td>Maller J.J.</td>
<td>$20,000</td>
<td>2015</td>
<td>$20,000</td>
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<tr>
<td>International Consortium on Hallucinations Research. Swinburne University Faculty of Health Arts &amp; Design International Engagement Scheme.</td>
<td>Rossell S., Thomas N.</td>
<td>$10,000</td>
<td>2015</td>
<td>$12,000</td>
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### 2015 RESEARCH GRANTS & FUNDING

<table>
<thead>
<tr>
<th>AUSTRALIAN RESEARCH COUNCIL (ARC)</th>
<th>CHIEF INVESTIGATORS</th>
<th>AMOUNT ($) RECEIVED IN 2015</th>
<th>YEARS OF FUNDING &amp; TOTAL FUNDING FOR DURATION OF GRANT</th>
<th>ADMINISTERING INSTITUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>The development and testing of a device to enhance the application of transcranial magnetic stimulation, ARC Linkage Grant:LP130100448</td>
<td>Fitzgerald PB, Partner Investigator: Warwick Fifield Grey Innovation</td>
<td>$161,020</td>
<td>2013 – 2016 $581,643</td>
<td>Australian Research Council</td>
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## 2015 Research Grants & Funding

### Government Funding

<table>
<thead>
<tr>
<th>Government Funding</th>
<th>Chief Investigators</th>
<th>Amount ($)</th>
<th>Years of Funding &amp; Total Funding for Duration of Grant</th>
<th>Administering Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Health Online, Australian Government Department of Health Telehealth Funding Scheme.</td>
<td>Thomas, N.</td>
<td>2015-2016</td>
<td>$840,000</td>
<td>Swinburne University</td>
</tr>
<tr>
<td>Reaching the groups where alcohol hits hardest: A peer modelling intervention to help young offenders reduce alcohol use. VicHealth Alcohol Innovation Challenge.</td>
<td>O’Mahony, B., Thomas, N., Whittington, J., Cornet, L., Guirieri, L., Cherry, N.</td>
<td>2015-2016</td>
<td>$89,436</td>
<td>Swinburne University</td>
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</table>

### Neuropsychiatry Research Team

<table>
<thead>
<tr>
<th>Project</th>
<th>Chief Investigators</th>
<th>Amount ($)</th>
<th>Years of Funding &amp; Total Funding for Duration of Grant</th>
<th>Administering Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proof of Concept Project for Pharmacogenomics Decision Support System. Victorian Department of Industry and Technology, Project Grant.</td>
<td>Winship, L., Sheffield, L., Barton, D.</td>
<td>No funding received via MAPrC in 2015</td>
<td>2012 to 2015</td>
<td>$1,000,000</td>
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<tr>
<td>Statewide high dependence unit (HDU) project. Victorian Department of Health and Human Services, Project Grant.</td>
<td>Lee, S.</td>
<td>2015-2016</td>
<td>$49,632</td>
<td>Alfred Hospital</td>
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<tr>
<td>Problem gambling amongst people seeking treatment for mental illness.</td>
<td>Lubman, D.</td>
<td>2014-2016</td>
<td>$10,000</td>
<td>Turning Point, Eastern Health</td>
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### Mental Health Service Research Team

<table>
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<tr>
<th>Mental Health Service Research Team</th>
<th>Chief Investigators</th>
<th>Amount ($)</th>
<th>Years of Funding &amp; Total Funding for Duration of Grant</th>
<th>Administering Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Research Fellow in Women’s Mental Health. Service Fellow Grant.</td>
<td>Kulkarni J.</td>
<td>$30,000</td>
<td>2015</td>
<td>$30,000</td>
</tr>
<tr>
<td>ALKS461-205 A Phase 3 Efficacy and Safety Study of ALKS 461 for the Adjunctive Treatment of Major Depressive Disorder (the FORWARD-4 Study). Alkermes Inc.</td>
<td>Jayashri Kulkarni</td>
<td>$74,361</td>
<td>2013 - 2016</td>
<td>Alfred Hospital</td>
</tr>
<tr>
<td>ALKS461-208 A Phase 3 Multicenter Study of the Long-term Safety and Tolerability of ALKS 461 for the Adjunctive Treatment of Major Depressive Disorder in Adults who Have an Inadequate Response to Antidepressant Therapy (the FORWARD-2 Study). Alkermes Inc.</td>
<td>Jayashri Kulkarni</td>
<td>$21,592</td>
<td>2013 - 2016</td>
<td>Full Amount to be determined</td>
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<tr>
<td>Social Anxiety Study/Phase 2a Randomized, Double-blind, Placebo-Controlled, Parallel-Group, Multi-center Study Investigating the Efficacy, Safety, and Tolerability of JNJ-42165279 in Subjects with Social Anxiety Disorder. Janssen-Cilag Pty Limited.</td>
<td>Jayashri Kulkarni</td>
<td>$27,077</td>
<td>2015 - 2016</td>
<td>Full Amount to be determined</td>
</tr>
<tr>
<td>A phase 4, Randomized, Double-blind, Active and Placebo-controlled, Multi-center Study Evaluating the Neuropsychiatric Safety and Effectiveness of 12 weeks Varenicline Tartrate 1mg bid and Bupropion Hydrochloride 150mg bid for Smoking Cessation in Subjects With and Without a History of Psychiatric Disorders. Pfizer Australia Inc.</td>
<td>Jayashri Kulkarni</td>
<td>$45,449</td>
<td>2011 - 2015</td>
<td>$45,449</td>
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<tr>
<td>A multicentre, Randomized, Double-blind Trial to Assess the Efficacy and Safety of ASC-G01 in Patients with Major Depressive Disorder (MDD). Otsuka Pharmaceutical Co. Ltd.</td>
<td>Jayashri Kulkarni</td>
<td>$74,391</td>
<td>2013-2015</td>
<td>Alfred Hospital</td>
</tr>
<tr>
<td>Retrospective audit of people treated with Long-Acting Injectable Treatments (LAIs): Usage Patterns and Outcomes. Janssen-Cilag Pty Limited, Project Grant.</td>
<td>De Castella, A.</td>
<td>$17,627</td>
<td>2015-2016</td>
<td>$59,424</td>
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### Psychopharmacology Team

<table>
<thead>
<tr>
<th>Psychopharmacology Team</th>
<th>Chief Investigators</th>
<th>Amount ($)</th>
<th>Years of Funding &amp; Total Funding for Duration of Grant</th>
<th>Administering Institution</th>
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<tbody>
<tr>
<td>A new approach to depression treatment. Sir Edward Dunlop Medical Research Foundation.</td>
<td>Sepetre, R., Fitzgerald, P.B.</td>
<td>2015 - 2016</td>
<td>$20,000</td>
<td>Monash University</td>
</tr>
<tr>
<td>Interventional repetitive transcranial magnetic stimulation treatment for fibromyalgia. Arthritis Australia National Research Program. The ARFA Project Grant funded by the Australian Rheumatology Association.</td>
<td>Fitzgibbon, B., Fitzgerald, P.B., Hoy, K</td>
<td>$10,000</td>
<td>2015</td>
<td>$10,000</td>
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<tr>
<td>Thinkable award (social media category). Thinkable.org.</td>
<td>Bailey, N.</td>
<td>2015</td>
<td>$1,800</td>
<td>Alfred Hospital</td>
</tr>
<tr>
<td>Monitoring and training heart rate variability using wearable technology: Scoping study for a mental well-being mobile app. Barbara Dicker Brain Sciences Foundation.</td>
<td>Thomas, N., Vasa, R., Thiel, S., Muzukazi, K.</td>
<td>2015</td>
<td>$3,000</td>
<td>Swinburne University</td>
</tr>
<tr>
<td>The impact of a mindfulness-based intervention for auditory hallucinations on localised brain activity, attention and subjective experience. Barbara Dicker Brain Sciences Foundation.</td>
<td>Murray, G., Rossell, S., Johnson, S., Blythe, J.</td>
<td>2015-2016</td>
<td>$20,000</td>
<td>Swinburne University</td>
</tr>
<tr>
<td>Improving the cognitive abilities of young people following a first ever psychotic episode. The Angor Family Foundation.</td>
<td>March, E., Rossell, S.L., Castle, D.J.</td>
<td>2015-2016</td>
<td>$13,319</td>
<td>St Vincent’s Hospital</td>
</tr>
</tbody>
</table>
JOURNAL ARTICLES

WOMEN’S MENTAL HEALTH RESEARCH TEAM


Kulkarni J, Reeva Parker K. Psychiatrists' awareness of partial- and non-adherence to antipsychotic medication in schizophrenia: results from the Australian ACHES survey. Australian Psychologist. 2015; 23(3): 258-64.


PSYCHIATRIC NEUROTECHNOLOGY RESEARCH TEAM


MAPRC Publications for 2015


Kulkarni, J. Invited Speaker: NCD Luncheon, 12th April 2015
Kulkarni, J., Gaertside, E., Worsley, R., Gregg, J., Gilbert, H. Workshop Organisers: Innovating Psychiatry Through Neurosciences Workshop, Melbourne, Australia, 19th August 2015
Gilbert, H. Conference presentation – ANMF Conference (Australian Nursing and Midwifery Federation), Melbourne, September 2015
Gilbert, H. Conference presentation – ASPOG Conference (Australian College of Obstetricians and Gynaecologists), Melbourne, Australia, July 2015

POSTERS
BeuJU Poster Presentation "Does the progression and mimetism of the combined oral contraceptive pill affect mood?" Biological Psychiatry Australia (BPA), Sydney, Australia, 21st - 22nd September 2015
BeuJU, Poster Presentation "Metformin for cognition in women with co-morbid depression and obesity." Biological Psychiatry Australia (BPA), Sydney, Australia, 21st-22nd September 2015

PSYCHIATRIC NEUROTECHNOLOGY RESEARCH TEAM PRESENTATIONS
Fitgerald, P.B. – Workshop, World Federation of Societies of Biological Psychiatry, 12th World Congress Of Biological Psychiatry, Athens Greece June 2015
Fitgerald, P.B. Keynote presentation: Advanced Education Program in Clinical Neuropsychiatry, Asian-Oceanian chapter of International Federation of Clinical Neurophysiology and the Taiwan Society of Clinical Neurophysiology, August 2015, Kaohsiung, Taiwan.
Hoy, Kate. Expert Panel Member: "Brain Dialogue and MAPPs Zap My Brain Public Forum." Melbourne Brain Centre auditorium, Melbourne, 13/05/2015
Hoy, Kate. Guest Speaker: "The Neuroscience of Psychiatry." Australian Medical Students Association Centre auditorium, Melbourne, 13/05/2015
Hoy, Kate. Invited Speaker: "Enhanced Frontoparietal Connectivity and Improved Working Memory Following tBSI." 1st International Brain Stimulation Meeting, Singapore. 2nd - 4th March 2015
Hoy, Kate. Invited Speaker: "Restoring Cognitive Function Using Brain Stimulation." NHMRC Excellence Awards Dinner, ANU, Canberra, September 2015
Hoy, Kate. Invited Speaker: "Teaching Cognitive Impairment in Psychiatry and Neurology: The emerging field of Cognitive Neurotechnology." Psychiatry Grand Round, Alfred Hospital, Melbourne, August 2015
Segrave, Rebecca. Invited Speaker: "Cognitive Neuroscience Approaches to Depression Treatment." Cognitive Neuroscience Unit, Deakin University, Melbourne, August 2015
Segrave, Rebecca. Speaker: "TU-01: Having the Conversation." ROK Day, Alfred Hospital Melbourne, September 2015
Segrave, Rebecca. Invited Symposium Presentation: "Cognitive Control Training and tDCS: A New Approach to Treating Depression." Anxiety and Depression Association of America Conference, Miami, USA, April 2015
Fitzgibbon, Bernadette. Invited Speaker: "Train the Brain: The overlap between physical pain, empathy for pain and social pain." Science Stakes of Tomorrow, Australian Academy of Science, Canberra, June 2015

ABSTRACTS

MENTAL HEALTH SERVICE RESEARCH TEAM PRESENTATIONS
Larissa Fogden, Klein, Basia, Jason Webb, Stuart Lee, Phoebe Wright, Violette Peterson, Sharon Sutherland. Catalysing a social work single session family consultation intervention in acute psychiatry. Alfred Health Research Forum at Alfred Health Research Week, Melbourne, 2015.

POSTERS

PERCEPTUAL & CLINICAL NEUROSCIENCE LABORATORY POSTERS
Fitzgibbon, Bernadette, Rebecca. Invited Speaker: "Train the Brain: The overlap between physical pain, empathy for pain and social pain." Science Stakes of Tomorrow, Australian Academy of Science, Canberra, June 2015

ABSTRACTS

WOMEN’S MENTAL HEALTH TEAM RESEARCH PROJECTS
CHIEF INVESTIGATORS
PROJECTED END DATE
An audit of clinical practices - eliciting a history of previous trauma in female psychiatric inpatients. Jayashri Kulkarni 2015
Depression and the Pill. Jayashri Kulkarni 2017
Family violence – understanding health practitioners’ current practice, attitudes and beliefs. Jayashri Kulkarni 2017
Metformin for mind and metabolism - A Pilot Study. Jayashri Kulkarni 2015
The National Register of Antipsychotic Medication in Pregnancy (NRAMP). Jayashri Kulkarni & (B) David Barton (B) Caroline Gurvich C Ongoing

SELECTIVE ESTROGEN RECEPTOR MODULATORS (SERM) – A Potential Treatment for Child Bearing Age women with Schizophrenia? Jayashri Kulkarni 2017

PSYCHIATRIC NEUROTECHNOLOGY TEAM RESEARCH PROJECTS
CHIEF INVESTIGATORS
PROJECTED END DATE
Bridging the gap between sensory and social impairments in Autism. Bernadette Fitzgibbon 2016
CCT: Cognitive control training for depression: application, evaluation and augmentation. Rebecca Segrave 2015
Cognitive enhancement: an investigation of non-invasive electrical brain stimulation methods. Bernadette Fitzgibbon 2017
Connectivity & MDD. Paul Fitzgerald 2016
Enhancing cognitive function/neuropoietic using non-invasive brain stimulation. Kate Hoy 2017
FIBROMYALGIA / tMS for fibromyalgia. Bernadette Fitzgibbon Ongoing
How similar are the changes in neural activity resulting from mindfulness practice in contrast to spiritual belief? How does tactile distraction interfere with cognitive vigilance in meditators compared with non-meditators? Neil Bailey 2015
Investigating cortical inhibition as an endophenotype in schizophrenia. Paul Fitzgerald and Kate Hoy 2016
Investigating cortical inhibition as an endophenotype in schizophrenia. Paul Fitzgerald 2016
Investigating the potential for brain stimulation to treat mild cognitive impairment. Kate Hoy 2017
Looking on the bright side: Can non-invasive brain stimulation enhance positive information processing bias? Can tDCS enhance positive ABMT? An EEG investigation. Rebecca Segrave 2015
MST/ECT: A randomised controlled trial of Magnetic Seizure Therapy in Major Depressive disorder. Paul Fitzgerald 2015
Neural connectivity in autism spectrum disorders. Paul Fitzgerald 2014
Neural correlates of brain stimulation enhanced second language learning/Can transcranial direct current stimulation enhance second language learning? Kate Hoy 2017
Optimization of theta burst stimulation on depression. Paul Fitzgerald 2016
PREDICT: Investigating predictors of response to TMS. Bernadette Fitzgibbon 2015
tDCS for Cognitive Impairment in TBI: A 4 week RCT of tDCS and cognitive training in the treatment cognitive impairment following TBI. Kate Hoy Ongoing
IPvCS: SCZ: A pilot clinical trial of 5 sessions of tDCS for the treatment of cognitive impairment. Bernadette Fitzgibbon Ongoing
The neuroeconomics of major depression. Paul Fitzgerald 2016
The neurophysiological mechanisms underlying the therapeutic effects of transcranial magnetic stimulation for treatment resistant depression. Paul Fitzgerald 2016
The role of social support in physical pain. Bernadette Fitzgibbon 2019

The role of social support in physical pain. Bernadette Fitzgibbon 2019
The neurophysiological mechanisms underlying the therapeutic effects of transcranial magnetic stimulation for treatment resistant depression. Paul Fitzgerald 2016
The role of social support in physical pain. Bernadette Fitzgibbon 2019
### RESEARCH PROJECTS

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Principal Investigator(s)</th>
<th>End Date</th>
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</thead>
<tbody>
<tr>
<td>Understanding the role of negative beliefs and emotion regulation in chronic low back pain.</td>
<td>Bernadette Fitzgibbon</td>
<td>2019</td>
</tr>
<tr>
<td><strong>PSYCHOPHARMACOLOGY TEAM RESEARCH PROJECTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALKS5461-205 A Phase 3 Efficacy and Safety Study of ALKS 5461 for the Adjunctive Treatment of Major Depressive Disorder (the FORWARD-4 Study) Alkermes Inc.</td>
<td>Jayashri Kulkarni</td>
<td>2018</td>
</tr>
<tr>
<td>ALKS5461-208 A Phase 2b Multicenter Study of the Long-term Safety and Tolerability of ALKS 5461 for the Adjunctive Treatment of Major Depressive Disorder in Adults who Have an Inadequate Response to Antidepressant Therapy (the FORWARD-2b Study).</td>
<td>Jayashri Kulkarni</td>
<td>2016</td>
</tr>
<tr>
<td>Ondansetron A Double-blind, Placebo Controlled, Randomized Investigation of Ondansetron in Chronic Residual Schizophrenia.</td>
<td>Jayashri Kulkarni</td>
<td>2015</td>
</tr>
<tr>
<td>Social Anxiety Study Phase 2A Randomized, Double-blind, Placebo-Controlled, Parallel-Group, Multicenter Study Investigating the Efficacy, Safety, and Tolerability of JNJ-42165279 in Subjects with Social Anxiety Disorder.</td>
<td>Jayashri Kulkarni</td>
<td>2015</td>
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<td>A phase 4, randomized, double-blind, active and placebo-controlled, multicenter study evaluating the Neuropsychiatric safety and efficacy of 12 weeks Varenicline Tartrate 1mg bid and bupropion hydrochloride 150mg bid for relapse prevention in subjects with and without a history of Psychiatric disorders.</td>
<td>Jayashri Kulkarni</td>
<td>2015</td>
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<tr>
<td>A Multicentre, Randomized, Double-blind Trial to Assess the Efficacy and Safety of ASC-01 in Patients with Major Depressive Disorder (MDD)</td>
<td>Jayashri Kulkarni</td>
<td>2015</td>
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<td><strong>COGNITIVE NEUROPSYCHIATRY TEAM RESEARCH PROJECTS</strong></td>
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<tr>
<td>A brain imaging study of auditory verbal hallucinations and inhibition in patients with schizophrenia.</td>
<td>Susan Rossell</td>
<td>2019</td>
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<tr>
<td>A multidimensional and clustering study of fluency performance in schizophrenia.</td>
<td>Susan Rossell</td>
<td>2019</td>
</tr>
<tr>
<td>Are auditory verbal hallucinations related to auditory processing deficits and prosodic impairment in schizophrenia?</td>
<td>Susan Rossell</td>
<td>2015</td>
</tr>
<tr>
<td>Cognitive remediation therapy in schizophrenia.</td>
<td>Susan Rossell</td>
<td>2015</td>
</tr>
<tr>
<td>Development and application of trauma-focused intervention for auditory verbal hallucinations.</td>
<td>Susan Rossell</td>
<td>2015</td>
</tr>
<tr>
<td>Does visual processing training enhance cognitive remediation therapy outcomes in people with schizophrenia?</td>
<td>Susan Rossell</td>
<td>2015</td>
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<tr>
<td>Ecological momentary assessment and intervention to enhance self management of persistent auditory verbal hallucinations.</td>
<td>Susan Rossell</td>
<td>2015</td>
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<tr>
<td>Exploring the unique benefits of cognitive remediation therapy (CRT) on neurocognitive and psychosocial outcomes relative to an active control.</td>
<td>Susan Rossell</td>
<td>2015</td>
</tr>
<tr>
<td>Immunological responses in depression and psychophysiological correlates.</td>
<td>Susan Rossell</td>
<td>2015</td>
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<tr>
<td>Investigating factors that influence the efficacy of cognitive remediation therapy in people with schizophrenia.</td>
<td>Susan Rossell</td>
<td>2015</td>
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<tr>
<td>Investigating ocular-motor correlates of abnormal mirror system functioning in autism.</td>
<td>Susan Rossell</td>
<td>2015</td>
</tr>
<tr>
<td>Investigating the neurobiological and cognitive features of anorexia nervosa.</td>
<td>Susan Rossell</td>
<td>2015</td>
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<tr>
<td>Neuroimaging correlates of dysfunctional semantic processes in schizophrenic formal thought disorder.</td>
<td>Susan Rossell</td>
<td>2015</td>
</tr>
<tr>
<td>Self, attachment and trauma in relation to voices.</td>
<td>Susan Rossell</td>
<td>2015</td>
</tr>
<tr>
<td>Semantic memory function in first degree relatives of those with schizophrenia.</td>
<td>Susan Rossell</td>
<td>2015</td>
</tr>
<tr>
<td>Speech disturbances and quality of life in schizophrenia.</td>
<td>Susan Rossell</td>
<td>2015</td>
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<tr>
<td>The impact of a mindfulness-based intervention for auditory hallucinations on localised brain activity, attention and subjective experience.</td>
<td>Susan Rossell</td>
<td>2015</td>
</tr>
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</table>

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<tr>
<th>Project Title</th>
<th>Principal Investigator(s)</th>
<th>End Date</th>
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</thead>
<tbody>
<tr>
<td>The muscarinic cholinergic system and cognition in schizophrenia.</td>
<td>Susan Rossell</td>
<td>2015</td>
</tr>
<tr>
<td>The role of the glutamatergic system in cognition across the schizotypy/schizophrenia continuum</td>
<td>Susan Rossell</td>
<td>2015</td>
</tr>
<tr>
<td>Understanding individual differences in response to non-invasive brain stimulation: the influence of endor and sex hormones/Impact of gender on cortical excitability.</td>
<td>Susan Rossell</td>
<td>2015</td>
</tr>
<tr>
<td><strong>NEUROPSYCHIATRY RESEARCH PROJECTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A randomised trial examining the effectiveness of sympathetic nervous inhibition in alleviating the metabolic side effects of antipsychotic medications in patients with schizophrenia.</td>
<td>Gavin Lambert</td>
<td>2015</td>
</tr>
<tr>
<td>Interactions between the serotonin transporter and sympathetic nervous system activity in patients with major depressive disorder: understanding the link between the brain and the heart.</td>
<td>Gavin Lambert</td>
<td>2015</td>
</tr>
<tr>
<td>Are auditory verbal hallucinations related to auditory processing deficits and prosodic impairment in schizophrenia?</td>
<td>See entry under Women's Mental Health research — joint project</td>
<td></td>
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<tr>
<td><strong>MENTAL HEALTH SERVICE RESEARCH PROJECTS</strong></td>
<td></td>
<td></td>
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<tr>
<td>Crisis awoken: The experience of consumers and carers to a Police and Clinical Early Response (PACER) unit responding to a mental health crisis.</td>
<td>Elizabeth Deveny</td>
<td>2015</td>
</tr>
<tr>
<td>Evaluating a Social Work single session family consultation intervention in Acute Psychiatry.</td>
<td>Sharon Sutherland</td>
<td>2015</td>
</tr>
<tr>
<td>Measuring employment stress and the correlates of employment stress at least 2 years post haemopoietic stem cell transplant.</td>
<td>Sharon Avery</td>
<td>2015</td>
</tr>
<tr>
<td>Measuring the benefits of rehabilitation services for people with a severe mental illness.</td>
<td>Bronwyn Wauchope</td>
<td>2015</td>
</tr>
<tr>
<td>Peer education and resources to empower women distressed by a trauma history to ask for help</td>
<td>Sandra Keppich-Arnold</td>
<td>2016</td>
</tr>
<tr>
<td>Piloting the effectiveness of physical health nurses in community based mental health services.</td>
<td>Stuart Lee</td>
<td>2015</td>
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<tr>
<td>Problem gambling amongst people seeking treatment for mental illness.</td>
<td>Dan Lubman</td>
<td>2016</td>
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<tr>
<td>Psychological wellbeing from the perspective of adolescents with vision impairment.</td>
<td>Narelle Waren</td>
<td>2016</td>
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<td>Recovery nursing and advancing practice.</td>
<td>Bridget Hamilton</td>
<td>2015</td>
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<tr>
<td>Retrospective audit of people treated with Long-Acting Injectable Treatments (LAlts): Usage Patterns and Outcomes</td>
<td>Anthony De Castella</td>
<td>2016</td>
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<tr>
<td>Retrospective audit of service and patient factors contributing to unplanned psychiatric admission.</td>
<td>Natasha Sands</td>
<td>2016</td>
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<tr>
<td>Statewide high dependence unit (HDU) project.</td>
<td>Stuart Lee</td>
<td>2016</td>
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### PERCEPTUAL & CLINICAL NEUROSCIENCE LABORATORY RESEARCH PROJECTS

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Principal Investigator(s)</th>
<th>End Date</th>
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<tr>
<td>Bicoronal rivalry online.</td>
<td>S. Miller</td>
<td>Continuing</td>
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<tr>
<td>Genetics of bicoronal rivalry.</td>
<td>S. Miller</td>
<td>Continuing</td>
</tr>
<tr>
<td>The constitution of phenomenal consciousness: Toward a science and theory.</td>
<td>S. Miller</td>
<td>2015</td>
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<tr>
<td>Vestibular neuromodulation in persistent pain and other clinical conditions.</td>
<td>S. Miller</td>
<td>Continuing</td>
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### EVENTS

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<tr>
<td>EViewIT™ — A New Window to the Mind</td>
<td>Adj. Professor Brian Lithgow [Technology]/ Professor Jayashri Kulkarni / Professor Paul Fitzgerald [Clinical]</td>
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<tr>
<td>DEGREE</td>
<td>NAME OF STUDENT</td>
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<tr>
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</tr>
<tr>
<td>PhD</td>
<td>Ms Sacha Filia</td>
</tr>
<tr>
<td></td>
<td>Alexia Palacín</td>
</tr>
<tr>
<td>Grad Dip in Counselling</td>
<td>Ms Cindy Yu</td>
</tr>
<tr>
<td>Grad Dip in Psychology</td>
<td>Ms Vínia Morititto</td>
</tr>
<tr>
<td></td>
<td>Ms Evelyn Chenchen Bian</td>
</tr>
<tr>
<td>B Med Sci (Hons)</td>
<td>Ms Jacual Bell</td>
</tr>
<tr>
<td></td>
<td>Ms Karin Uthani</td>
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<tr>
<td></td>
<td>Ms Lucinda Miller</td>
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<tr>
<td>4th Year B Arts (Psych)</td>
<td>Ms Maria Ugric</td>
</tr>
<tr>
<td>5th Year MBBi</td>
<td>Ms Ashwin Pathnasharali</td>
</tr>
<tr>
<td></td>
<td>Mr Gurnase Singh</td>
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<td></td>
<td>Mr Joshua John</td>
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<td></td>
<td>Mr Peter Richard</td>
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<tr>
<td></td>
<td>Ms Catherine Nigan</td>
</tr>
<tr>
<td></td>
<td>Ms Muhammad Naseer Um</td>
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<tr>
<td></td>
<td>Ms Tees Marinelli</td>
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<td></td>
<td>Renato Assini</td>
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<td>Roth Trino</td>
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<td>Waradana Lahiruni</td>
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<tr>
<td>3rd Year B Med Sci</td>
<td>Ms Claudia Xiao</td>
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<tr>
<td>3rd year Psych Undergrad</td>
<td>Ms Caitlin Bleeker</td>
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<tr>
<td>ONGOING STUDENTS</td>
<td>Dr Roisin Worsley</td>
</tr>
<tr>
<td></td>
<td>Ms Heather Gilbert</td>
</tr>
<tr>
<td></td>
<td>Ashima Soni</td>
</tr>
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<td>Ms Ayushi Gupta</td>
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<td>Ms Leah Smith</td>
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<thead>
<tr>
<th>DEGREE</th>
<th>NAME OF STUDENT</th>
<th>UNIVERSITY</th>
<th>RESEARCH PROJECT/THESIS TITLE</th>
<th>SUPERVISORS</th>
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<tbody>
<tr>
<td>PhD</td>
<td>Ms Melissa Kirkovski</td>
<td>Monash University</td>
<td>Neural connectivity in autism spectrum disorders</td>
<td>Paul Fitzgerald (50%), Peter Ericott (60%)</td>
</tr>
<tr>
<td></td>
<td>Mr Nikolay Kozlov</td>
<td>Monash University</td>
<td>Using brain stimulation enhanced second language learning Can transcranial direct current stimulation enhance second language learning?</td>
<td>Kate Hoy, Neil Bailey</td>
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<tr>
<td>Biomedical Sci (Hons)</td>
<td>Ms Katerina Lau</td>
<td>Monash University</td>
<td>Neural correlates of brain stimulation enhanced second language learning/Can transcranial direct current stimulation enhance second language learning?</td>
<td>Kate Hoy, Neil Bailey</td>
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<tr>
<td>BiMedSci (Hons)</td>
<td>Ms Bridget Pianta</td>
<td>Monash University</td>
<td>Looking on the bright side: Can non-invasive brain stimulation enhance positive information processing bias? / Can iEDS enhance positive ABMT? An EEG investigation.</td>
<td>Rebecca Segrave (70%), Kate Hoy (30%)</td>
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<tr>
<td></td>
<td>Ms Gabrielle Freedman</td>
<td>Monash University</td>
<td>Investigating the effects of mindfulness on neural activity markers of inhibition of emotional distractors during working memory retention.</td>
<td>Neil Bailey (75%), Rebecca Segrave (25%)</td>
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<tr>
<td>ONGOING STUDENTS</td>
<td>Mr Aron Hill</td>
<td>Monash University</td>
<td>Enhancing cognitive function/neuroplasticity using non-invasive brain stimulation</td>
<td>Kate Hoy (70%), Paul Fitzgerald (30%)</td>
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<tr>
<td></td>
<td>Ms Phillip Hall</td>
<td>Monash University</td>
<td>The neuroeconomics of major depression.</td>
<td>R. Croft, Paul Fitzgerald</td>
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<tr>
<td></td>
<td>Mr Andor Anderson</td>
<td>Monash University</td>
<td>The neurophysiological mechanisms underlying the therapeutic effects of transcranial magnetic stimulation for treatment resistant depression.</td>
<td>Paul Fitzgerald, Kate Hoy (40%)</td>
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<tr>
<td></td>
<td>Mr Sung Wook Chung</td>
<td>Monash University</td>
<td>Optimization of theta burst stimulation on depression</td>
<td>Paul Fitzgerald, Kate Hoy (40%)</td>
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<tr>
<td></td>
<td>Mr Xianwei Che</td>
<td>Monash University</td>
<td>The role of social support in physical pain</td>
<td>Paul Fitzgerald, Bernadette Fitzgibbon</td>
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<tr>
<td></td>
<td>Ms Kim Makaes</td>
<td>Monash University</td>
<td>Bridging the gap between sensory and social impairments in Autism</td>
<td>Bernadette Fitzgibbon (50%), Rebecca Segrave (40%), Paul Fitzgerald (10%)</td>
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<tr>
<td></td>
<td>Ms Tingting Cao</td>
<td>Monash University</td>
<td>Connectivity &amp; MDD</td>
<td>Paul Fitzgerald (50%), Richard Thomson (50%), Rebecca Segrave (10%)</td>
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<tr>
<td></td>
<td>Mr Oscar Murphy</td>
<td>Monash University</td>
<td>Cognitive enhancement: an investigation of noninvasive electrical brain stimulation methods.</td>
<td>Rebecca Segrave (50%), Kate Hoy (40%), Dana Weng (10%)</td>
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<tr>
<td></td>
<td>Ms Karyn Richardson</td>
<td>Monash University</td>
<td>investigating cortical inhibition as an endophenotype in schizophrenia</td>
<td>Paul Fitzgerald (50%), Kate Hoy (50%)</td>
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<tr>
<td></td>
<td>Ms Melanie Emson</td>
<td>Monash University</td>
<td>investigating the potential for brain stimulation to treat mild cognitive impairment</td>
<td>Kate Hoy (70%), Paul Fitzgerald</td>
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<tr>
<td></td>
<td>Mrs Amanda Green</td>
<td>Monash University</td>
<td>Investigating the effects of adjunct glycine therapy on cognitive function in schizophrenia</td>
<td>Paul Fitzgerald, R Croft</td>
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<tr>
<td>Volunteer Student</td>
<td>Mr Joseph Barnaby</td>
<td>Monash University</td>
<td>How similar are the changes in neural activity resulting from mindfulness practice in contrast to spiritual belief? / How does tactile distraction interfere with cognitive attention in meditators compared with non-meditators?</td>
<td>Neil Bailey (80%), Paul Fitzgerald (10%), Richard Chambers (10%)</td>
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### Cognitive Neuropsychiatry Research Team

<table>
<thead>
<tr>
<th>Degree</th>
<th>Name of Student</th>
<th>Name of University</th>
<th>Research Project/Thesis Title</th>
<th>Supervisors/s</th>
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<tbody>
<tr>
<td>PhD</td>
<td>Mr Chris Groot</td>
<td>Swinburne University</td>
<td>Enhancing cognitive function/neuroplasticity using non-invasive brain stimulation</td>
<td>Susan Rossell (100%)</td>
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<tr>
<td></td>
<td>Mr Eric Tan</td>
<td>Swinburne University</td>
<td>The neuroeconomics of major depression.</td>
<td>Susan Rossell (80%), Gregory Yoland (20%)</td>
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<tr>
<td></td>
<td>Mr Peter Goodin</td>
<td>Swinburne University</td>
<td>The neurophysiopathological mechanisms underlying the therapeutic effects of transcranial magnetic stimulation for treatment-resistant depression.</td>
<td>Susan Rossell (100%)</td>
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<td></td>
<td>Ms Andrea Philipou</td>
<td>Swinburne University</td>
<td>Optimization of theta burst stimulation on depression</td>
<td>Susan Rossell (100%)</td>
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<tr>
<td></td>
<td>Ms Andrea Wallace</td>
<td>Swinburne University</td>
<td>Voices Clinic (clinical placement)</td>
<td>Neil Thomas (100%)</td>
</tr>
<tr>
<td></td>
<td>Ms Carlye Weiner</td>
<td>Swinburne University</td>
<td>Voices Clinic (clinical placement)</td>
<td>Neil Thomas (100%)</td>
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<tr>
<td>DPsych</td>
<td>Ms Lauren Ban</td>
<td>Swinburne University</td>
<td>Voices Clinic (clinical placement)</td>
<td>Neil Thomas (100%)</td>
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<tr>
<td></td>
<td>Ms Susan Lee</td>
<td>Monash University</td>
<td>Understanding individual differences in response to non-invasive brain stimulation: the influence of and sex hormones/Impact of gender on cortical excitability</td>
<td>Rebecca Segrave (70%), Jayashri Kulkarni (30%)</td>
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<td></td>
<td>Mr Andrew McCann</td>
<td>Swinburne University</td>
<td>Cognitive remediation therapy in schizophrenia</td>
<td>Susan Rossell (100%)</td>
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<td></td>
<td>Ms Eleni Lysikatos</td>
<td>Swinburne University</td>
<td>Semantic memory function in first degree relatives of those with schizophrenia</td>
<td>Susan Rossell (60%), Erica Neil (40%)</td>
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<tr>
<td></td>
<td>Ms Nicole Brownfield</td>
<td>Swinburne University</td>
<td>A multidimensional and clustering study of fluency performance in schizophrenia</td>
<td>Susan Rossell (100%), Erica Neil (40%)</td>
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### Ongoing Students

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<th>Degree</th>
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<tr>
<td>PhD</td>
<td>Dr Rachel Brand</td>
<td>Swinburne University</td>
<td>Development and application of trauma-focused intervention for auditory verbal hallucinations</td>
<td>Neil Thomas (70%), Susan Rossell (30%)</td>
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<td></td>
<td>Mr Philip Sumner</td>
<td>Swinburne University</td>
<td>Neuroimaging correlates of dysfunctional semantic processes in schizophrenic formal thought disorder</td>
<td>Susan Rossell (70%), Matt Hughes (30%)</td>
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<td>Mr Sean Carruthers</td>
<td>Swinburne University</td>
<td>The mesocortical cholinergic system and cognition in schizophrenia</td>
<td>Susan Rossell (60%), Caroline Gurvich (40%)</td>
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<td>Ms Elizabeth Thomas</td>
<td>Monash University</td>
<td>The role of the glutamatergic system in cognition across the schizotypy/schizophrenia continuum</td>
<td>Caroline Gurvich (60%), Susan Rossell (30%), Kymel Bozaoglu (20%)</td>
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<td></td>
<td>Ms Imogen Bell</td>
<td>Swinburne University</td>
<td>Ecological momentary assessment and intervention to enhance self management of persistent auditory verbal hallucinations</td>
<td>Neil Thomas (70%), Susan Rossell (30%)</td>
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<td>Ms Natalia Conteras</td>
<td>Monash University</td>
<td>Does visual processing training enhance cognitive remediation therapy outcomes in people with schizophrenia?</td>
<td>Susan Rossell (100%)</td>
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<td>Ms Sarah Lancaster</td>
<td>Swinburne University</td>
<td>A brain imaging study of auditory verbal hallucinations and inhibition in patients with schizophrenia</td>
<td>Susan Rossell (70%), Matt Hughes (15%), Will Woods (15%)</td>
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<td></td>
<td>Ms Stephanie Louise</td>
<td>Swinburne University</td>
<td>The impact of a mindfulness-based intervention for auditory hallucinations on localised brain activity, attention and subjective experience</td>
<td>Neil Thomas, Susan Rossell</td>
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<tr>
<td>DNeuroPsych</td>
<td>Mr Shayden Bryce</td>
<td>Monash University</td>
<td>Exploring the unique benefits of cognitive remediation therapy (CRT) on neurocognitive and psychosocial outcomes relative to an active control</td>
<td>Jennie Ponsford (50%), Susan Rossell (50%), Stuart Law (20%)</td>
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<tr>
<td>DPsych</td>
<td>Ms Jacqueline Riddiford</td>
<td>Monash University</td>
<td>Investigating ocular-motor correlates of abnormal mirror system functioning in autism</td>
<td>Jo Fielding (40%), Peter Enticott (30%), Caroline Gurvich (30%)</td>
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<td>Ms Monique Scott</td>
<td>Swinburne University</td>
<td>Self, attachment and trauma in relation to voices</td>
<td>Neil Thomas (70%), Susan Rossell (30%)</td>
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<tr>
<td>DPsych (Clin)</td>
<td>Ms Maree Raser</td>
<td>Swinburne University</td>
<td>Investigating factors that influence the efficacy of cognitive remediation therapy in people with schizophrenia</td>
<td>Susan Rossell, Neil Thomas</td>
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<tr>
<td>MPsych (Clin)</td>
<td>Ms Maria Light</td>
<td>Swinburne University</td>
<td>Voices Clinic (clinical placement)</td>
<td>Neil Thomas (100%)</td>
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Please note that, for reasons of confidentiality, not all of our donors are included in this list.