



PHD (CLINICAL PSYCHOLOGY) AND (CLINICAL NEUROPSYCHOLOGY) PROJECTS

A SAMPLE OF PROJECTS CURRENTLY UNDERWAY

Researcher	Project Area
A/Prof Sean Cain	My group has recently identified a new mechanism for the vulnerability to depression (decreased light sensitivity) and a new understanding of the neural mechanism for the efficacy of antidepressant treatment (increased light sensitivity). This new understanding of circadian function in depression has led to several new treatment strategies (both behavioural and pharmacological) that will target the underlying mechanisms.
A/Prof Marie Yap	Parenting and prevention of youth mental health problems
Prof Julie Stout	Psychological treatments for Huntington's disease; Family functioning in Huntington's disease; Psychological well-being in inherited neurodegenerative disease
Dr Bei Bei	<p>Sleep meets clinical psychology: nature and mechanisms of sleep/wake behaviours, and improving sleep and wellbeing through cognitive-behavioural interventions</p> <p>Prospective students are invited to discuss research opportunities in the following areas:</p> <ol style="list-style-type: none"> (1) The psychological and behavioural regulations of sleep. (2) The relationship between sleep and mental health (e.g. mood, anxiety, and other psychiatric symptoms/disorders). (3) Psychological interventions for sleep disturbance and insomnia.
Prof Kim Cornish	Attention training in young children with developmental brain disorders e.g autism, ADHD
Dr Rico Lee	<p>App-based technologies to personalise treatments for addictions and OCD</p> <p>We have developed an app-based assessment tool in collaboration with Torus Games to measure the key drivers of addictions and OCD in an engaging and accessible way. This assessment app is currently being validated by clinical partners (ie. Turning Point inpatient alcohol and methamphetamine detoxification clinics) and is a key platform at BrainPark, a world-first purpose-built facility for lifestyle (eg, exercise, meditation) and technology-based (eg, brain training, virtual reality) interventions for addictive and compulsive disorders. There is diverse scope in developing a PhD project (clinical or clinical neuropsychology) looking at cognitive assessment of addictions and OCD, identifying predictors of treatment response to lifestyle and technology-based interventions in order to personalise treatments, as well as to develop cognitive training approaches using app-based technology in collaboration with our industry partner, Torus Games.</p>

Prof Peter Anderson	<p>With access to numerous large cohorts, my group does research investigating the factors associated with neurodevelopmental problems in children born very preterm. We do neuroimaging studies to examine brain pathology and brain development in these children, with the hope of finding early biomarkers for later cognitive, academic, motor, behavioural and social impairments. The group is also very interested in parental psychological distress following the birth of a very preterm baby, and how social-environmental factors influence outcomes in these children with a particular focus on parenting behaviour. Based on the knowledge gained from these studies we develop and assess intervention strategies that aim to prevent or minimise neurodevelopmental impairments.</p> <p>There is also opportunities for PhD projects on a large population based study to investigate the influence of alcohol exposure during pregnancy on offspring neurodevelopment. The children are being re-assessed at 6 to 7 years with a focus on cognitive, academic, behavioural and social outcomes. All children will have advanced 3-D craniofacial analysis and subset will have advanced brain imaging. The quantity and timing of alcohol exposure will be investigated, as well as the influence of episodes of binge drinking which often occurs prior to pregnancy awareness</p>
Prof Sean Drummond	<p>Impact of Operational Sleep Disruption on PTSD-relevant Fear Learning Processes This is an experimental study with clear translational implications for PTSD and other anxiety disorders.</p>
Dr Rebecca Segrave	<p>Conquering Compulsions The project will focus on fMRI neuroimaging outcomes and the reward system. A description of the project can be found here: http://bmh.org.au/projects/conquering-compulsions</p> <p>Brain Exercise Addiction Trial The PhD project will fall within the larger BEAT project which is describe here: http://bmh.org.au/projects/restoring-brain-health-in-cannabis-users-an-exercise-intervention-study. The student would work as part of the trial team and their project would involve MRI neuroimaging, psychological well-being, and cognitive data.</p>
Prof Murat Yucel	<p>The translation of compulsivity-related constructs into the clinic Our research stream investigates the definition, applicability, acceptance and clinical utility of the concept of compulsivity across treatment seeking and non-treatment seeking samples of impulsive and compulsive spectrum disorders. We are also interested in short and long-term outcomes (i.e. efficacy, effectiveness, and tolerability) of medical and non-medical approaches (e.g. exercise, meditation) and technologically based treatments (e.g. virtual reality, brain stimulation) for compulsivity tested within our clinic. Suitable for Clin Psych.</p>
Dr Joshua Wiley	<p>Emotion regulation and/or sleep interventions in people with cancer designed to reduce depression/anxiety, promote emotional awareness and coping, and improve sleep. No one project or student would do all of that, but those are the sorts of clinical projects I could support. We have good links with the PeterMac cancer center. I am also open to student initiated projects around any of the following broad themes: psychosocial stress, resilience/emotion regulation, cancer, daily studies/ecological momentary assessment.</p>
Dr Bradley Edwards (and Prof Sean Drummond)	<p>Examining the cause, and the clinical consequences, of increased rates of sleep apnea in PTSD. This project may also examine similar questions in insomnia, as this is the sleep problem most commonly reported in PTSD.</p>

<p>A/Prof Antonio Verdejo-Garcia</p>	<p>Impulsivity and social commitment in people with Borderline Personality Disorder The project is focused on higher-order cognition and social interaction among people with Borderline Personality Disorder, and includes research on the sense of commitment and impulsivity. The project will explore new computational theories of the disorder and links between neuroscience-informed phenotypes and clinical outcomes. The project sits between philosophy and psychology, and will include work with clients and clinicians to predict treatment progress and outcome measures.</p> <p>Goal Management Training for Methamphetamine Addiction The project aims to establish if Goal Management Training (GMT) (a group-based cognitive rehabilitation program) improves executive function deficits and clinical outcomes in people with methamphetamine dependence. The project will involve a randomised controlled trial to test the efficacy of GMT versus a Control (Brain Health Psychoeducation) intervention in the context of residential addiction treatment. The key outcomes of interest are the change in executive functioning from baseline to postintervention, and reduction of methamphetamine use at follow-up.</p>
<p>Dr Rene Stolwyk</p>	<p>Examining novel treatments to address depression and anxiety symptoms following stroke.</p> <p>Utilising telehealth technology to improve access to neuropsychological services for rural and remote stroke survivors</p>

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