

DOCTOR OF PHILOSOPHY (CLINICAL NEUROPSYCHOLOGY)

School of Psychological Sciences, Monash University

Researchers from the School of Psychological Sciences and the Turner Institute for Brain and Mental Health are offering a range of clinical research projects in 2027 that may be suitable for PhD (Clinical Neuropsychology) students applying for enrolment in 2027. A sample of particular projects or areas of research are listed below.

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A/PROF. ADEEL RAZI

Computational Neuroscience Laboratory

[PURE Profile](#)

[Supervisor Connect](#)

Our research is cross-disciplinary, combining neuroscience with mathematics, engineering, computer science and artificial intelligence. We develop computational models to understand the principles underlying brain organisation and function, and translate these insights into new approaches for brain and mental health. Our lab research focuses on:

1) NeuroAI and brain modelling: to understand how brain networks interact to support cognition, and to develop generative and AI models of brain organisation and dynamics; 2) Biological and neuroscience-inspired intelligence: to uncover computational principles underlying learning, reasoning, planning and adaptive behaviour; 3) Precision neurotherapeutics: including psychedelics and brain stimulation, combining brain imaging, computational modelling and AI to understand mechanisms and predict individual treatment response.

PROJECTS

PRECISION NEUROTHERAPEUTICS

We combine neuroimaging, computational modelling and clinical trials to understand and improve emerging treatments for brain and mental health conditions. Our work includes psychedelic-assisted therapies, with a particular focus on identifying mechanisms of treatment response and explaining individual variability. Ultimately, we aim to move from understanding average treatment effects towards predicting which intervention is most likely to benefit an individual.

DR. ALEXANDER WOLKOW

Sleep and Occupational Health Research Group: Alex Wolkow Lab

[Alex Wolkow Lab](#)

[PURE Profile](#)

[Supervisor Connect](#)

The goal of the Sleep and Occupational Health Research Group (lead by Alex Wolkow) is to better understand, and counteract, the impact of poor sleep and other workplace stressors on health, safety, and performance in high-risk occupations. Our group is interested in both the acute and long-term impact of sleep disturbances and other stressors in occupational settings. We use simulated work environments to explore the acute impact of sleep loss on work performance and stress, as well as cross-sectional and longitudinal studies to examine the link between sleep and health issues in the workplace. A further area of focus for our team is examining the effectiveness of interventions and workplace programs designed to enhance mental health and wellbeing in high-risk occupations.

PROJECTS

IMPACT OF SLEEP DISTURBANCES AND OTHER OCCUPATIONAL DEMANDS ON MENTAL HEALTH IN EMERGENCY SERVICE PERSONNEL AND OTHER HIGH-RISK OCCUPATIONS

Emergency services and other high-risk industries are exposed to a unique set of occupational demands, such as poor sleep, trauma and shift work. These demands can adversely impact the mental health of personnel. Our team aims to better understand and counteract the impact of occupational demands on mental health in emergency personnel and other high-risk occupations. Within this area of research, we are interested in examining how sleep and other factors emerge in new personnel and could be related to the development of mental health conditions (e.g., PTSD, depression, anxiety, burnout). We are also interested in understanding the effectiveness of interventions and programs designed to enhance mental health in these high-risk occupations. There are opportunities for PhD (Clinical psychology PhD, Research-only PhD and Clinical Neuropsychology PhD) and Masters (Master of Clinical Psychology) candidates to join this research area. Note this project area can be modified to align with the specific interests of the candidate. See our lab website for information: <https://www.monash.edu/medicine/psych/alex-wolkow-lab>

ACUTE IMPACTS OF OCCUPATIONAL DEMANDS ON PERFORMANCE AND STRESS IN EMERGENCY PERSONNEL AND OTHER HIGH-RISK OCCUPATIONS

Shift work can lead to sleep loss and circadian misalignment, which in turn can adversely impact an individual's performance and stress physiology. Our team uses simulated work environments and field settings to examine how shift work, sleep loss and other occupational demands influence different aspects of work performance and physiological stress responses in high-risk occupations (e.g., emergency services). There are opportunities for PhD (Research-only PhD, Clinical Psychology PhD and Clinical Neuropsychology PhD) and Masters (Master of Clinical Psychology) candidates to conduct projects within this area of research. Note this project area can be modified to align with the specific interests of the candidate. See our lab website for information: <https://www.monash.edu/medicine/psych/alex-wolkow-lab>

DR. ANNA MULLINS

Jackson Lab / Sleep and Brain Health

[PURE Profile](#)

Investigates links between sleep, cognition, and neurodegeneration using brain and biological biomarkers. Uses physiological signal analysis and interpretation to understand the influence of sleep-wake physiology and psychology on brain health.

PROJECTS

SLEEP STABILITY, EMOTIONAL MEMORY AND RISK FOR NEURODEGENERATION

In sleep disorders and the general community, poor sleep quality is associated with cognitive impairments, biomarkers of neurodegeneration and dementia. Rescue & Recovery Workers (RRWs) exhibit a high prevalence of sleep disorders, mental health comorbidities and show evidence of early-onset neurodegeneration. This project will investigate habitual sleep (using cardio-pulmonary coupling), emotional memory and plasma markers of neurodegeneration in this population.

PROF. ANTONIO VERDEJO-GARCIA

Addiction and Impulsivity Research Lab

[PURE Profile](#)

[Supervisor Connect](#)

My research investigates how the brain and body interact to shape emotion, interoception, reward, and addiction, and how these processes are disrupted in psychiatric illness. I combine naturalistic neuroimaging (film-based fMRI, EEG, and simultaneous physiological recording) with intracranial EEG in patients to characterise emotional learning and brain-body coupling at high spatial and temporal resolution. A second strand develops precision neuromodulation, using transcranial magnetic stimulation and transcutaneous vagus nerve stimulation to test causal mechanisms and therapeutic targets.

Methodologically, I utilise functional connectivity approaches as well as effective connectivity approaches with dynamical causal modelling to investigate meso- and macroscale brain dynamics. I also use computational neuroscience and dynamical systems approach, applied to fMRI, intracranial EEG, peripheral bodily responses, and behaviour. Projects integrate these tools within a mechanistic, clinically grounded framework rather than purely data-driven modelling.

Students can expect training across neuroimaging, computational analysis, and translational study design, with scope to develop projects spanning healthy cognition and clinical populations with strong focus on translational neuroscience. I have a medical background (MBBS) with strong signal processing skills thus enabling supervision of students from diverse backgrounds such as psychology, engineering,, computer science, physics and medicine.

PROJECTS

BRAIN-BODY INTERACTIONS IN DEPRESSION AND ADDICTION: MAPPING DISRUPTED COUPLING AS A MECHANISTIC MARKER AND TREATMENT TARGET

This project examines how communication between the brain and peripheral bodily systems shapes mood and motivation, and how disrupted brain-body coupling contributes to depression and addiction. Using neuroimaging, physiological recording, and computational modelling, students will characterise these interactions and test their value as mechanistic markers and neuromodulation targets.

NOVEL METHODS FOR MEASURING BRAIN ACTIVITY AND CONNECTIVITY IN ALCOHOL USE DISORDER, AND THEIR CHANGES WITH BRAIN STIMULATION

Alcohol use disorder is linked to altered activity and communication between brain regions that support reward, craving, and self-control. This project develops and applies novel computational methods to measure brain activity and connectivity from brain imaging data, and tests how these measures change following non-invasive brain stimulation (transcranial magnetic stimulation, TMS). Students will learn advanced analysis approaches and use them to identify markers of the disorder and to track how the brain responds to treatment.

PROF. BEI BEI

Sleep and Mental Health- [Bei Bei Lab](#)

[PURE Profile](#)

[Supervisor Connect](#)

The Sleep and Mental Health Laboratory researches a range of research areas related to: - the nature and mechanisms of sleep and circadian rhythm disorders - Interventions for sleep and circadian rhythm disorders, including Cognitive Behavioural Therapy for Insomnia, and Bright Light Therapy - Moderators and mechanisms of Cognitive Behavioural Therapy for Insomnia - the relationship between sleep and mental health (e.g., depression, anxiety, and other psychiatric symptoms/disorders) - sleep-wake behaviours and sleep health in adolescents, including the effects of restricted and extended sleep opportunities on adolescents' emotional and cognitive wellbeing; and sleep health in women, including interventions to improve sleep and wellbeing during pregnancy and postpartum periods. In addition, our group is an integral part of the Monash University Healthy Sleep Clinic. We provide research support to the Clinic's translational research activities, and contribute to training of provisional psychologists and Clinical Psychology registrars on sleep disorders management.

PROJECTS

PERINATAL INSOMNIA, SLEEP HEALTH, AND MENTAL HEALTH

The Sleep Health in Perinatal Care (SHINE) study is a large National Health and Medical Research Council (NHMRC) funded clinical trial, looking at real-world effectiveness of Cognitive Behavioural Therapy for Insomnia during pregnancy and the postpartum periods, as well as the implementation potential of the intervention in the routine perinatal care (Royal Women's Hospital and Monash Health). Within this trial, there will be ample scope for the candidate to develop research topics in the area of perinatal maternal/infant sleep, mental health, and cognitive/daytime functioning; health and wellbeing of new fathers; as well as clinical expertise in treating insomnia during this challenging time for new parents. Topics for doctoral/PhD/Masters projects are worked out collaboratively with the candidate to incorporate their research interests and career goals.

SLEEP AND MENTAL HEALTH IN ADOLESCENTS

Sleep and circadian rhythms (body clock) undergo tremendous changes during adolescence. It is also during this critical developmental period, early signs of mental health symptoms such as anxiety and depression emerge. The CLASS (Circadian Light in Adolescence, Sleep and School) Study is funded by the Australian Research Council (ARC), the NHMRC, and Wellcome (UK). It follows a large cohort of teenagers across adolescence and into young adulthood, and examines how changes in sleep and circadian rhythms are related to changes in mental health symptoms and academic and cognitive performance. A wide range of topics are available within this project across clinical psychology and clinical neuropsychology domains.

MONASH UNIVERSITY HEALTHY SLEEP CLINIC

This busy outpatient service provides evidence-based treatments for sleep disorders to the broader community, while also serving as a platform to foster research excellence, professional training, and education. Over the past 8 years, our research database has captured comprehensive sleep, mental health, and functioning profiles on 2000+ patients. Candidate working in this area will have the opportunity to have deep-dives into our research database, and receive specialist training in behavioural sleep medicine.

DR. BETH JOHNSON

Johnson lab

[PURE Profile](#)

Neurodevelopment, mental health, children and youth, LGBTQA+, qualitative, quantitative, multidimensional phenotyping.

PROJECTS

DIMENSIONAL MODELS OF NEURODEVELOPMENT AND MENTAL HEALTH ACROSS CHILDHOOD AND ADOLESCENCE

Neurodevelopmental and mental health conditions frequently co-occur. Children with multiple co-occurring neurodevelopmental conditions face substantially higher rates of mental health issues, yet current categorical diagnostic frameworks and clinical guidelines are not well suited for supporting overlapping conditions. This project is supported by established lived experience advisory groups to help inform and guide the conceptualisation, priorities and study design across the project. This project will use dimensional approaches of conceptualising neurodevelopmental traits, such as attention, emotion regulation, social communication, and mental health traits, that cut across diagnoses and shift over the course of development. It will also look at the utility of such dimensional approaches for informing clinical formulation and care, and predicting daily functioning and therapeutic support needs. Or alternatively, the utility of such a dimensional approach for informing self-concept and understanding by family or caregivers to provide fuller picture of a child's needs and strengths.

UNDERSTANDING THE CHANGING ROLE OF EDUCATORS IN SUPPORTING CHILDREN AND YOUTH WITH CO-OCCURRING NEURODEVELOPMENTAL AND MENTAL HEALTH CONDITIONS

This project will investigate how neurodevelopmental and mental health conditions emerge and shift across childhood and adolescence, and how developmental trajectories shape the role, scope, and needs of educators supporting students. Working across primary and secondary education settings, the project will work with teachers to understand their evolving role in supporting students with neurodevelopmental and mental health conditions as they move through different stages of schooling, and supports needed for teachers at each stage.

SUPPORTING MENTAL HEALTH IN NEURODIVERGENT LGBTQIA+ CHILDREN AND YOUTH

This project will use participatory research methods to map the intersectional experiences, needs, and supports of LGBTQIA+ children and youth with neurodevelopmental and mental health conditions, exploring how they build identity, community, and resilience within a social-ecological model. Findings will translate into affirming, strengths-based resources for priority community, workforce, and education settings.

AUTISTIC AND ADHD SYMPTOMS, MENTAL HEALTH AND HORMONAL SENSITIVITY IN MOTHERS AND THEIR CHILDREN

The shared relationship between autistic and ADHD symptoms, mental health and hormonal sensitivity in mothers and their children is increasingly recognised, yet remain poorly understood. This project will investigate how maternal and child neurodevelopmental traits, mental health, and hormonal sensitivity and examine how shared genetic or environmental factors shape the parent-child relationship and wellbeing.

A/PROF. DAVID MOSELEY

Child Youth and Family Intervention Clinic, Turner Clinics

[PURE Profile](#)

[Supervisor Connect](#)

Our research explores how relationships can support children's development, mental health, and wellbeing, and how this knowledge can inform effective interventions, services, and systems. A particular focus is understanding the relational processes through which development and therapeutic change occur, including attachment, attunement, co-regulation, caregiver responsiveness, and the ways parents, clinicians, educators, and other adults scaffold children's development.

Projects span parent-child therapy, parenting and caregiver wellbeing, neurodevelopment, child and youth mental health, and broader questions in child development. We are particularly interested in practical, developmentally informed and family-centred approaches for children with complex or intersecting needs that can work across traditional diagnostic and service boundaries.

Our research draws on intervention and therapy process research, co-design and participatory methods, service design and journey mapping, implementation and effectiveness research, and evaluation of models of care across health, education, and disability settings.

Across this work, we collaborate with children, families, clinicians, services, and communities to produce research that is scientifically rigorous, responsive to lived experience, and useful in real-world practice. We welcome PhD and Masters students interested in understanding how and why supports for children and families work, and how effective approaches can be translated into everyday practice and services.

PROJECTS

UNDERSTANDING AND IMPROVING HOW PARENT-CHILD RELATIONSHIPS SUPPORT CHILD MENTAL HEALTH AND DEVELOPMENT

This research examines how relationships shape children's development and mental health, and how developmental and clinical science can be translated into interventions and clinical practice that improve outcomes for children and families. Prospective PhD and Masters students are invited to co-develop the research projects, aligned with their interests. Projects may include studying mechanisms of change in parent-child therapy, evaluating relational interventions such as My Emotions, exploring the experiences of children, families, and clinicians, and/or developing and evaluating training that supports relational and dyadic practice. Students have opportunities to work within the Turner Clinics Child, Youth and Family Intervention Research Integrated Clinic and with our broader research and hospital partners.

DR. ELISE FACER-CHILDS

[Facer-Childs Lab](#) - Sleep and Performance

[PURE Profile](#)

[Supervisor Connect](#)

Our research examines how sleep and circadian rhythms shape mental health, wellbeing, exercise and performance, and how they can be measured and modified in the real world. A central interest of ours is individual differences. People vary considerably in their sleep, their body clocks, their physiology and in how they respond to the demands placed on them, and our aim is to understand that variation and explore whether accounting for it leads to better outcomes. Much of our work is applied science, looking at how we translate our findings into benefit through partnerships with industry and elite sport.

We work with athletes across sub-elite and elite groups, as well as with clinical and community samples. We have a strong interest in female populations and considering sex differences, where sleep and circadian research has historically been thin. We combine objective sleep and circadian assessment, including wearables, actigraphy and circadian phase measurement, with mental health, physical activity and physiological monitoring, longitudinal field studies, co-design methods and interventions.

Candidates are welcome to propose their own project within these themes. The examples below reflect directions we are currently interested in pursuing, each connecting to work already underway in the lab. All are suitable for candidates in the research only, clinical (or clinical neuropsychology) PhD programs and can be scoped to fit alongside coursework and placement commitments. Successful candidates would be embedded within the research team and have the opportunity to collaborate on other projects across the lab, including our applied work with industry and elite sport partners. We are a vibrant, active and welcoming team who are keen to find likeminded individuals to join us and advance our mission across sleep, chronobiology, mental health and performance. Check out our lab website for more information: <https://www.monash.edu/medicine/psych/elise-facer-childs-lab>

PROJECTS

PERSONALISING A DIGITAL SLEEP AND CIRCADIAN INTERVENTION FOR CLINICAL OR ATHLETE POPULATIONS

Project SCIMA is a newly developed sleep and circadian intervention for mental health, evaluated in athletes and currently being translated into a digital format. This project would adapt the intervention for either a clinical population or other athlete groups using co-design methods, then test its feasibility and efficacy on sleep, mood, mental health and functioning. Note: there is scope to modify or adapt the project based on the candidate's interests.

SLEEP, CIRCADIAN RHYTHMS AND MENTAL HEALTH ACROSS THE MENOPAUSE TRANSITION

The menopause transition carries high risk of insomnia and depressive symptoms, yet objective sleep and circadian changes across this period remain poorly characterised. This project would use wearable and daily monitoring to track sleep, physical activity, circadian timing, symptoms and mood, and to identify modifiable behavioural targets including physical activity, light exposure and sleep regularity. Note: there is scope to modify or adapt the project based on the candidate's interests.

OBJECTIVE SLEEP AND CIRCADIAN OUTCOMES FOLLOWING HEAD IMPACTS IN ATHLETES

Sleep after head impacts is almost always measured by questionnaire, and circadian outcomes are rarely assessed at all. This project would use objective sleep and circadian monitoring with comparison groups, contrasting head impacts against musculoskeletal injury and no injury, contact against non-contact sport, or currently competing against retired athletes. Note: there is scope to modify or adapt the project based on the candidate's interests.

SLEEP, BODY CLOCKS AND MENTAL HEALTH IN ADOLESCENT ATHLETES

Adolescent athletes balance sport with school, compounded by the pubertal delay in body clocks. This project would track sleep, circadian timing, mental health and burnout longitudinally using objective monitoring, to identify early targets for intervention. There is particular scope to focus on female athletes, where pubertal transition, rising depression risk and disengagement from sport converge. Note: there is scope to modify or adapt the project based on the candidate's interests.

DR. HANNAH KIRK

Child Development and Digital Technologies Lab

[PURE Profile](#)

[Supervisor Connect](#)

The CDDT lab focuses on how children are developing within a rapidly changing world, shaped by both digital proliferation and escalating climate change. Our goal is to assess the impact that digital technologies and climate change have on childhood mental health as well as cognitive, behavioural and academic development. We are interested in creating evidence-based digital technologies to optimise mental and cognitive health in childhood, and in understanding how climate-related distress affects children's wellbeing and developmental trajectories. Our lab has created a series of novel virtual reality and game-based interventions for neurodiverse children that are used globally, alongside research examining climate-related mental health in children and young adolescents

PROJECTS

CLIMATE-RELATED DISTRESS AND ANXIETY IN ADOLESCENTS: MAPPING A SHARED COGNITIVE PATHWAY

Adolescent anxiety is rising, and climate change is an increasingly plausible but understudied driver. Awareness of climate change alone, even without direct exposure to extreme weather, is enough to elevate distress in young people. Yet little is known about whether this distress leads to clinical anxiety over time, or why. This project tracks early adolescents (aged 12–14) to test whether climate-related distress predicts the onset of anxiety symptoms and whether this occurs through cognitive-affective processes already targeted in evidence-based anxiety treatments. The study has two aims. Aim 1 provides the first longitudinal test of whether persistent climate-related distress predicts subsequent increases in anxiety symptoms across early adolescence. Aim 2 examines whether cognitive-affective processes mediate this pathway. If climate-related distress predicts anxiety through these established cognitive-affective mechanisms, existing evidence-based therapies could potentially be adapted to address climate-related distress directly. This would offer a faster, more cost-effective route from evidence to care than developing bespoke interventions from scratch.

PREDICTORS OF CLIMATE-RELATED DISTRESS IN EARLY ADOLESCENCE

Climate-related distress is increasingly common among young people, with Australian estimates suggesting the vast majority of children and adolescents worry about climate change. Yet the factors that drive this distress, beyond direct exposure to extreme weather events, remain poorly understood. Awareness of climate change alone appears sufficient to elevate distress, suggesting a range of psychological, social, and environmental factors may be at play, but these have not been systematically mapped in youth. The project has two aims. Aim 1 maps the longitudinal trajectory of climate-related distress across early adolescence. Aim 2 identifies modifiable risk and protective factors of climate-related distress. Findings will identify which young people are most vulnerable to climate-related distress and why, providing the evidence base needed for the development of support tools.

CO-DESIGN OF RESILIENCE AND SUPPORT PROGRAMS FOR CLIMATE-RELATED DISTRESS

Despite growing recognition of climate-related distress in young people, few evidence-based programs exist to build resilience or provide support, and existing therapeutic approaches have rarely been adapted or tested for this specific context. Development of new interventions is often slow, costly, and disconnected from the lived experience of the young people they are intended to help. This project addresses that gap through participatory co-design, working directly with young people, families, and educators to develop a resilience and support program for climate-related distress. The project has two aims. Aim 1 uses co-design methodology with youth and other stakeholders to develop a prototype resilience/support program. Aim 2 pilot-tests the program's feasibility, acceptability, and preliminary impact on climate-related distress and associated wellbeing outcomes. This project offers a direct, tangible support tool for young people and the adults supporting them.

DR. JAI CARMICHAEL

Monash-Epworth Rehab

[PURE Profile](#)

[Supervisor Connect](#)

My research focuses on the neuropsychology of mental health, including the neuropsychiatric consequences of acquired brain injury. I have a particular interest in transdiagnostic, dimensional, and empirical models of mental health and their application to individuals with brain-based conditions or neuropsychological syndromes. I am also a practising clinician and am increasingly interested in conducting clinically embedded research, clinical translation and implementation activities, etc. I use a combination of more complex multivariable statistical approaches and qualitative methodologies.

PROJECTS

CO-DEVELOPING A MEASURE OF MENTAL HEALTH TAILORED TO ACQUIRED BRAIN INJURY

This project will contribute to the development, validation, and implementation of a novel transdiagnostic mental health measure tailored to people with acquired brain injury (ABI). The student will have opportunities to obtain feedback on the validity of the measure from individuals with lived experience of ABI, evaluate the psychometric properties of the measure, develop norms, and contribute to translation activities such as development of a manual, resources for providing feedback, and training for clinicians.

ON THE RELATIONSHIP BETWEEN COGNITION AND EMOTIONAL FUNCTIONING IN A REAL-WORLD COHORT OF MENTAL HEALTH CONSUMERS: A NEUROPSYCHOLOGICAL PERSPECTIVE

The proposed project will be based within COGMENT (COGnition and MENTAl Health), a newly established observational cohort study embedded within the Mental Health and Wellbeing Services at Bayside Health Peninsula Care Group, a large public health network covering Frankston and the Mornington Peninsula. Using data collected through routine neuropsychological assessments and medical records, the student will have opportunities to explore how different dimensions of psychopathology relate to cognitive functioning, investigate whether transdiagnostic symptom dimensions provide greater explanatory value than traditional psychiatric diagnoses, and characterise important constructs at the intersection of cognitive and emotional functioning, such as alexithymia and inhibitory control, across a wide range of clinical psychiatric and neurological diagnoses. The project offers a unique opportunity to conduct clinically applied research with direct relevance to neuropsychological assessment, formulation, and treatment in public mental health services.

A/PROF. JAMES COXON

James Coxon Lab

[PURE Profile](#)

[Supervisor Connect](#)

Our research spans cognitive neuroscience, neurophysiology, and exercise science. We use non-invasive brain stimulation (transcranial ultrasound stimulation, TUS, and transcranial magnetic stimulation, TMS), electroencephalography, and brain imaging (MRI) to stimulate and record from the brain. These tools are used to gain insight into the neural mechanisms of motor skill learning, memory formation, and decision making. We research the impacts of 'priming' the brain e.g. with non-invasive brain stimulation, or cardiorespiratory exercise with the aim of discovering new ways to enhance learning and cognition.

PROJECTS

TRANSCRANIAL ULTRASOUND FOR NEUROMODULATION OF LEARNING, MEMORY, AND COGNITION

White matter tracts connect brain regions into networks that underpin learning, memory, and cognition. Existing non-invasive brain stimulation techniques target network function by stimulating cortical network nodes. This project will utilise transcranial ultrasound stimulation (TUS) for non-invasive, high-precision modulation of deep brain structures and white matter pathways. TUS will be used to investigate the causal role of cortico-hippocampal and cortico-striatal networks in learning, memory, and cognition.

DR. JEGGAN TIEGO

Neural Systems and Behaviour Lab

[PURE Profile](#)

[Supervisor Connect](#)

Using statistical modelling to link brain and genetics to behaviour, specifically novel models of psychopathology and cognition. Development of a novel hierarchical dimensional model of psychopathology to the DSM-5-TR. Cognitive and psychological sequelae of ECT.

PROJECTS

THE NEUROPSYCHOLOGY OF ECT: DETECTING HIDDEN DEFICITS AND DEVELOPMENT OF A NOVEL NEUROPSYCHOLOGICAL BATTERY

Electroconvulsive therapy (ECT) is considered the gold-standard treatment for severe treat-resistant depression and is used to treat thousands of patients each year. However, severe long-term cognitive impairments are being increasingly reported by patients. These reports are routinely ignored, because many large-scale studies demonstrate no long-term negative impacts on cognitive function. However, there is evidence to suggest that 1) adverse effects on cognition in a subset of patients are being obscured by aggregation bias; 2) the type of cognitive tests being used to evaluate ECT patients are not sufficiently sensitive/do not test for the types of cognitive impairments reported by patients; 3) the follow-up timeframes for testing are too short (< 6 months). This proposed project consists of three interrelated studies: 1) Re-analysis of studies reporting null or beneficial effects of ECT on cognition to test for aggregation bias; 2) Development of a neuropsychological battery that is sensitive to the cognitive deficits described by ECT patients; and preliminary testing of this battery in ECT patients reporting cognitive impairments post-ECT (pilot data); 3) Pre-, peri, and post-ECT testing on a small number of patients to determine feasibility and clinical efficacy of a recommended neuropsychological testing procedure.

DR. KATE GOULD

IGNITE Group (MERRC)

[PURE Profile](#)

[Supervisor Connect](#)

Innovations by Gould's Neuropsychology researchers for Impact, Translation and Engagement (IGNITE) prioritises utilising co-design to empower people with living experience of brain injury and other disabilities, and focuses on maximising community translation of evidence-based solutions to improve brain injury neurorehabilitation. Methodologies include co-design; intervention design, implementation and evaluation (SCED, RCT), survey development and validation, longitudinal studies, translational research, mixed-methods studies (quantitative and qualitative). Key interest areas include challenging behaviour (PBS+PLUS intervention), cybersafety and scams (CyberAbility), psychiatric disorders, and safe dating practises.

PROJECTS

ENHANCING SELF-ADVOCACY AND MANAGING RISKS IN DATING AFTER ACQUIRED BRAIN INJURY.

People with acquired brain injury (ABI) often experience cognitive and psychosocial challenges that make navigating intimate relationships difficult. Despite intimate relationships being a core contributor to quality of life, people with ABI often struggle with positive and safe dating. Neurorehabilitation clinicians report feeling uncomfortable with navigating the complexities of dating with their clients, and no evidence-based interventions exist. Left unsupported, vulnerability to exploitation, unsafe practices, and relational breakdowns may be prevalent. The project will involve co-designing a manualised intervention, delivered by neurorehabilitation clinicians, to support clients with ABI to develop safe and positive dating skills. The intervention will be delivered to individuals with ABI and evaluated through mixed quantitative and qualitative methods. Students will collaborate with co-design contributors with ABI and partnering disability organisations. The project is suitable for a PhD student in either Clinical Neuropsychology or Clinical Psychology.

CYBERABILITY: AN EVALUATION OF A CO-DESIGNED EMOTIONAL SUPPORT PHONE SERVICE FOR PEOPLE WITH DISABILITY IMPACTED BY CYBERSCAMS.

Online scams are an escalating public-health and equity issue in Australia, causing an estimated \$2–3 billion in annual losses each year and disproportionately affecting people with disability, including those with acquired brain injury (ABI). In response to the urgent need for accessible, evidence-informed support for people affected by cybercams, our team is implementing a telephone-based wellbeing and support service. This project builds on our other co-designed and evidence-based scam support programs - see cyberAbility.org.au. This project will evaluate the telephone-based wellbeing and support service for people affected by cybercams, including people with disabilities. It will examine service development, implementation, user needs and experiences, and outcomes to build evidence for accessible, effective scam support. We welcome enthusiastic PhD applicants to join our collaborative and dedicated team.

PBS+PLUS: CO-DESIGNING A TAILORED CLINICAL TRAINING PROGRAM FOR PEOPLE PROVIDING SUPPORTS TO INDIVIDUALS WITH CHALLENGING BEHAVIOURS FOLLOWING BRAIN INJURY

Challenging behaviours (e.g. aggression, socially inappropriate behaviours) are one of the most difficult changes people experience after an acquired brain injury. They may also present in people with neurodevelopmental and neurodegenerative conditions. PBS+PLUS is an evidence-based and humanistic approach to help people build a meaningful life and self-regulate their behaviours. It combines positive behaviour support and strategies helpful for people with cognitive difficulties. Since 2021, our team have co-developed and translated PBS+PLUS training resources for neurorehabilitation clinicians. This includes a clinical guidebook, a podcast (Relentless Optimism), presentations, whole-of-service workshops, intensive supervision and a Monash University clinic. Approximately 700-800 clinicians (neuropsychologists, occupational therapists, speech therapists, social workers, behaviour support practitioners etc) have engaged in this training. There remains a gap, however, in training that is tailored for non-clinician support people including family members and support workers, as well as nurses. This project will involve the co-design, delivery and evaluation of a PBS+PLUS training program suitable for support people.

DR. KELLY ATKINS

Atkins Lab

[PURE Profile](#)

[Supervisor Connect](#)

Ageing and Neurodegeneration with an emphasis on the implementation and evaluation of models of care (both diagnostic and post-diagnostic care). This includes evaluating the experiences and needs of caregivers who support people with young-onset dementia. Both qualitative and quantitative research projects are available.

PROJECTS

EVALUATING POST-DIAGNOSTIC CARE FOR YOUNG-ONSET DEMENTIA

This project will evaluate a novel model of post-diagnostic care for people diagnosed with young-onset dementia (e.g., early onset AD, FTD) and their caregivers. We are currently piloting this care model at the Department of Neuropsychiatry and the Royal Melbourne Hospital. Both quantitative and qualitative outcomes are available for evaluation, with the intention to refine the model to meet the needs of patients and their families for a subsequent larger trial.

IDENTIFYING PATIENT PREFERENCES FOR DISEASE-MODIFYING THERAPIES IN ALZHEIMER'S DISEASE

Disease-modifying therapies that may slow or delay the progression of neurodegenerative disease are beginning to emerge. Understanding patient and caregiver preferences is essential to ensure that treatment decisions, regulatory processes, and funding models are aligned with what matters most to those living with the disease, ultimately supporting more patient centred and equitable care. This project will use Discrete Choice Experiments (DCEs), a stated preference method to quantify how people value different aspects of a treatment or intervention. Both quantitative and qualitative data may be generated for analysis.

SOCIAL AND ECONOMIC COST OF HUNTINGTON'S DISEASE IN AUSTRALIA

A major barrier to improving HD services is a lack of population-level evidence about how people with HD use the healthcare system. We have no systematic, statewide estimates of the type of healthcare services used by people with HD, how frequently they are accessed, or how service use differs between metropolitan, regional and rural areas. Without this information we cannot identify service gaps, define priorities for improvement in services, or implement effective change for people living with HD. Using data held by the Australian Institute of Health and Welfare (AIHW), we aim to: 1) describe the patterns of healthcare utilisation among people with HD in Victoria, including hospital admissions, emergency department presentations, outpatient specialist care and pharmaceutical use; 2) examine variation in healthcare utilisation according to demographic characteristics; 3) estimate the direct healthcare-system costs associated with HD, overall and across major categories of care and; 4) explore how healthcare utilisation and costs vary across the course of illness.

DR. LOUISA SELVADURAI

Cerebellum and Neurodegeneration Research Group

[PURE Profile](#)

[Supervisor Connect](#)

The Cerebellum and Neurodegeneration Research Group aims to better understand, predict, and intervene on the historically under-recognised psychological symptoms experienced by people with progressive cerebellar neurodegeneration (i.e., cerebellar ataxias). These may include cognitive difficulties, neuropsychiatric symptoms, and/or adjustment to having a rare and progressive neurological condition whose symptoms impact daily participation. Through better understanding these symptoms and experiences, we aim to address gaps in current clinical care by producing tailored, accessible information and interventions to support individuals' mental quality of life in the context of debilitating and progressive motor disability.

Our key research methodologies are clinical assessments, surveys and interviews of people with lived experience of ataxia and their close others. We have a strong focus on ensuring that the consumer voice is embedded in our work. We take advantage of online research tools to create accessible research participation opportunities for individuals with ataxia around Australia and the world. Our work is enhanced by integration with neurology clinics in Melbourne and Brisbane, international collaborations, the Australian Cerebellar Ataxia Registry, and our Ataxia Consumer Ambassador lived experience consumer group.

PROJECTS

AN ONLINE PSYCHOEDUCATIONAL INTERVENTION FOR PSYCHOLOGICAL SYMPTOMS IN ATAXIAS

Individuals with cerebellar ataxias (progressive neurological conditions) can experience a range of psychological symptoms. This has been identified as an important area for input by consumers, but there are several barriers to accessing appropriate intervention. This project aims to co-design, implement, and evaluate a novel, online, psychoeducational intervention for cerebellar ataxias, embedding consumer lived experience throughout. Scholarship top-up funding of \$5000 per year is available for this project.

DR. MANA BIABANI

Bellgrove lab

[PURE Profile](#)

[Supervisor Connect](#)

My research examines the neural and computational mechanisms that support human cognition, with a particular focus on perceptual decision-making, attention, cognitive control, and neurodevelopmental conditions such as ADHD. I investigate how molecular, cellular, circuit-level, and behavioural processes interact to shape cognition and individual differences.

My work combines multimodal human neuroscience methods, including electroencephalography (EEG), transcranial magnetic stimulation (TMS) with concurrent EEG, focused ultrasound stimulation (FUS), magnetic resonance imaging (MRI), psychopharmacology, and computational modelling. I use these approaches to identify causal brain mechanisms, characterise the neural dynamics underlying cognition, and link neurophysiological signals to formal models of behaviour.

PROJECTS

CAUSAL CIRCUIT MECHANISMS OF DECISION FORMATION IN THE HUMAN BRAIN

This project investigates how the brain transforms sensory information into decisions. It combines high-density EEG, MRI, computational modelling, and focused ultrasound stimulation (FUS) to test how distributed neural networks and their interactions causally shape decision behaviour and neural dynamics, providing a mechanistic account of the systems supporting perceptual decision-making.

EXCITATION–INHIBITION DYNAMICS UNDERLYING COGNITIVE FUNCTION IN ADHD

This project investigates how alterations in excitation–inhibition dynamics contribute to attention, impulse control, and decision-making in ADHD. Combining pharmacological perturbation, high-density EEG, and computational modelling, it will link neural activity to behaviour and individual differences, providing a mechanistic foundation for more targeted and personalised interventions.

PROF. MARIE YAP

Parenting and Youth Mental Health Research Group

[PURE Profile](#)

[Supervisor Connect](#)

Our team conducts impact-focused applied research in child and youth mental health (aged between 5-18 years), with a particular focus on empowering parents and carers in the important role they have in their child's development and mental health. Our research revolves around scalable digital parenting interventions that empower parents to support their child's mental health, and span prevention into early intervention of mental health problems. Our team's vision is that all parents will be empowered with evidence-based parenting strategies to support their child's mental health that are relevant and actionable.

If your research interests align with our vision and approach, I would welcome the opportunity to discuss potential Master's or PhD projects you may wish to conduct.

The research projects we conduct are inherently translational, and use a range of methodologies, which may include:

PROJECTS

- Co-design of digital parenting interventions to support child/adolescent mental health with parents/carers, young people, and professionals who support these families, to address depression and anxiety problems and associated challenges (e.g. school refusal, suicide risk, non-suicidal self-injury, trauma) and for different subgroups of the population (e.g. autism, ADHD, parental mental health challenges, family adversities, immigrant families, rural/remote families, fathers)
- Small-scale evaluations of the acceptability and feasibility of our interventions using mixed methods
- Large-scale randomised controlled trials to evaluate the effectiveness and cost-effectiveness of the interventions
- Development and evaluation of parenting-coach training frameworks and packages, as part of the coach-supported versions of our digital parenting interventions
- Implementation research surrounding the integration and national roll-out of parenting interventions in existing services, e.g. headspace
- Understanding the mechanisms of change (e.g. parent factors, child factors, sociodemographic factors, intervention-specific factors, coach-level factors) in parenting interventions
- Systematic reviews, meta-analyses, and Delphi studies of international expert consensus are examples of research translation methods we use to ensure that our parenting intervention content is drawn from the highest-quality research evidence.

DR. MARINA DOWNING

Monash Epworth Rehabilitation Research Centre (MERRC)

[PURE Profile](#)

[Supervisor Connect](#)

PROJECTS

IMPLEMENTING EVIDENCE-BASED CARE FOR COGNITIVE AND PSYCHOSOCIAL CONSEQUENCES OF MODERATE-TO-SEVERE TRAUMATIC BRAIN INJURY

Traumatic brain injury (TBI) causes cognitive and behavioural changes that impact independence, work, relationships and mental health. This research has already assessed the needs, barriers and facilitators to service delivery for these issues across Australia, including people in rural areas, and culturally and linguistically diverse groups. We will now harness this information to implement best practice guidelines for cognitive and psychosocial rehabilitation after TBI in order to upskill service providers and enhance the experience of individuals with TBI and their close-others in various parts of Australia.

PROF. MARK BELLGROVE

[Mark Bellgrove Lab](#)

[PURE Profile](#)

[Supervisor Connect](#)

My lab does work across basic neuroscience and clinical application (ADHD, autism). We study how cognition is enacted at the systems level (genes, neurochemistry, brain, phenotypes) in order to understand risk mechanisms for ADHD and autism

PROJECTS

SYSTEMS NEUROSCIENCE OF PERCEPTUAL DECISION MAKING

We have funded programmes of work examining how perceptual decisions are formed using neuropharmacological challenge, EEG, and behaviour both in healthy populations and in clinical samples. We have a new programme of work developing rodents models of perceptual decision making. We are also starting a new programme of work looking at how arousal shapes fluctuations in behavioural variability using pharmacological challenge

PROF. MARTIN SELLBOM

Personality, Psychopathology, and Measurement lab

[PURE Profile](#)

[Supervisor Connect](#)

My research concerns how individual differences in personality traits can be used to understand, classify, and assess mental disorder. Much of this work has focused on personality pathology, in step with the shift in DSM-5 and ICD-11 away from traditional categorical diagnoses toward a model based on impairment in self and interpersonal functioning described by dimensional trait profiles. I examine both underlying mechanisms and clinical utility issues in this respect.

A second theme addresses the hierarchical structure of psychopathology and what mechanisms personality traits and mental disorders share, whether disorder reflects personality functioning under stress, or traits act as risk factors for later difficulty.

A third concerns clinical assessment in applied settings, with a particular emphasis on the MMPI-3: how its scales map onto contemporary hierarchical models, and how its validity scales detect feigned or defensive responding.

PROJECTS

HIERARCHICAL TAXONOMY OF PSYCHOPATHOLOGY (HiTOP): ASSESSMENT, MECHANISMS AND CLINICAL UTILITY

The Hierarchical Taxonomy of Psychopathology (HiTOP) models mental disorder dimensionally and hierarchically, rather than as a set of discrete categories. It was developed to address well-documented limitations of categorical diagnosis (e.g., comorbidity, within-diagnosis heterogeneity, and unreliable boundaries between disorders). The framework is still young and important questions remain open.

How is HiTOP best assessed, and can existing instruments be mapped onto it? What neuropsychological and environmental mechanisms underlie its spectra? And is the framework feasible and clinically useful in practice? Projects might involve secondary analysis of existing datasets or new data collection, and can be shaped around prospective students' specific interests.

PROF. MATTHEW PASE

Epidemiology of Dementia (Pase) Lab

[PURE Profile](#)

[Supervisor Connect](#)

Professor Pase's team is dedicated to making dementia a preventable condition by identifying modifiable risk factors and early biomarkers. His research involves clinical research (including clinical trials) and cohort studies.

PROJECTS

RISK FACTORS FOR COGNITIVE DECLINE AND DEMENTIA

We will use longitudinal data to understand how changes in different health (eg blood pressure) and lifestyle (eg sleep) factors are associated with dementia risk

A/PROF. MELINDA JACKSON

Sleep & Brain Health Research Group

[PURE Profile](#)

[Supervisor Connect](#)

Sleep disorders/ disturbance, digital interventions, cognition, clinical trial.

PROJECTS

CARE 2 SLEEP: A DIGITAL SLEEP INTERVENTION FOR COMMUNITY-DWELLING PEOPLE LIVING WITH COGNITIVE IMPAIRMENT AND THEIR CARER

Over 200,000 Australians provide informal assistance and caregiving to people with dementia, and two thirds of these individuals experience significant sleep disturbance. Poor sleep in dementia carers is associated with increased depressive symptoms and reduced quality of life. This project will test the feasibility and efficacy of a digital sleep intervention for people with dementia and their carer using a multimodal approach that combines brief training of caregivers in behavioural strategies to improve sleep in the person with dementia, in addition to cognitive and mindfulness-based strategies to improve sleep and mood in the caregiver.

DR. PRERNA VARMA

[Sletten Lab](#) (Sleep and Circadian Rhythms Theme)

[PURE Profile](#)

Projects are spread across two themes:

- Sleep and Mental Health Equity
- Digital Interventions for Shift Work:

PROJECTS

INEQUITIES THAT DON'T SLEEP: USING INTERSECTIONAL FRAMEWORKS TO UNDERSTAND SLEEP AND MENTAL HEALTH ACROSS COMMUNITIES

1 in 2 Australians experience sleep deficiencies. This is linked to more than 3,000 premature deaths and costs the economy over \$66 billion each year through its effects on physical and mental health. But the burden is not evenly borne. Inequities in sleep and mental health are shaped by migration, discrimination, gender, sexuality, disability, trauma, social and structural barriers. However, Australia does not systematically document or address these inequities. This theme examines sleep and mental health inequity using intersectional frameworks and a decolonising lens. Our goal is to develop community-led, co-designed interventions that advance health equity. We partner with community organisations, local councils and not-for-profits. We use mixed methods, including risk modelling, multilevel intersectional analysis, and qualitative approaches such as participatory storytelling.

SLEEPSYNC: PERSONALISED, DIGITAL INTERVENTION FOR SHIFT WORKERS

Digital Interventions for Shift Work: Shift workers are our essential workforces, providing 24/7 services in high-stress, operationally demanding contexts. Over 70% of shift workers experience sleep and circadian disruption associated with an increased risk of accidents, injuries and adverse mental health outcomes. This theme develops personalised digital interventions for shift workers. We work directly with industries such as healthcare, defence and aviation to co-produce solutions that improve sleep and alertness. We collaborate with industries, researchers, clinicians, computational modelling experts and intend to extend these interventions beyond shift work, to conditions such as delayed sleep-wake phase disorder, mental health conditions and jet lag.

DR. REBECCA KERESTES

Bellgrove Lab

[PURE Profile](#)

[Supervisor Connect](#)

Themes: Neurodevelopmental conditions (autism and ADHD), emotion dysregulation, lived experience, culture and mental health, with a focus on developing culturally responsive approaches to emotion regulation. Methodologies: Co-designed qualitative research involving children and young people with lived experience of autism and/or ADHD and culturally and linguistically diverse communities. The project will utilise a cross-cultural participatory action research approach to explore cross-cultural perspectives and lived experiences of emotion dysregulation and inform the development of a cross-cultural model and culturally responsive interventions.

PROJECTS

RETHINKING EMOTION DYSREGULATION IN AUTISM AND ADHD: BUILDING A TRANSDIAGNOSTIC, CROSS-CULTURAL MODEL

This research examines emotion dysregulation in autistic children and young people with ADHD across diverse cultural contexts. Using co-designed qualitative methods and lived-experience perspectives, the project will explore how emotion dysregulation is experienced and understood, informing culturally responsive interventions and contributing to the development of a cross-cultural model of emotion dysregulation.

DR. SAURABH SONKUSARE

Addiction and Impulsivity Research

[PURE Profile](#)

My research investigates how the brain and body interact to shape emotion, interoception, reward, and addiction, and how these processes are disrupted in psychiatric illness. I combine naturalistic neuroimaging (film-based fMRI, EEG, and simultaneous physiological recording) with intracranial EEG in patients to characterise emotional learning and brain-body coupling at high spatial and temporal resolution. A second strand develops precision neuromodulation, using transcranial magnetic stimulation and transcutaneous vagus nerve stimulation to test causal mechanisms and therapeutic targets.

Methodologically, I utilise functional connectivity approaches as well as effective connectivity approaches with dynamical causal modelling to investigate meso- and macroscale brain dynamics. I also use computational neuroscience and dynamical systems approach, applied to fMRI, intracranial EEG, peripheral bodily responses, and behaviour. Projects integrate these tools within a mechanistic, clinically grounded framework rather than purely data-driven modelling.

Students can expect training across neuroimaging, computational analysis, and translational study design, with scope to develop projects spanning healthy cognition and clinical populations with strong focus on translational neuroscience. I have a medical background (MBBS) with strong signal processing skills thus enabling supervision of students from diverse backgrounds such as psychology, engineering,, computer science, physics and medicine.

PROJECTS

BRAIN-BODY INTERACTIONS IN DEPRESSION AND ADDICTION: MAPPING DISRUPTED COUPLING AS A MECHANISTIC MARKER AND TREATMENT TARGET

Uses neuroimaging, physiological recording, and computational modelling to examine how communication between the brain and bodily systems shapes mood and contributes to depression and addiction.

NOVEL METHODS FOR MEASURING BRAIN ACTIVITY AND CONNECTIVITY IN ALCOHOL USE DISORDER, AND THEIR CHANGES WITH BRAIN STIMULATION

Applies novel computational methods to measure brain activity/connectivity changes in alcohol use disorder following non-invasive brain stimulation (TMS).

PROF. SEAN DRUMMOND

Sean Drummond Lab

[PURE Profile](#)

[Supervisor Connect](#)

My program of research covers three broad areas:

1) Behavioural interventions for insomnia; and 2) Translational studies examining the mechanistic role of sleep in psychopathology, especially PTSD and mood disorders; and 3) Cognitive neuroscience of sleep and sleep deprivation. Our studies include lab-based experimental studies, clinic-based treatment studies, home-based experimental or observational studies, and combinations of the three.

We address our research questions in healthy controls, patients with insomnia, patients with PTSD, and other mental health populations. I work with my students (both research PhD and Clinical PhD students) to develop their own ideas and projects, providing an opportunity to experience every stage of the research process. Generally, students derive some of their data from ongoing studies and some from new studies and/or new methods they add to ongoing projects.

PROJECTS

IMPACT OF AMBIENT HEAT ON SLEEP AND MENTAL HEALTH

Experimental, qualitative, and/or EMA studies examining the impact of nocturnal heat on sleep, mood, cognition, and mental health. Populations of interest include adults, older adults, those with sleep disorders, and those with pre-existing mental health symptoms/disorders. There may be opportunities for international collaboration on these projects. Please see Supervisor Connect link for more details.

UNDERSTANDING INSOMNIA: FROM PHYSIOLOGY TO TREATMENT OUTCOMES

A thesis in this area will utilise existing data and new data collection to address one or more of the key questions in Insomnia Disorder: What are the physiological endotypes? Do endotypes or other traits help predict treatment response? What is the best way to measure CBT for Insomnia treatment adherence, and how can we promote adherence to promote treatment outcomes? How do bed partners affect each other's sleep and insomnia symptoms? How are all these things influenced by comorbidities (e.g., with OSA or mental health symptoms)?

PERSONALITY DISORDER AND SLEEP DYSFUNCTION: FROM ASSOCIATION TO MECHANISM

Sellbom and Drummond (2026) recently established associations between dimensional models of personality disorder and several forms of sleep dysfunction. However, that work was entirely cross-sectional, survey-based, and examined a fairly limited number of sleep metrics, leaving open questions of directionality and mechanism — both of which matter if sleep is to be a viable treatment target in personality pathology. This project will build on those findings through a series of small-scale prospective studies using varied methodologies (e.g., experience sampling, daily sleep diaries, wearable sleep trackers) to test how personality pathology and sleep disturbance influence one another over time. The student will gain training in intensive longitudinal design and analysis, with scope to shape the specific research questions around their own interests.

PROF. SUE COTTON

Early Intervention and Mental Health

[Pure Profile](#)

[Supervisor Connect](#)

Research Themes: Psychosis, bipolar disorder, mood disorders, youth mental health, health service outcomes, measurement, carers

Methodologies: Data-driven quantitative, clinical trials, psychometrics, and qualitative methodologies

PROJECTS

ADHD AND BIPOLAR DISORDER

This project will examine impulsivity in people with attention-deficit/hyperactivity disorder (ADHD), including how impulsive behaviours relate to ADHD symptoms, emotional regulation, functioning and wellbeing. Using existing or newly collected data, the study will explore factors associated with greater impulsivity and consider how these may contribute to difficulties experienced by people with ADHD. Both neuropsychological and clinical projects.

COGNITION AND SOCIAL COGNITION IN BD

Cognitive and social cognitive difficulties are common in bipolar disorder and can affect relationships, employment, education and everyday functioning. This project will examine areas such as memory, attention, executive functioning, emotion recognition and social understanding, and investigate how these difficulties relate to clinical characteristics, functioning, wellbeing and recovery.

A/PROF. TRACEY SLETTEN

Shift Work and Circadian Health Laboratory

[PURE Profile](#)

[Supervisor Connect](#)

Our research and industry engagement program is focussed on the mechanisms of sleep and circadian disruption, particularly in shift workers. We work to understand the adverse implications of sleep and circadian disruption for health, safety and productivity, and develop targeted interventions to improve sleep health in occupational environments. We specialise in translational research to understand and improve sleep health challenges in unique industry settings including healthcare, Defence, commercial aviation, heavy vehicle transport, manufacturing and Antarctic expedition.

PROJECTS

SLEEP AND NEUROBEHAVIOURAL PERFORMANCE IN INTERNATIONAL AVIATION

This program of research is examining the sleep, alertness and cognitive performance of international pilots and cabin crew during the longest commercial flight patterns globally. The project translates laboratory-based research into the real-world with novel technologies allowing EEG and cognitive assessments in the skies. This world-first research involves collaborative data collection with Qantas Airways during specifically designed research flights patterns. It provides the opportunity to support personalised behavioural recommendations to crew to optimise occupational health and wellbeing.

SLEEPSYNC: DIGITAL SLEEP HEALTH MANAGEMENT FOR SHIFT WORK

Development and evaluation of app-based technology to provide personalised recommendations for sleep-related behaviour to manage sleep and health in shift work where immediate access to clinical support is limited. The program incorporates adjustment of digital health to the needs of users, and evaluation of effectiveness. This project can include the optimisation of interventions via qualitative user-centred design.