Doctor of Philosophy (Clinical Neuropsychology)

Research Projects

Researchers from the School of Psychological Sciences and the Turner Institute for Brain and Mental Health are offering a range of research projects in 2026 that may be suitable for PhD (Clinical Neuropsychology) applicants. A sample of particular projects or areas of research are listed below.

Researcher	Project Area
Adam McKay	**Project: Developing and evaluating training in managing agitation after traumatic brain injury.** Agitation and challenging behaviours occur in about 50% of people during early recovery after moderate–severe traumatic brain injury (TBI), particularly when they are confused and in post-traumatic amnesia (PTA). Symptoms such as restlessness, impulsivity, and aggression can persist for weeks, increasing risks of injury, delayed rehabilitation, and use of restrictive practices. For clinicians, agitation is a key challenge in PTA care and can contribute to distress, burnout, and injury. There is currently no evidence-based approach or training to guide clinicians. In our team's recent research, clinicians across Australia identified the need for evidence-based strategies to improve patient and staff outcomes. Frameworks such as positive behaviour support are used to support people with challenging behaviours in community settings, but they have not been systematically applied to agitation during inpatient PTA care. Adaptations are needed due to patients' severe cognitive impairments, which limit capacity to regulate behaviour, and the features of inpatient care that require a different model. Our team has produced international guidelines on PTA care and, with consumers and clinicians, identified agitation management as a key step in early TBI recovery. This project will co-design a PBS model and training for agitation management in PTA, and pilot its feasibility and impacts on clinicians, patients, and families through a mixed-methods study.
Antonio Verdejo-Garcia	**Project: Clinical trials of neuroscience informed interventions for addictions and eating disorders**

	We offer a variety of projects embedded in our clinical trials which are testing novel neuroscience-informed tailored interventions for people with addictions and eating disorders. We combine different approaches, including fMRI, cognitive and neurostimulation tools, and novel pharmacological (e.g. psychedelics) and psychological interventions (e.g. precision-based psychotherapies and cognitive remediation).
Bei Bei	**Project: Perinatal insomnia 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. Projects broadly relate to sleep and mental health, and improving sleep and wellbeing through cognitive-behavioural interventions. Please see our website to find out more about the team https://www.monash.edu/turner-institute/bei-bei-lab
Bei Bei	**Project: 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. Topics for doctoral/PhD/Masters projects are worked out collaboratively with the candidate to incorporate their research interests and career goals. Projects broadly relate to sleep and mental health, and improving sleep and wellbeing through

	cognitive-behavioural interventions. Please see our website to find out more about the team https://www.monash.edu/turner-institute/bei-bei-lab
Bei Bei	**Project: A novel approach to improve sleep in adolescents** Over the past 10 years, our group has extensively studied the unique sleep challenges adolescents face. Based on this body of work, we are piloting a novel intervention to help adolescents sleep better using a combined bio-psycho-social approach. The candidate will play a critical role in the development and delivery of the intervention, and receive training on behavioural management of sleep problems in adolescents. Topics for doctoral/PhD/Masters projects are worked out collaboratively with the candidate to incorporate their research interests and career goals. Projects broadly relate to sleep and mental health, and improving sleep and wellbeing through cognitive-behavioural interventions. Please see our website to find out more about the team https://www.monash.edu/turner-institute/bei-bei-lab
Bei Bei	**Project: 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 7 years, our research database has captured comprehensive sleep, mental health, and functioning profiles on 1500+ 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. Topics for doctoral/PhD/Masters projects are worked out collaboratively with the candidate to incorporate their research interests and career goals. Projects broadly relate to sleep and mental health, and improving sleep and wellbeing through cognitive-behavioural interventions. Please see our website to find out more about the team https://www.monash.edu/turner-institute/bei-bei-lab
Beth Johnson	**Project: Creating a transdiagnostic model of neurodevelopment and mental health** Neurodevelopmental conditions, like autism and ADHD, frequently co-occur with mental health conditions in children and young people. Families, young people, educators, clinicians, and allied health professionals have consistently reported that existing diagnostic systems do not capture the full range of children's strengths and support needs.

	This project will focus on co-designing new ways to assess co-occurring neurodevelopment and mental health that moves beyond current diagnostic categories. This project will work closely with consumers and professionals to create a holistic model of neurodevelopment and mental health by combining standardised quantitative (parent- and teacher-reported measures, clinical information) and qualitative insights from young people, families and professionals whose complex or nuanced presentations mean that traditional assessments are not appropriate. The goal is to develop a transdiagnostic framework that separates symptom presentation (e.g., attention differences, social communication, emotional regulation) from a young person's support needs across family, education, medical, allied health, and disability contexts to create flexible, holistic support young people's needs.
Brad Edwards	**Project: A novel mechanism informed treatment for comorbid insomnia and obstructive sleep apnoea** Co-morbid insomnia and obstructive sleep apnoea (COMISA) is common and when these disorders co-occur, they result in additive impairments to patients' sleep, daytime functioning, mental health and a higher risk of all-cause mortality compared to those with either insomnia or OSA alone. Notably, COMISA is more difficult to treat than either condition alone, particularly as these patients demonstrate even worse acceptance and use of CPAP therapy (the primary OSA therapy), compared to patients with OSA-only. Our team seeks to identify the mechanisms underlying COMISA and its effects on daytime function. Depending on student interests, thesis topics could aim to identify the underlying cause(s) of OSA and insomnia in COMISA patients and assess how treatment of insomnia or OSA, alone or combined, influence these mechanism(s), symptom severity and clinical presentation. Students will gain experience with performing clinical interviews, cognitive testing, assessing mental health, working with large participant databases, and delivering interventions (including drug therapy) in randomised controlled trials.
David Moseley	**Project: Mindful Parenting for Neurodivergence** The Mindful Parenting for Neurodivergence program is a tailored, strengths-based intervention designed to support parents of children with autism, ADHD, and intellectual disabilities. Delivered in four online modules, the program aims to enhance parental wellbeing by fostering mindfulness, emotional regulation, and parent self-compassion. With project supervision from clinical and clinical neuropsychologists, Master's and PhD projects will focus on evaluating feasibility, acceptability, and effectiveness in supporting parents, improving family functioning, and promoting neurodiversity-affirming care, while also offering students valuable experience in intervention development, clinical evaluation, and multidisciplinary collaboration. At the Master's

	level, the project could involve piloting the four-module program with parents using a pre–post evaluation design, including psychometric measures of parental stress, mindfulness, and perceived competence, alongside qualitative feedback to refine the program. At the PhD level, the project could extend on this foundation by incorporating a systematic review of mindful parenting interventions, co-design of enhanced resources with parents and clinicians, and a randomised controlled trial to evaluate outcomes for parents and children. A co-designed peer mentoring model where experienced parents support others could also be explored. These projects will be developed collaboratively with the candidate to align with their research interests and career goals, and offer the opportunity to make a substantial contribution to family-centred, neurodiversity-affirming approaches to child and family mental health. This is a collaborative project between the Turner Clinics Child Youth and Family Clinic and the Monash University Centre for Consciousness and Contemplative Science (M3CS).
David Moseley	**Project: Understanding and Improving Inpatient Care for Children with Complex Co-Occurring Mental Health and Neurodevelopmental Presentations** This PhD or Masters project, offered in collaboration with the statewide Oasis Neuropsychiatry Unit at Monash Health, offers Clinical Psychology and Clinical Neuropsychology candidates the opportunity to advance knowledge and practice for children with highly complex presentations. The project could include a systematic review of international evidence on inpatient mental health care for children with neurodevelopmental disorders, followed by the development of a revised evaluation protocol grounded in empirical literature and co-designed with clinicians, children, and families. Opportunities include to implement this protocol within the Oasis Unit and conduct a pilot evaluation, examining key domains including transdiagnostic presentations, the role of trauma and adversity in children's lives, and assessment and treatment models and outcomes. This project will be developed collaboratively with the candidate to align with their research interests and career goals, offering opportunities to build expertise in systematic review, co-design, applied clinical research, and service evaluation. The project will contribute to new knowledge about complex inpatient care, generate evidence to inform practice and policy, and play a role in shaping more effective and responsive services for children with neurodevelopmental disorders and mental health difficulties. This is a collaborative project between the Turner Clinics Child Youth and Family Clinic and the Monash Health Early in Life Mental Health Service (ELMHS) - Dr Belinda Gargaro and collaborators.
Elise Facer-Childs	**Project: The impact of exercise, sleep and chronobiology on mental health, physical performance and cognitive function**

	"There are a few areas of interest in the lab that a student could develop their own PhD project around. These include: 1. Exercise and sleep in females: impact of the menstrual cycle, difference in mental health and sleep, developing exercise interventions to improve sleep and mental health in females. 2. Sleep and body clocks in adolescent athletes: investigating the link with burnout and mental health in adolescents and whether sleep could be a modifiable factor to target. 3. A sleep and circadian intervention to improve mental health and performance: joining a larger lab project looking at a sleep intervention to improve mental health and performance in athletes which can be translated to other high performance settings. This has been piloted and we are moving towards running a randomised control trial. 4. The neurophysiology of athlete sleep, recovery and performance: exploring how slow wave sleep enhancement could be a target for intervention to improve recovery and cognition in athlete populations. Note: for all of these projects there is scope to modify / adapt the project based on the candidate's interests. About the lab: These projects are most suitable to PhD candidates (research, clinical or clinical neuropsychology). All candidates joining this lab will have the opportunity to work in real-world studies and develop relationships with industry partners in elite sport. The candidate will receive specialist training in state-of-the-art techniques in sleep and chronobiology research, and develop their knowledge of commercial research environments. The candidates would be embedded within the research team and have the opportunity to collaborate on other research being conducted in the lab. We are a vibrant, active and welcoming team who are keen to find like minded individuals to join our advance our mission of exercise, sleep, chronobiology, mental health and performance. Check out our lab website for more information: https://www.monash.edu/medicine/psych/elise-facer-childs-lab"
Hannah Kirk	**Project 1: Examining how digital technology use influences executive functions such as working memory, cognitive flexibility, and inhibitory control during adolescence.** Self-regulation, the ability to manage behaviours, emotions, and thoughts to achieve goals develops from early childhood into adulthood and is critical for lifelong success. It involves executive functioning (e.g., inhibitory control, working memory, cognitive flexibility), attention control, and emotional regulation. Deficits in self-regulation are

	associated with long-term challenges, including academic underperformance, behavioural difficulties, and mental health issues. The rise of digital technologies introduces unique challenges for self-regulation, with features like infinite scrolling, and algorithm-driven recommendations potentially undermining this ability. The impact of digital technology use on self-regulation is currently poorly understood, and the mediating impact of individual differences is yet to be explored through methodologically robust studies. This study aims to examine if and how digital environments impact self-regulation and whether individual factors influence this potential relationship.
Hannah Kirk	**Project 2: Protecting Young Minds in a Changing World: Helping Australian Children Manage Eco- Anxiety to Support Mental Health.** Exposure to stressors in childhood increases the risk of long-term mental health disorders. Today one of the most profound and growing stressors is the escalating climate crisis. Children are growing up amidst rising temperatures and an uncertain environmental future. As children become aware of these threats, many experience fear and distress referred to as eco-anxiety. Eco-anxiety has been linked to long-term negative functional and clinical outcomes, including increased anxiety and depression. Despite a unique vulnerability to eco-anxiety, children have been largely overlooked in climate-related mental health research. Without evidence, well-meaning but misguided strategies like withholding information can heighten distress and exacerbate mental health challenges. There is an urgent need for evidence-based, age-appropriate strategies that acknowledge children's experiences and support their mental wellbeing. This project is the first globally to comprehensively investigate eco-anxiety in children aged 9-12, addressing critical research and policy gaps by: 1. Mapping eco-anxiety over time, measuring its impact on mental wellbeing and establishing a baseline for ongoing monitoring. 2. Identifying modifiable socio-ecological risk and protective factors to inform early intervention and prevention efforts. 3. Co-designing a school-based program (Climate Circles for Kids) to help children manage eco-anxiety, while equipping parents and educators with tools to support child mental health. By acting early before mental health issues escalate, this project lays the foundation for child-centred national mental health strategies to address on-going climate change risks. Empowering children with the skills to manage eco-anxiety is essential to lower future health service demand and equip a generation to drive positive environmental change.

Jai Carmichael	**Project: Addressing suicidality and self-harm after acquired brain injury: Co-developing support resources** People with acquired brain injury (ABI), such as from traumatic brain injury or stroke, are at 2 to 4 times higher risk of attempting and dying by suicide compared to the general population. While non-suicidal self-injury (NSSI) often co-occurs with suicidality in non-ABI populations, no research to date has explored NSSI in individuals with ABI, leaving a major gap in understanding and clinical practice. This innovative and fully funded project aims to co-develop practical resources (e.g., training, psychoeducational content) to support clinicians, families, and individuals with ABI in assessing and responding to suicidality and NSSI. It will use a multi-method approach—scoping surveys, qualitative interviews, and co-design sessions—involving ABI clinical scientists, suicide prevention experts, and people with lived experience. Funded by a School of Psychological Sciences Strategic Grant and the American Foundation for Suicide Prevention, this project offers the chance to contribute to world-first research with strong academic, clinical, and lived experience partnerships.
James Coxon	**Project: Investigating the role of subcortical regions in learning and memory processes with transcranial ultrasound stimulation** Transcranial ultrasound stimulation (TUS) is a novel non-invasive brain stimulation technique capable of targeting the basal ganglia and hippocampus with excellent spatial precision. The project will involve using TUS to investigate the online and offline learning processes contributing to (procedural, and/or declarative) memory formation. Suited to a student with an interest in cognitive neuroscience, MRI neuroimaging, and laboratory based experimental research.
Jessica Trevena-Peters	**Project: From Isolation to Participation: Adapting and Piloting a Peer Support Intervention for People with Traumatic Brain Injury** Traumatic brain injury (TBI) often leads to persistent cognitive and psychosocial difficulties, with many individuals facing barriers to community reintegration. In a recent Australia-wide survey conducted by our team, 40% of respondents with TBI reported a need for more support from peers with TBI during their rehabilitation and recovery journey. This highlights an underexplored service gap, particularly given the recognised value of peer support in reducing isolation, fostering coping skills, and supporting participation in daily life. Group-based approaches can create opportunities to share experiences and build community, while

	one-to-one mentoring can enable participants to pursue their goals and best meet individual needs. This PhD project will address this need by: 1. Engaging stakeholders (people with TBI, peer support workers, close others, and clinicians) to scope priorities and contextual requirements for peer support delivery in Australia. 2. Adapting an existing international peer support protocol to the local context, likely incorporating both group work and opportunities for individualised sessions. 3. Piloting the adapted community-based intervention in a feasibility trial to assess acceptability, practicality, and preliminary outcomes. By combining co-design with structured evaluation, the project aims to deliver a sustainable, evidence-based model of peer support tailored to the needs of people with TBI.
Joshua Wiley	**Project: SleepSteps** Summary: Stepped care trial of cognitive behavioral sleep interventions for people with cancer. Opportunities: direct patient work, intervention design & delivery, qualitative interviews, work with lived experience experts, collaborate with clinical health partners (hospitals & community). Measures: variety of measures incl sleep symptoms and behaviors, quality of life, mental health, cognitive function, qualitative feedback. $8,000/yr topup scholarship available.
Joshua Wiley	**Project: Neurocognitive prehabilitation** Brain "fog" and memory problems are common after cancer and are exacerbated by surgery. In this project, we work with the Peter MacCallum Cancer Centre Psychology and Surgery departments to explore neurocognitive prehabilitation options before surgery. Opportunities: direct patient work, direct work with clinicians (psychology and medical), possible intervention design & delivery, qualitative interviews, work with lived experience experts, possible observational surveys. Measures: subjective cognitive function, brief objective function measures, sleep, feasibility & acceptability & satisfaction.
Joshua Wiley	**Project: Cancer's Financial Toxicity** The psychosocial impacts of financial toxicity after cancer are not clearly documented. This project is focused on understanding financial toxicity's impacts on psychological and social factors and potential solutions and supports (e.g., what options do healthcare professionals see, what options would people with cancer like to see health services provide).

	Opportunities: direct contact with patients, direct contact with health professionals, work with the Peter MacCallum Cancer Centre. Measures: distress & mental health, social & relationship factors, neurocognitive functioning, qualitative measures, sleep
Joshua Wiley	**Project: Cancer Daily Experiences** This project would use daily diary / ecological momentary assessment to understand the real time experiences of people after cancer. There is broad scope to plan the exact measures included and questions asked. Opportunities: patient recruitment, real time understanding, training in statistical analysis, remote delivery offers research flexibility. Measures: sleep, physical activity, fatigue, pain, emotions, emotion regulation, mental health, brief daily cognitive function measures.
Kate Gould	**Project: Co-designing a disability friendly cybersafety online education program to help people avoid scams** We have previously developed "CyberAbility" cyberability.org.au. This co-designed program helps people with brain injury learn how to avoid scams. With major funding from industry, we will update this training using co-design with additional disability groups to enhance utility and also consider more recent scams including the impact of Artificial Intelligence (AI). Research will include mixed methods quantitative and qualitative approaches.
Louisa Selvadurai	**Project: Neuropsychiatry of degenerative cerebellar ataxias** Degenerative cerebellar ataxias are complex and heterogeneous diseases defined by a range of debilitating motor and non-motor symptoms. These include neuropsychiatric symptoms, such as emotional dysregulation and social difficulties, increasingly recognised as common and functionally impactful disease features. There is also an open question as to whether the current knowledge of neuropsychiatric symptoms in ataxias is being effectively translated into the clinic. The wider project includes the following aims: 1) investigate the phenomenology of neuropsychiatric dysfunction through qualitative interviews of people with ataxia and their close others, 2) investigate how neuropsychiatric symptoms are evaluated and addressed in current clinical practice for ataxias, 3) understand the types of neuropsychiatric symptoms experienced and how they manifest in daily life, 4) investigate the impact of neuropsychiatric symptoms on family and carer relationships, 5) track neuropsychiatric symptoms over time, 6) co-design, implement, and evaluate an intervention for neuropsychiatric symptoms in ataxias. This research project will be co-supervised by Dr Louisa Selvadurai (psychologist, clinical neuropsychology registrar) and Associate

	Professor Ian Harding (neuroscientist). Students will have the opportunity to work with local and international clinical and research collaborators, and be embedded in the Ataxia Center of Excellence at the Royal Victorian Eye & Ear Hospital.
Marie Yap	**Project: Co-design and evaluation of a coach-supported digital parenting intervention to support parents to respond to school avoidance in primary-school-aged children** School avoidance (also known as school can't or school refusal) has become a global concern especially since the COVID-19 pandemic. A child with school avoidance experiences high levels of distress about attending and staying at school, and ends up missing school despite their parents' efforts to send them to school. Despite parents' central role in supporting children with these challenges, there are currently no evidence-based guidance for parents of primary-school-aged children. This project will co-design such a program with parents and education-sector professionals, and evaluate its short-term effects on parental self-efficacy and child school attendance.
Martin Sellbom	**Project: Hierarchical Taxonomy of Psychopathology (HiTOP): Assessment, Mechanisms and Clinical Utility** The Hierarchical Taxonomy of Psychopathology (HiTOP) is a new framework that considers mental disorders from a dimensional and hierarchical perspective. It is designed to address many of the limitations of the traditional categorical mental disorder system and allow for more accurate and useful formulations of individual's presenting symptoms and problems. The HiTOP framework is quite new and many important questions remain unanswered. My lab is interested in addressing important questions about the optimal assessment of the HiTOP framework, improving our understanding of underlying neuropsychological and environmental mechanisms that underlie HiTOP spectra, and understanding the feasibility and predictive utility of this framework in clinical implementation. Research projects within this context can be discussed and shaped based on prospective students' specific interests.
Matthew Pase	**Project: Finger prick blood tests for Alzheimer's disease diagnosis** Alzheimer's disease (AD) is characterized by the accumulation of brain amyloid plaques and tau neurofibrillary tangles. Plasma-based blood tests have transformed AD assessment but remain limited by their reliance on phlebotomy, time-sensitive processing, and specialized infrastructure (e.g., -80°C freezers). These barriers restrict accessibility, particularly in low-resource settings and large-scale, decentralized trials. Our team is working towards validating novel finger-prick blood tests for the detection of AD. These tests can be self-administered remotely, eliminating the need for cold-chain storage and phlebotomy.

	By enabling finger-prick, dried blood spot (DBS) collection, this project has the potential to democratize AD biomarker testing, expanding access to underserved and underrepresented populations. If validated, this method could revolutionize dementia risk reduction and therapeutic trials by supporting scalable, frequent, and remote-friendly outcome assessments, ultimately accelerating therapeutic discovery and prevention efforts worldwide.
Megan Spencer-Smith	**Project: Brain development and neurobehavioural outcomes in individuals born very preterm** There are PhD project opportunities as part of the VIBeS longitudinal cohort study, the world's largest prospective longitudinal neuroimaging and neurodevelopmental study of very preterm and term born children continuing into young adulthood. Brain MRI and neurobehavioural assessments were conducted at birth, 2, 5, 7, 13 and 20 years of age. A control group of individuals born at term provides an important reference group for determining alterations in brain and neurobehavioural trajectories in survivors born very preterm. Projects might include documenting trajectories and/or identifying predictors of long-term outcomes in individuals born very preterm
Megan Spencer-Smith	**Project: Corpus callosum development in individuals born very preterm and the association with cognitive and behavioural functioning** The corpus callosum is the largest white matter tract in the brain and is the major pathway connecting the right and left hemispheres. The corpus callosum is vulnerable to adverse exposures during early development, including being born preterm. However, no study has examined the development of the corpus callosum from birth to adulthood in those born very preterm, or related the dysmaturation of this structure to neurobehavioural impairments that are common in this population. This project will address these gaps utilising data from the unique VIBeS longitudinal cohort which has neuroimaging and neurobehavioural data at birth, 2, 5, 7, 13 and 20 years of age. Supervisors: Dr Megan Spencer-Smith, Dr Claire Kelly, Prof Peter Anderson
Megan Spencer-Smith	**Project: Developmental absence (agenesis) of the corpus callosum in children** The corpus callosum is the largest white matter pathway in the brain, connecting left and right hemispheres important for communication of sensory, motor, cognitive and behavioural information. Early disruption to its development can lead to developmental absence (agenesis) of the corpus callosum (AgCC), impacting on children's cognitive and behavioural functioning. AgCC is diagnosed based on brain imaging, and is now commonly diagnosed with routine prenatal ultrasound.

	There are PhD project opportunities as part of the Paediatric Agenesis of the Corpus Callosum Project, the largest cohort study with neuroimaging and neurobehavioural data of children with AgCC. One opportunity is to take a transdiagnostic approach to study the corpus callosum by exploring neuroimaging biomarkers of cognitive and behavioural outcomes in children with AgCC and children born very preterm, who share difficulties in cognitive and behavioural outcomes and are vulnerable to alterations in corpus callosum structure. Another opportunity is to work with families and clinicians to understand the research priorities in AgCC. Supervisors: Dr Megan Spencer-Smith, Dr Claire Kelly, Prof Peter Anderson
Melinda Jackson	**Project 1: Care2Sleep: Co-designing a digital sleep intervention for community-dwelling people with cognitive impairment and their care partner** Sleep disturbances are common in individuals with cognitive decline and their care partners. Despite this, effective and accessible treatments of sleep disturbances remain an unsolved challenge. The Care2Sleep project intends to design and implement a digital sleep program to improve access to a preventive sleep health intervention that will delay and reduce the severity of dementia. The aim is to transform an existing sleep health intervention, the Better Sleep for Wellbeing program, into a digital offering, thus providing a scalable, accessible, evidence-based sleep intervention that provides cost-effective ongoing support to not only people with cognitive impairment, but their carers. To achieve this, the Care2Sleep project will involve: 1) qualitative co-design workshops drawing on the lived-experiences of key community groups and stakeholders to design the program and sleep coaching model, and 2) a hybrid effectiveness-implementation RCT to demonstrate community implementation and effectiveness of the Care2Sleep program. The project will involve both qualitative and quantitative research methods and working with clinical populations.
Melinda Jackson	**Project 2: Sound Asleep: A Novel Approach to Treat Obstructive Sleep Apnoea and Associated Cognitive Impairment** Sleep is critical for effective cognition, particularly the presence of slow wave sleep; a deep, stable phase of non-REM sleep. Research shows individuals with Obstructive Sleep Apnoea (OSA) have less slow wave sleep, poorer cognition and brain atrophy compared to healthy individuals. Thus, it is critical to treat OSA to prevent further cognitive decline. One potential approach, acoustic stimulation therapy, has been used in healthy adults across the lifespan to improve slow wave sleep, with positive benefits for cognition. This first-of-its-kind NHMRC-funded project will explore the use of acoustic stimulation therapy in individuals with OSA to improve slow wave sleep. OSA patients will

	undergo two weeks using a novel acoustic stimulation device. Polysomnography, daytime sleepiness and cognition will be assessed to determine if acoustic stimulation therapy can bolster slow wave sleep, improve cognition and sleepiness, and alter OSA pathophysiology. We will also assess the feasibility of acoustic stimulation therapy for use in individuals with OSA. This study will take the first steps in determining whether acoustic stimulation therapy enhances slow wave activity, and improves daytime functioning and OSA severity; thus offering a unique, cost-effective, and non-invasive alternative treatment for the millions of individuals with OSA who remain untreated.
Michael Takagi	**Project: Cognitive, mental health, and behavioural outcomes associated with childhood onset Facioscapulohumeral muscular dystrophy (FSHD)** FSHD is an autosomal dominant muscular dystrophy, with a prevalence of 1 in 8000. Symptom onset in childhood (<18 years) is reported in around 20% of cases. While adult studies suggest cognitive and mental health impacts, few have examined cognitive and psychological profiles in childhood-onset FSHD. Early-onset FSHD, defined by the genetic profile and/or clinical presentation (i.e. onset of symptoms under 10 years of age), is associated with extra muscular symptoms including sensorineural hearing loss, retinal vascular disease, and increased incidence of cognitive difficulties. A reduced quality of life, high levels of anxiety and the need for psychological support has been suggested in a recently published mixed methods study in children with FSHD. This is an international project, involving three other sites. It aims to examine cognitive, mental health, and psychosocial (e.g., social cognition) outcomes for children with FSHD. The focus of the PhD project will be developed with the student and supervisors and will be conducted in conjunction with Monash University, Murdoch Children's Research Institute (MCRI) and the Royal Children's Hospital. This project is well-suited for both clinical psychology and neuropsychology students who are interested in paediatrics, neurodevelopment, and mental health.
Michael Takagi	**Project: Developing interventions for families on a waitlist for psychological assessment: merging mental health and neurodevelopment** The Paediatric Assessment Clinic provides comprehensive and family-focused neurodevelopmental, cognitive, and mental health assessments to school-aged children experiencing complex challenges. While the bulk of our referrals typically relate to queries around autism, ADHD, intellectual developmental disorder, and/or a specific learning disorder, the clinic sees many children and families with varied presentations, including those with neurological and medical conditions.

	Perhaps most importantly is that while many services in Australia and internationally remain siloed, our clinic prides itself on being a 'dual focused' neurodevelopment and mental health assessment service. This means that our expertise does not lie in either neurodevelopment or mental health, but uniquely, in both. As such, assessments at our clinic are in high demand, and waitlists are often long and drawn out. Families spend a significant amount of time waiting for a formal assessment, and tend to only receive support after the assessment has been completed. In the meantime however, families still need help. This project aims to provide help to these families by co-designing interventions, supports and/or resources that can be offered to them in the waitlist period between their initial intake and their child's formal assessment. Excitingly, given the clinic's dual focus and novel service model, waitlist supports will be neurodevelopmentally and psychologically centred, and will be informed by families' needs. This project sits at the intersection of clinical psychology and neuropsychology, and will provide an opportunity to work directly with families. It is well-suited for a clinical psychology and neuropsychology student who has an interest in paediatrics, neurodevelopment/neurodiversity and mental health.
Nicole Rinehart	**Project: AllPlay Dance** Children with neurodevelopmental conditions such as autism and attention deficit hyperactivity disorder (ADHD) often experience clinical and social barriers to inclusion in their daily lives. The Child and Family Program revolves around a suite of clinical and community programs that aim to improve developmental outcomes. The program is a partnership model funded by industry, government and philanthropy. For example: AllPlay Learn, Footy, Dance, Joy of Moving, Sleeping Sound, and the Developmental Kit. Research Methodology: Implementation research, randomised control trials, and clinical neuroscience and developmental neuropsychology. https://www.monash.edu/medicine/psych/research/neurodevelopment/allplay-child-and-family-program
Nicole Rinehart	**Project: AllPlay Footy** Children with neurodevelopmental conditions such as autism and attention deficit hyperactivity disorder (ADHD) often experience clinical and social barriers to inclusion in their daily lives. The Child and Family Program revolves around a suite of clinical and community programs that aim to improve developmental outcomes. The program is a partnership model funded by industry, government and philanthropy.

	For example: AllPlay Learn, Footy, Dance, Joy of Moving, Sleeping Sound, and the Developmental Kit. Research Methodology: Implentation research, randomised control trials, and clinical neuroscience and developmental neuropsychology. https://www.monash.edu/medicine/psych/research/neurodevelopment/allplay-child-and-family-program
Nicole Rinehart	**Project: AllPlay Learn** Children with neurodevelopmental conditions such as autism and attention deficit hyperactivity disorder (ADHD) often experience clinical and social barriers to inclusion in their daily lives. The Child and Family Program revolves around a suite of clinical and community programs that aim to improve developmental outcomes. The program is a partnership model funded by industry, government and philanthropy. For example: AllPlay Learn, Footy, Dance, Joy of Moving, Sleeping Sound, and the Developmental Kit. Research Methodology: Implentation research, randomised control trials, and clinical neuroscience and developmental neuropsychology. https://www.monash.edu/medicine/psych/research/neurodevelopment/allplay-child-and-family-program
Nicole Rinehart	**Project: Joy of Moving - Mental and Physical Activity Project** Children with neurodevelopmental conditions such as autism and attention deficit hyperactivity disorder (ADHD) often experience clinical and social barriers to inclusion in their daily lives. The Child and Family Program revolves around a suite of clinical and community programs that aim to improve developmental outcomes. The program is a partnership model funded by industry, government and philanthropy. For example: AllPlay Learn, Footy, Dance, Joy of Moving, Sleeping Sound, and the Developmental Kit. Research Methodology: Implentation research, randomised control trials, and clinical neuroscience and developmental neuropsychology. https://www.monash.edu/medicine/psych**/research/neurodevelopment/allplay-child-and-family-program**
Rebecca Kerestes	**Project: Rethinking Emotion Dysregulation in autism and ADHD: Building a transdiagnostic, cross-cultural model.** Autism and ADHD are the two most prevalent neurodevelopmental conditions, with one in ten Australian children and youth diagnosed with autism, ADHD or both. Emotion dysregulation, defined as difficulties in adaptively managing or modifying emotions, is a prevalent feature of autism and ADHD. Emotion dysregulation negatively impacts personal, academic, and social relationships, is associated with reduced quality of life and confers additional risk for mental health conditions including anxiety and depression. Furthermore, while culture has a fundamental influence on how mental health is understood, current treatments that target emotion

	dysregulation are based on theoretical models of emotion regulation derived from predominantly Western perspectives. This project which will be co-designed with the lived and living experience community, will investigate cross-cultural perspectives of emotion dysregulation in children and youth with autism and ADHD. Nested within a larger MRFF-funded project, this project will involve collaborations with private and public health care clinics and the lived and living experience community. This project will produce translational research to guide service providers on how to culturally tailor interventions for emotion dysregulation, in children from culturally and linguistically diverse backgrounds and will represent the next step towards a new cross-cultural model of emotion dysregulation
Rene Stowyk	**Project: Implementation of Best-Practice Traumatic Brain Injury Rehabilitation in Rural and Remote Australia** This project forms part of a national MRFF-funded research program aimed at improving implementation of best-practice guidelines to manage and treat cognitive and psychosocial difficulties following Traumatic Brain Injury (TBI). This project aims to (i) better understand barriers/facilitators to providing best practice in rural/remote settings as well as (ii) co-design, implement and evaluate a range of strategies to optimise quality of cognitive and mental health treatments in these regions.
Sally Richmond	**Project: Developing interventions for families on a waitlist for psychological assessment: merging mental health and neurodevelopment.** The Paediatric Assessment Clinic provides comprehensive and family-focused neurodevelopmental, cognitive, and mental health assessments to school-aged children experiencing complex challenges. While the bulk of our referrals typically relate to queries around autism, ADHD, intellectual developmental disorder, and/or a specific learning disorder, the clinic sees many children and families with varied presentations, including those with neurological and medical conditions. Perhaps most importantly is that while many services in Australia and internationally remain siloed, our clinic prides itself on being a 'dual focused' neurodevelopment and mental health assessment service. This means that our expertise does not lie in either neurodevelopment or mental health, but uniquely, in both. Families spend a significant amount of time waiting for a formal assessment and tend to only receive support after the assessment has been completed. In the meantime however, families still need help.

	This project aims to provide help to these families by co-designing interventions, supports and/or resources that can be offered to them in the waitlist period between their initial intake and their child's formal assessment. Excitingly, given the clinic's dual focus and novel service model, waitlist supports will be neurodevelopmentally and psychologically centred, and will be informed by families' needs. This project sits at the intersection of clinical psychology and neuropsychology, and will provide an opportunity to work directly with families. It is well-suited for a clinical psychology and neuropsychology trainee who has an interest in paediatrics, neurodevelopment/neurodiversity and mental health.
Sean Drummond	**Project: Understanding Improving adherence to Cognitive Behavioural Therapy for Insomnia (CBT-I)** It seems like a simple truth that adhering to treatment recommendations in any CBT should be linked to treatment outcomes. However, empirical evidence for such a relationship has been shockingly hard to find in CBT-I. Our lab seeks to understand adherence to CBT-I better (e.g., Are we measuring adherence incorrectly? What is the best way to measure it?), how adherence relates to outcomes (e.g., insomnia, mental health, cognition, comorbidities), and how we can improve both adherence and outcomes. A thesis based on these ideas will involve previously collected data on multiple studies (including individual CBT-I, a partner-assisted version of CBT-I, and in comorbid insomnia and sleep apnea), as well as new data collection driven by the student.
Sue Cotton	**Project: Understanding risk behaviours in bipolar disorder** During a manic episode there can be increased goal-directed activities (either socially, vocationally, and sexually) and involvement in pleasurable activities (excessive spending, sexual indiscretions, substance use) that can lead to poor outcomes for both the individual with bipolar disorder but also close others. There can also be heightened risk of self-harm and suicide, particularly during mixed episodes. However, we do not have a good understanding of those with a lived experience, their caregivers and supporters, and clinicians' perspectives on risks associated with bipolar disorder. Also, examination of risk is often specific to self-harm and suicide rather than more broadly about other kinds of risk. We also do not have an adequate measure of the diverse risks associated with the disorder. This research program is part of the NHMRC Centre of Research Excellence in Bipolar Disorder (CORE-BD) led by Prof Sue Cotton. Other supervisors will include Dr Mel Hasty (Senior Research Fellow, Clinical Psychologist and Executive Officer of CORE-BD), A/Prof Kate Filia (Principal Research Fellow, Orygen, expertise in social inclusion), and Dr Emma Morton

	(Senior Lecturer, Psychologist, expertise in bipolar disorder). There are a range of potential projects that students could undertake in this area.
Sue Cotton	**Project: Social determinants associated with bipolar disorder (BD)** There are a range of social determinants that have been associated with poor health and mental health outcomes such as economic stability, education, social and community context, health and healthcare, neighbourhood and built environment. These have often been examined in the context of mental health more broadly, and there has been little done on specific disorders such as bipolar disorder. We do not have a good understanding of the causes of bipolar disorder and often there is a 10-year delay between of symptom onset, diagnosis, and receipt of adequate treatment. In this research program, the student will examine the social determinants of bipolar disorder and look at their relationships with diagnostic delays and poor outcomes. This research program is part of the NHMRC Centre of Research Excellence in Bipolar Disorder (CORE-BD) led by Prof Sue Cotton. Other supervisors will include Dr Mel Hasty (Senior Research Fellow, Clinical Psychologist and Executive Officer of CORE-BD), A/Prof Kate Filia (Principal Research Fellow, Orygen, expertise in social inclusion), and Dr Emma Morton (Senior Lecturer, Clinical Psychologist, expertise in bipolar disorder).
Sue Cotton	**Project: Mapping contacts with police after a first episode of psychosis** This project offers the opportunity for students to examine contacts with police in a large cohort of individuals who were treated for a first episode psychosis (FEP) at the Early Psychosis Prevention and Intervention Centre (EPPIC) at Orygen, Parkville between 1998-2000. As part of the long-term follow-up study (FEPOS15 – the First Episode Psychosis Outcome Study – 15 year+ follow up), we have recently linked cohort data to the Victorian Police's Law Enforcement Assistance Program (LEAP). We have data on offending behaviours, victimisation, family violence and police call outs for medical episodes. One DPsych student has been looking at several aspects of violent offending behaviours but there a range of opportunities available for several students to explore other aspects of the data. Students will be supervised **by Prof Sue Cotton, Dr Amity Watson (Orygen).**
Sue Cotton	**Project: The CARE research program** The CARE program encompasses a suite of projects designed to better understand the experiences, wellbeing, and support needs of people who care for a loved one with severe or serious mental illness. The flagship CARE project focuses on carers of individuals with psychosis and/or bipolar disorder, using an online survey to capture information on carer wellbeing, functioning, and lived experience, with recruitment already underway. CARE-Mood extends this focus to carers of young

	people with mood and/or anxiety disorders, with plans to include carers of adults in future stages. CARE-Sib builds on earlier work to explore the unique perspectives and support needs of siblings who support a family member with mental illness. Finally, CARE-Parent is a new stream that will examine the experiences of young people caring for a parent with severe mental illness. Together, these projects aim to generate comprehensive insights to inform policy, service development, and targeted supports for carers across different contexts. There are opportunities to look at social determinants, impacts of suicide attempts, family violence on carers' experiences. The supervisory team include Prof Sue Cotton, Dr Mel Hasty, A/Prof Kate Filla (Orygen), Dr Dan Gan (Orygen) and Dr Amity Watson (Orygen).
Sue Cotton	**Project: Understanding and supporting memory and cognitive difficulties in youth with depression** Depression is the leading cause of disability in young people aged 10-24 worldwide, afflicting one in five by early adulthood with prevalence rapidly increasing. Memory and cognitive difficulties are a central and often persistent feature of depression, with effects on functioning and quality of life. Memory and cognitive difficulties are not addressed by standard depression treatments (medication, CBT) and are predictive of depression persistence and relapse. Young people with depression report that memory and cognitive impairments impact key life domains, including academic functioning, self-esteem, and therapy effectiveness, and they want targeted support. While cognitive difficulties are known to emerge early in depression, it is not known whether they emerge before depression onset, which would establish them as an early marker that could be targeted for prevention. There are also no effective and acceptable memory or cognitive treatments, especially for young people who have different treatment preferences and functional goals to adults. This PhD program will be a collaboration with the Cognition Team at Orygen and will aim to advance understanding of the onset and treatment of memory and cognitive difficulties early in the course of depression in youth.
Sue Cotton	**Project: Advancing the assessment of mental health through psychometric investigations** Many mental health assessment tools that are commonly employed. by clinicians and researchers were developed decades ago and are outdated. These include measures of depression, anxiety, psychological distress and quality of life. Measures have most often been developed without input from key stakeholders such as those with lived experience. In this research program there will be an opportunity to not examine the properties of commonly used measures but to develop new measures. One study is focused on undertaking a review of the Health of Nation Outcome Scales that is widely used in mental health services. Other studies including critiquing screening and assessment

	tools used for bipolar disorder. Another study is focused on developing a tool focused on risk (e.g., hypersexuality, impulsive spending). Another study would be focused on identifying what quality of life means to young people today.
Sue Cotton	**Project: Understanding the impacts of being a woman living with bipolar disorder** Bipolar disorder can have serious impacts for the individual and especially women. In this research program a range of studies can be examined. This includes the relationship between mood and hormones, relationships, risky behaviours, etc. Understanding the unmet needs of women with bipolar disorder will inform development of novel treatments.
Susmita Saha	**Project: Identifying Novel Disease Progression subgroups in Rare Diseases Using Machine Learning.** Hereditary cerebellar ataxias (HCAs) are rare neurodegenerative conditions marked by progressive movement, coordination, and balance difficulties. While genetic testing confirms diagnosis, it does not capture the wide variation in how quickly symptoms progress or how individuals are affected. This study aims to identify and characterise distinct subtypes of major HCAs – including Friedreich Ataxia based on disease progression patterns derived from multimodal brain scans, clinical and cognitive data. Using advanced machine learning techniques, we will integrate structural, diffusion and susceptibility MRI with neurochemical, blood, cognitive and clinical data to identify subgroups of patients who share similar progression trajectories. These data-driven subgroups will be validated against patient symptoms, comorbidities, genetics, and lifestyle factors to enhance clinical relevance and to find their biological links. The project will develop a scalable analytical framework to enhance diagnosis, prognosis, clinical trial design, and patient outcomes by enabling more precise patient stratification, with the potential for application to other rare neurological movement disorders.
Tracey Sletten	**Project: SleepSync: digital sleep health management** Digital sleep health interventions for mental health in shift workers. 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. Projects will be shaped in collaboration with the student, to best align with their interests.

	The vision of our research program is to optimise circadian rhythmicity, sleep, alertness and mental health in society, with a particular focus on individuals experiencing circadian misalignment, a mismatch in the timing of the circadian pacemaker and the timing of sleep. Our research is focussed on understanding the mechanisms and impacts of sleep and circadian disruption, especially in the workplace, and developing targeted interventions to improve sleep, health and wellbeing. Research will be conducted in community and industry settings. Candidates will gain unique experience in well-designed research and intervention in real-world settings, and adaptation to the specific requirements of the population in question to support scaling of health support. Projects will include collaboration with additional experts at Monash, across national and international collaborating academic institutions, and external industry and policy stakeholders.
Tracey Sletten	**Project: SWITCH: personalised sleep health interventions** Personalised behavioural recommendations for optimising sleep, alertness and health in shift workers, a vulnerable population who form up ~16% of the working population. This research is deploying novel individualised sleep and lighting recommendations tailored to each individuals' circadian timing and shift schedule to help shift workers to manage their non-standard work hours and improve their sleep wake behaviour and wellbeing. The project will include examination of the factors influencing compliance with behavioural change interventions to support successful implementation across multiple cohorts. Projects will be shaped in collaboration with the student, to best align with their interests. The vision of our research program is to optimise circadian rhythmicity, sleep, alertness and mental health in society, with a particular focus on individuals experiencing circadian misalignment, a mismatch in the timing of the circadian pacemaker and the timing of sleep. Our research is focussed on understanding the mechanisms and impact of sleep and circadian disruption, especially in the workplace, and developing targeted interventions to improve sleep, health and wellbeing. Research can be conducted in community and industry settings. Candidates will gain unique experience in research and intervention in real-world settings, adaptation to the specific requirements of the population in question. Projects will include collaboration with additional experts at Monash, and across national and international collaborating academic institutions.
Tracey Sletten	**Project: Sleep and alertness in commercial flight operations** Sleep, alertness and cognitive performance during extended flight duty. This project will examine the sleep, alertness and wellbeing of

	international pilots and cabin crew during long range flight patterns to understand the impact of shift work, variable occupational workload and regular time zone transitions. Data collection includes working with Qantas Airways during specifically designed flight patterns and incorporate assessments of health, cognition and wellbeing. The program will support the development of recommendations for improving the safety case for extended duration flight patterns proposed for the future on international aviation. Projects will be shaped in collaboration with the student, to best align with their interests. The vision of our research program is to optimise circadian rhythmicity, sleep, alertness and mental health in society, with a particular focus on individuals experiencing circadian misalignment, a mismatch in the timing of the circadian pacemaker and the timing of sleep. Our research is focussed on understanding the mechanisms causing sleep and circadian disruption, especially in the organisational setting, and developing targeted interventions to improve sleep, health and wellbeing. Research will be conducted with external industry and policy stakeholders. Candidates will gain unique experience in research and intervention in real-world settings. Projects will include collaboration with additional experts at Monash, across national and international collaborating academic institutions.