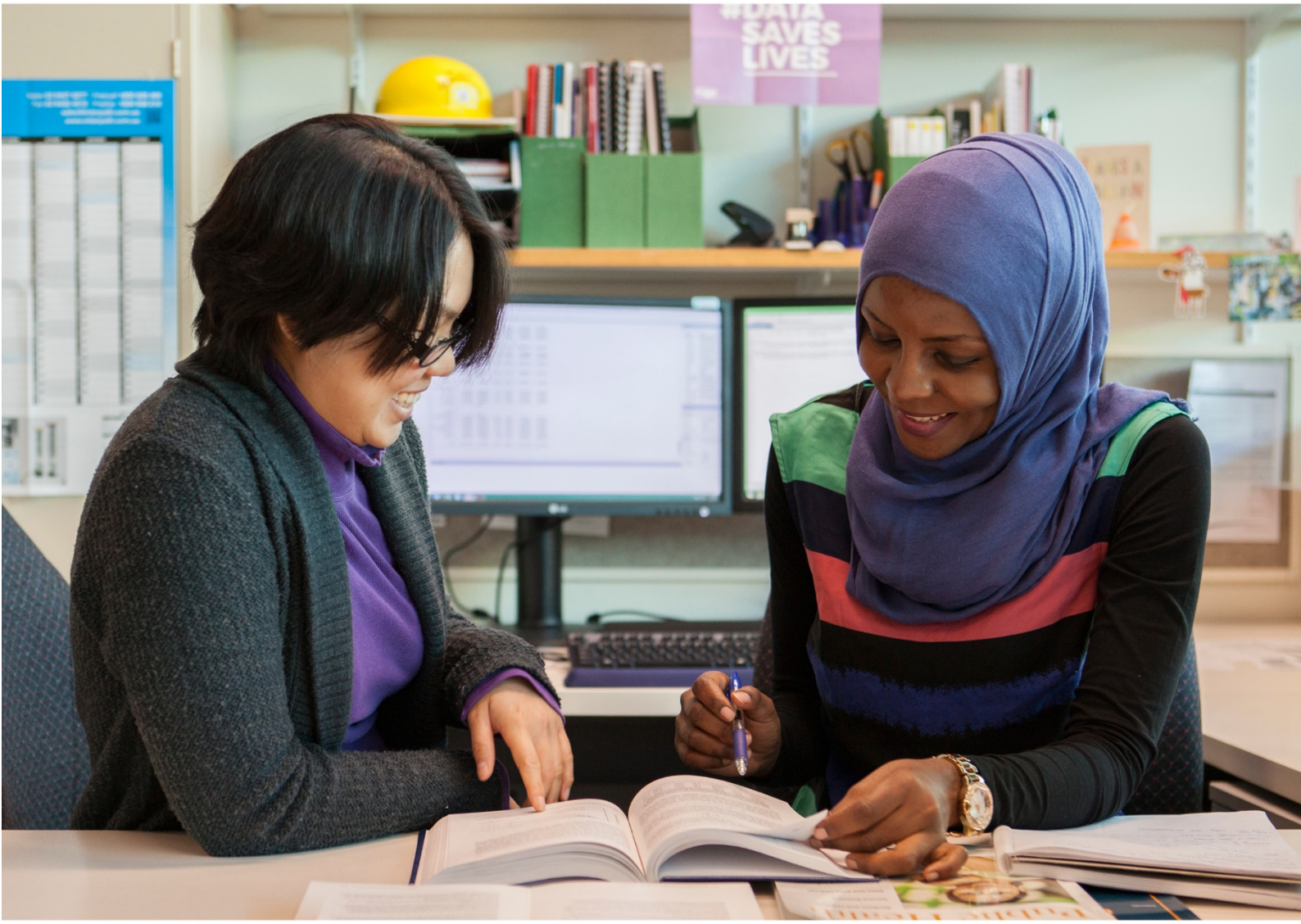
Postgraduate Research Opportunities at the Telethon Kids Institute

Student project booklet 2017



Discover. Prevent. Cure.

WELCOME TO THE
TELETHON KIDS INSTITUTE

The Telethon Kids Institute is the largest medical research facility in Western Australia and with more than 500 staff and students, the Telethon Kids is also one of Australia's largest research facilities dedicated to child health.

Our multidisciplinary approach brings together clinical researchers, laboratory scientists and epidemiologists all under the one roof to tackle the many complex childhood diseases and issues from a range of different angles.

The Telethon Kids has a proven track record of translating research findings into actions that make a real difference to the lives of children everywhere.

The Telethon Kids has strong affiliations with Princess Margaret Hospital for Children and the School of Paediatrics and Child Health at The University of Western Australia, as well as wide-reaching collaborations with leading research organisations around the world. We are also affiliated with The University of Western Australia through the Centre for Child Health Research and with the state's other four universities.

Government of **Western Australia**
Department of **Health**
Child and Adolescent Health Service

THE UNIVERSITY OF WESTERN AUSTRALIA

You can find out more about areas of research and opportunities for students at the Telethon Kids by:

- Reading the Postgraduate Student Project Booklet. This gives a range of suggested projects and should be considered a guide to the opportunities available, not a definitive list.
- Referring to the Telethon Kids website - www.telethonkids.org.au
- Contacting individual researchers for further information about research projects.
- General questions can be directed to study@telethonkids.org.au or (08) 9489 7799
- Attending the Prospective Students Evening at the Telethon Kids on Thursday August 11th, 2016 4:00-6.00pm

RESEARCH FOCUS AREAS

Our Research Focus Areas are hubs that will facilitate the development, delivery and translation of high quality collaborative projects that make a difference to child health. Each Research Focus Area is designed to attract a diversity of expertise and a range of disciplines, in a coalescence of activity and creativity.

ABORIGINAL HEALTH

The need to improve the health and wellbeing of Aboriginal children and families is a priority in every research focus area at the Telethon Kids Institute.

There are, however, specific cultural, social and economic contexts that require more specialised investigation in collaboration and consultation with Aboriginal families - and there are health issues that disproportionately affect Aboriginal people. This collaborative way of working will also provide models that can be applied to other vulnerable populations in Australia and globally.

RESEARCH PRIORITIES: Aboriginal mental health & wellbeing; Developing healthy Aboriginal families; Aboriginal youth health & wellbeing

DEVELOPMENT AREAS: Environmental health & risk factors; Restorative Justice

HORIZON RESEARCH: Improving access to health, education & family support services

BRAIN AND BEHAVIOUR

Brain and behaviour is at the core of many issues affecting the ongoing health and wellbeing of kids.

At the Telethon Kids Institute, this research encompasses a child's learning, development and mental health - and the impact of conditions like cerebral palsy, autism and intellectual disability.

Our research investigates the developmental, genetic, family and environmental determinants of child wellbeing, and how clinical, educational and community practices can provide every child with the best opportunity for optimal health and development.

RESEARCH PRIORITIES: Developmental health & education; Autism, Intellectual Disability & FASD; Physical disability; Mental health and wellbeing

DEVELOPMENT AREAS: Youth health & wellbeing

HORIZON RESEARCH: Injury

CHRONIC & SEVERE DISEASES

Chronic and severe diseases in children require very different investigation and treatment to similar conditions in adults.

Childhood cancers, diabetes, lung and heart diseases are debilitating and often life threatening.

Effective treatment and prevention requires a comprehensive understanding of the interactions between genetic and environmental factors.

Our focus is on better ways of diagnosing, treating and controlling disease in individual kids as well as reducing these diseases in the population as a whole.

RESEARCH PRIORITIES: Respiratory health; Cancer; Diabetes

DEVELOPMENT AREAS: Rare and undiagnosed diseases

HORIZON RESEARCH: Personalised medicine

EARLY ENVIRONMENT

The early environment affects health and development in childhood and beyond. Its influence starts from before a child is even conceived - that's why we also need to care about the health and wellbeing of prospective parents.

Factors including infection, climate, nutrition and physical activity, sunlight, the built environment, pollutants and the complex range of bacteria living in and around us, all can have an impact. Understanding these exposures and their impact on children, particularly in early life, is key to preventing and treating a number of common, chronic conditions in childhood and beyond.

RESEARCH PRIORITIES: Immunity & Inflammation; Nutrition & Obesity; Infections & Vaccines

DEVELOPMENT AREAS: Microbiome; Physical environment

HORIZON RESEARCH: Physical activity

Stan and Jean Perron Awards (for research conducted principally at the Telethon Kids Institute)

With the support of the Stan Perron Charitable Foundation, since 2005 the Telethon Kids Institute has established several prestigious awards aimed at supporting exceptional postgraduate research students who are undertaking their research at the Telethon Kids.

Stan and Jean Perron Top-up Scholarships

Child Health Research conducted principally at the Institute (new full-time PhD Students)

These Top-up Scholarship's accompany PhD scholarships won by the recipients through their enrolling Universities in a separate application process. To be eligible for consideration, a student must enrol full-time in a research higher degree (PhD or equivalent) at a University, and conduct the research principally within the Telethon Kids Institute under the primary supervision of one or more Institute's researchers.

Successful applicants will receive:

1. A top-up of $5000 per year, paid in conjunction with the main university scholarship for the duration of the scholarship.
2. $10,000 to be used towards the candidate's studies. This can include training opportunities; travel to and attendance of conferences; visiting other research groups; or PhD course fees.

Closing date: 4pm Friday November 25 2016. Applications should be emailed as one pdf to study@telethonkids.org.au

Further information and application process: telethonkids.org.au/join-us/study-with-us/scholarships-awards

Stan and Jean Perron Award for Excellence

Students intending to enrol in a PhD based at the Telethon Kids may be interested to know of the Stan and Jean Perron Award for Excellence. The Award is designed to recognise outstanding research performance whilst a student is undertaking research at the Telethon Kids. The Award has the value of $5000 for one year, and will be awarded to the research higher degree student whose performance is deemed the best in the preceding 12 months. More than one award may be made in any year.

The Peter and Anne Hector Awards

Translational Research in Aboriginal Health (new Honours, Doctor of Medicine or Masters Students)

As the parents of two children and grandparents to five, Anne and Peter Hector are exceptionally grateful for the health and privilege that their family experience. Whilst on the Board of Homeswest, Anne travelled to many remote Aboriginal communities and saw first-hand the health problems experienced by WA's indigenous population. This scholarship is a way for the Hector family to support indigenous health specialists to gain a better education and deliver healthy outcomes for Aboriginal Children.

The Awards are established as a scheme to support translational research in Aboriginal children's health and wellbeing in areas that will most likely effect positive and lasting change. The Awards can be made to both indigenous and non-indigenous researchers, with a preference for the former.

A top-up of $ 5,000 per annum tax free will be awarded

Closing date: 4pm Friday November 25 2016. Applications should be emailed as one pdf to study@telethonkids.org.au

Further information and application process: telethonkids.org.au/join-us/study-with-us/scholarships-awards

Wesfarmers Centre of Vaccines and Infectious Diseases PhD Scholarship Top Up

Infectious Diseases Research (new full-time Western Australian University PhD candidates)

The Telethon Kids Institute's Wesfarmers Centre of Vaccines and Infectious Diseases is committed to advance research that reduces the burden of serious infectious diseases experienced by children in WA and around the world by improving prevention, diagnosis, treatment and disease management. Bringing health solutions to Indigenous children is a major focus area.

The Wesfarmers Centre believes teamwork maximizes problem solving and outputs. Successful applicants are therefore expected to work on a project with clear collaborative activities and encouraged to actively engage with fellow PhD students and the Telethon Kids Research Focus Areas.

Successful applications for full-time research will receive:

1. A top-up of $ 5,000 per annum tax free for three years full-time study.
2. $10,000 to be used towards the candidate's studies. This can include training opportunities; travel to and attendance of conferences; visiting other research labs; or PhD course fees.

Closing date: 4pm Friday November 25 2016. Applications should be emailed as one pdf to study@telethonkids.org.au

Further information and application process: telethonkids.org.au/join-us/study-with-us/scholarships-awards

End Rheumatic Heart Disease Centre of Research Excellence (END RHD CRE) student scholarships

Rheumatic Heart Disease Research (Honours, Masters and PhD Scholarships)

The END RHD CRE is a five-year Centre of Research Excellence funded by the NHMRC. At the end of 5 years, the END RHD CRE will provide a stepwise roadmap to ending RHD in Australia and aim to produce a clear vision for achieving measurable disease control targets.

To do this, the END RHD CRE will undertake a number of projects across several disciplines of research including epidemiology, economics, biomedical sciences, clinical practice; health services research; and social sciences with a special focus on engaging the RHD community and documenting the experiences of those living with the disease.

Empowering Honours, Masters, PhD and other students to be independent researchers and practitioners is a core function of the END RHD CRE.

END RHD CRE is offering:

- Honours scholarships - up to $5,000 for one year.
- Masters Scholarships - up to $29,000 p/a for up to two years with the possibility of a 6 month extension.
- PhD Scholarships - up to $29,000 p/a for up to three years with the possibility of a 6 month extension.
- Masters top-up scholarships - up to $5,000 p/a top-up and up to $6,000 to be used towards the candidates studies.
- PhD top-up scholarships - up to $10,000 p/a top-up and up to $10,000 to be used towards the candidates studies.

Closing date: Applications are accepted all year. Applications should be emailed to END.RHD.CRE.SMB@telethnkids.org.au

Further information and application process see www.rhdaustralia.org.au/student-funding

Improving Aboriginal Lung Health Award

Prospective full-time PhD Students

This project will accurately determine, for the first time, baseline lung function of Aboriginal Australians and develop lung function reference values to be used across all ages in Aboriginal Australians. The project will help address significant inequities in healthcare, improve diagnosis and management of lung disease in Aboriginal patients and assist in closing the health gap between Aboriginal and non-Aboriginal Australians.

This scholarship will assist a PhD student to complete their thesis relating to this project. Thesis topics could be related to recruitment and retention strategies in Aboriginal Australian participants, pulmonary physiology, public health etc.

Successful applicants will receive:

$27 500 per annum scholarship, up to 3 years of full-time PhD candidature.

Closing date: Applications close: 22/07/2016. Applications should be emailed as one pdf to Elisha.white@telethonkids.org.au

Further information and application process: telethonkids.org.au/join-us/study-with-us/scholarships-awards or scholarships.curtin.edu.au/scholarships/scholarship.cfm?id=2713.0

ARC Centre of Excellence for Children and Families over the Life Course (the Life Course Centre)

UWA Node Life Course Centre Scholarships

Disadvantage systems, mental health, education, language and literacy, child development research (PhD scholarships)

The Life Course Centre (LCC) is funded by the Australian Research Council and collaborating partner organisations. Established in 2014, the LCC has its headquarters at The University of Queensland, with nodes at The University of Western Australia (UWA), and the universities of Melbourne and Sydney.

The LCC is investigating critical factors underlying disadvantage to provide life-changing solutions for policy and service delivery. The aim is to identify the drivers of disadvantage, characterised by the spread of social and economic poverty within families across generations, and to develop innovative solutions to reduce disadvantage. The LCC UWA node has scholarships available for specific research projects that fit within the LCC research themes.

The UWA node of the LCC is offering:

- PhD scholarships – up to $29,000 p/a for up to three years with a possibility of a 6 month extension.
- PhD top-up scholarships - up to $5,000 p/a
- $10,000 to be used towards the candidates studies

Closing date: 4pm Friday 25 November 2016.

Further information and application process: telethonkids.org.au/join-us/study-with-us/scholarships-awards

Vacation Scholarships: Telethon Kids Institute and School of Paediatrics and Child Health

Paediatric and Child Health Research (undergraduate students)

Vacation scholarships are open to all Western Australian-based tertiary students interested in research and child health. These scholarships enable students to carry out a short summer research project within the Telethon Kids Institute and the UWA School of Paediatrics and Child Health. Vacation scholarships provide students with an exciting opportunity to learn valuable research skills associated with paediatric and child health research and are particularly valuable for students considering postgraduate research degrees.

A maximum of 5 vacation scholarships are available, valued at $1,200 each: four sponsored by the Telethon Kids Institute and one jointly sponsored by the UWA School of Paediatrics and Child Health and Telethon Kids.

It is expected that the projects will last for at least 6-8 weeks and be supervised by Early-Mid Career Researchers (EMCR) at the Telethon Kids Institute and the UWA School of Paediatrics and Child Health.

Closing date: 4pm Friday 7 October 2016. Applications should be emailed as one pdf to study@telethonkids.org.au

Further information and application process: telethonkids.org.au/join-us/study-with-us/scholarships-awards

Contents

ABORIGINAL HEALTH

Title of Project	**The Alert Program Study**
Key Focus Area	**Aboriginal Health** Improving Access to Health, Education & Family Support
Research Group	Alcohol, Pregnancy and FASD
Start Date	Project has commenced therefore start date can be negotiated
Chief Supervisor	Dr James Fitzpatrick (Telethon Kids Institute, Patches Paediatrics, PMH)
Other Supervisors	Bree Wagner (Telethon Kids Institute)
Project Outline	"**How's your engine running?"** Are you an energetic team player with a passion for adventure? Then this is the project for you! Apply to join our diverse team of researchers and volunteers who are working in partnership with the remote Aboriginal communities of the Fitzroy Valley to implement and evaluate a school based FASD intervention founded on the "Alert Program® for Self-Regulation". **The Fitzroy Valley** The Fitzroy Valley is located approximately 400km east of Broome in the remote Kimberley region of Western Australia. The Valley is home to approximately 3500 predominantly Aboriginal people belonging to four language groups and living in more than 45 remote communities, some up to 190km from the main town of Fitzroy Crossing. **Project context** After implementing alcohol restrictions in 2007, the community turned their attention to the issue of FASD and early life trauma (ELT), which posed a threat to intergenerational transfer of language and culture. This led to the initiation of a comprehensive and community driven strategy to make FASD history in the Fitzroy Valley. This approach known as the Marulu FASD Strategy is led by a committed group of community leaders and is supported by a circle of friends to prevent, diagnose FASD and provide support to individuals, families and communities who are affected by FASD and/or ELT. **The Alert Program** The Alert Program® is based on the analogy of the body being like a car engine to teach self-regulation and improve executive functioning. The body can run at different levels of alertness such as high, low or just right. Children are taught five ways to change their level of alertness through listening, moving, touching, looking or putting something in their mouth. The program also supports families, school staff and occupational therapists (OTs) to develop strategies to change or maintain states of alertness to optimise student functioning. This research will focus upon upskilling teachers and school support staff to deliver the program to their primary school classes using a curriculum guide. **Student project** Whilst this project is based in Perth, interested students must be able to travel to the Kimberley for blocks of two weeks at set times (expenses paid). As this is a multi-faceted project, specific research focuses can be negotiated.
Project suitable for	☒ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	Undergraduate degree in education, occupational therapy, psychology, health promotion or other discipline relevant to the project.
Essential Skills	Flexibility, patience, initiative, excellent communication skills
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available

Contact for further information	Name: Bree Wagner Email: bree.wagner@telethonkids.org.au Telephone: (08) 9489 7752
Title of Project	**Marulu FASD Prevention Strategy**
Key Focus Area	**Aboriginal Health** Improving Access to Health, Education & Family Support
Research Group	Alcohol, Pregnancy and FASD
Start Date	Project has commenced therefore start date can be negotiated
Chief Supervisor	Dr James Fitzpatrick (Telethon Kids Institute, Patches Paediatrics, PMH)
Other Supervisors	To be determined
Project Outline	There is a humanitarian crisis in the Fitzroy Valley region of remote North-western Australia, which has amongst the highest rates of Fetal Alcohol Spectrum Disorders (FASD) in the world. Fetal Alcohol Spectrum Disorders (FASD) refers to a range of conditions caused by prenatal exposure to alcohol. The Fitzroy Valley communities have shown strong leadership and commitment to tackling FASD through the initiation of a comprehensive and multifaceted program that has the bold goal to "Make FASD History". The prevention project aims to develop, implement and evaluate a targeted community-wide prevention strategy (The Marulu FASD Prevention Strategy) to increase the proportion of women abstaining from alcohol while pregnant in the Fitzroy Valley.
Project suitable for	☒Honours ☐MD ☒Masters ☒PhD
Essential Qualifications	Undergraduate degree
Essential Skills	Computer skills Ability to work as part of a team Ability to travel to remote Aboriginal communities to conduct field work
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Kaashifah Bruce Email: kaashifah.bruce@telethonkids.org.au Telephone: (08) 9489 7828

Title of Project	**Pilbara FASD Strategy**
Key Focus Area	**Aboriginal Health** Improving Access to Health, Education & Family Support
Research Group	Alcohol, Pregnancy & FASD
Start Date	Project has commenced therefore start date can be negotiated
Chief Supervisor	Dr James Fitzpatrick (Telethon Kids Institute, Patches Paediatrics, PMH)
Other Supervisors	To Be Determined
Project Outline	The goals of this project are to lay the foundations and to begin to measurably and sustainably improve the health of Aboriginal children in the Pilbara by supporting the development and implementation of a Pilbara Fetal Alcohol Spectrum Disorders (FASD) strategy and establish a long-term partnership around child health with Telethon Kids in the Pilbara. The specific objectives of the project are to: • Begin reducing the prevalence of FASD in targeted communities in the Pilbara region • Improve the outcomes of children with FASD across the life course This research will assist efforts in each of prevention, diagnosis, treatment, family support, capacity building and policy advocacy as well as measuring the impact of the interventions on such indicators as school readiness, school attendance and learning. Critical focus will be on building the knowledge and agency of families with children with FASD, and increasing their confidence in engaging with services. **Implementation components** 1. Prevention 2. FASD Clinical Model of Care 3. Therapy and support **Student project** Whilst this project is based in Perth, interested students must be able to travel to the Pilbara for blocks of two weeks at set times. As this is a multi-faceted project, specific research focuses can be negotiated.
Project suitable for	☒Honours ☒MD ☒Masters ☒PhD
Essential Qualifications	Undergraduate degree
Essential Skills	Computer skills Ability to work as part of a team Ability to travel to remote Aboriginal communities to conduct field work
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Kaashifah Bruce Email: kaashifah.bruce@telethonkids.org.au Telephone: (08) 9489 7828

Title of Project	**Identifying Social Pathways to Enhanced Life Outcomes in Aboriginal and Torres Strait Islander Children**
Key Focus Area	**Aboriginal Health**
Research Group	Centre for Research Excellence in Aboriginal Health and Wellbeing
Start Date	January 2017
Chief Supervisor	Dr Carrington Shepherd (Telethon Kids Institute)
Other Supervisors	Dr Naomi Priest (Australian National University)
Project Outline	The health disparities between Indigenous and non-Indigenous populations in Australia are well documented and striking, and potentially worse than those of Indigenous populations in other developed countries. The reasons for the poor state of Aboriginal health in Australia are complex and multifaceted. While a robust international literature implicates socioeconomic factors as critical determinants of population health, there has been uncertainty as to whether, and to what degree, these factors impact on the health of Aboriginal peoples. Recent research conducted at the Telethon Kids Institute highlighted a less universal and less consistent socioeconomic patterning of health in Aboriginal health, however more rigorous research is required to investigate the causal pathways from socioeconomic status (SES) to morbidity outcomes and mortality among Aboriginal children. This includes examining the role of historical circumstances, social and cultural characteristics, and profound and persistent marginalisation in the patterning of Aboriginal health. This PhD or Masters project broadly aims to facilitate a better grasp of the complex underlying mechanisms that lead to poor health outcomes among Aboriginal peoples, using population-representative data sources and statistical modelling techniques. The results form part of a larger program of work that aims to provide more specific guidance to population health strategies for the prevention of poor health outcomes in early life.
Project suitable for	☐ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	For PhD candidates: a minimum of 2A Honours degree or a Masters degree in a related field.
Essential Skills	Background knowledge in relevant areas, such as the social determinants of health and population health. Knowledge of quantitative data analyses is essential.
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Carrington Shepherd Email: carrington.shepherd@telethonkids.org.au Telephone: (08) 9489 7839

Title of Project	**Defying the Odds: Identifying Determinants of Aboriginal Early Childhood Health Outcomes**
Key Focus Area	**Aboriginal Health**
Research Group	Centre for Research Excellence in Aboriginal Health and Wellbeing
Start Date	January 2017
Chief Supervisor	Professor Sandra Eades (Baker IDI Heart, Diabetes Institute)
Other Supervisors	Dr Bridgette McNamara (Baker IDI Heart, Diabetes Institute) Dr Lina Gubhaju (Baker IDI Heart, Diabetes Institute) Dr Carrington Shepherd (Telethon Kids Institute)
Project Outline	Disparities in health for Aboriginal people begin early in life, with infant and child mortality and hospital admission rates approximately twice those of non-Aboriginal Australians. However, hidden behind population rates are the complex pathways determining the health of Aboriginal people themselves; some Aboriginal families achieve good health and wellbeing despite being "high risk". Without information on health and illness pathways and the factors that drive these it is unlikely that effective programs to improve Aboriginal health will be possible. Identification of how Aboriginal early childhood health outcomes vary across different regions and across families with different characteristics can potentially inform the development and delivery of targeted services, helping Aboriginal children to 'defy the odds' and thrive. To date, most studies have only concentrated on the individual without assessment of the contexts from which risk arises; these include: family environment (including inter-generational risks), the wider community, and access to health and family services. This PhD study will provide currently lacking knowledge to inform effective service development to support families by identifying determinants of infant and child health outcomes using whole-of-population linked health and genealogical data from multigenerational Aboriginal families in Western Australia (WA) from 1980 to 2013, complimented with specifically-collected data from existing health and social services.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	For PhD candidates: a minimum of 2A Honours degree or a Masters degree in a related field.
Essential Skills	Background knowledge in relevant areas, such as developmental health, epidemiology and population health. Knowledge of quantitative data analyses is essential. Experience in the analyses of linked datasets would be advantageous but not essential.
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Carrington Shepherd Email: carrington.shepherd@telethonkids.org.au Telephone: (08) 9489 7839

Title of Project	**Investigating Aboriginal Parental Mental Health and Impacts on Child Development**
Key Focus Area	**Aboriginal Health**
Research Group	Centre for Research Excellence in Aboriginal Health and Wellbeing
Start Date	From July 2016
Chief Supervisor	Professor Rhonda Marriott (Telethon Kids Institute, Murdoch University)
Other Supervisors	Dr Carrington Shepherd (Telethon Kids Institute)
Project Outline	Aboriginal peoples are at an increased risk of mental health problems, which reflects a history of profound dispossession, exclusion, discrimination, marginalisation and inequality, in various forms. These circumstances have created a mental health burden that can extend across generations of Aboriginal families. Understanding the scale, nature and timing of mental health problems in parents is important, particularly given the potential adverse effects on child development and wellbeing. Mental health problems in the perinatal period, for example, are associated with a range of negative outcomes impacting on the mother, father, child, family, and society, including stillbirth, perinatal complications and low birth weight, and can have longer-term consequences for the wellbeing of the child in later life. This project aims to address some important gaps in the evidence base in the area of Aboriginal mental health, with a focus on the perinatal period. It will examine the type, scale and timing of mental health problems in Aboriginal children and their parents (and how these have changed over time) and provide insights into the causal pathways between the mental health problems of parents and the development of Aboriginal children in the early life course. This Masters or PhD study will draw on whole-of-population linked health and genealogical data from Aboriginal families in Western Australia from 1990 to 2015 (the data has already been obtained), complimented with specifically-collected data from existing health and social services. The results form part of a larger program of work that aims to provide more specific guidance to population health strategies for the prevention of poor mental health outcomes in Aboriginal families.
Project suitable for	☐ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	For PhD candidates: a minimum of 2A Honours degree or a Masters degree in a related field.
Essential Skills	Background knowledge in relevant areas, such as population health and epidemiology. Knowledge of quantitative data analyses is essential. Experience in the analyses of linked datasets would be advantageous but not essential.
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Carrington Shepherd Email: carrington.shepherd@telethonkids.org.au Telephone: (08) 9489 7839

Title of Project	**Improving Aboriginal Lung Health: Defining Lung Function in Healthy Aboriginal Children and Adults**
Key Focus Area	**Aboriginal Health** Improving Access to Health, Education & Family Support
Research Group	Children's Lung Health, Aboriginal Health
Start Date	June 2016
Chief Supervisor	A/Professor Graham Hall (Telethon Kids Institute, Curtin University)
Other Supervisors	Glenn Pearson (Telethon Kids Institute) Elisha White (Telethon Kids Institute)
Project Outline	This project will accurately determine, for the first time, baseline lung function of Aboriginal Australians and develop lung function reference values to be used across all ages in Aboriginal Australians. The project will help address significant inequities in healthcare, improve diagnosis and management of lung disease in Aboriginal patients and assist in closing the health gap between Aboriginal and non-Aboriginal Australians. Thesis topics could be related to recruitment and retention strategies in Aboriginal Australian participants, pulmonary physiology, and public health or similar. Aboriginal and Torres Strait Islanders are strongly encouraged to apply
Project suitable for	☐ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	Enrol in a full-time PhD program at Curtin University, be working on research within the project 'Improving Aboriginal Lung Heath: Defining Lung Function in Healthy Aboriginal children and adults.
Essential Skills	**Desirable but not essential:** experience working with Aboriginal people & communities, qualifications or experience in pulmonary function testing, experience in clinical and/or research environment. **Aboriginal and Torres Strait Islander students are highly encouraged to apply.**
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☒ Full scholarship available
Contact for further information	Name: Elisha White Email: elisha.white@telethonkids.org.au Telephone: (08) 9489 7890

Title of Project	**Early Childhood Development & Learning – Various**
Aboriginal Health	**Aboriginal Health** Aboriginal Mental Health & Wellbeing Developing Healthy Aboriginal Families Improving Access to Health, Education & Family Support
Research Group	Early Childhood Development and Learning Collaboration
Start Date	Various
Chief Supervisor	Professor Donna Cross (Telethon Kids Institute)
Other Supervisors	Various
Project Outline	The Early Childhood Development and Learning Collaboration is a new initiative of the Institute and seed funded by the Minderoo Foundation. It is an evidence partner, working alongside services, families and communities to improve outcomes for children. Its focus is on research translation. The Collaboration is currently developing its strategy in consultation with a wide range of internal and external stakeholders. Once finalised, the strategic plan will inform the key areas for research. If you have a strong interest in early childhood and are passionate about seeing on the ground change, please contact us to discuss potential projects.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	Undergraduate degree (any discipline) & eligible for admission into a PhD program
Essential Skills	Deep appreciation of the importance of early childhood and its importance for healthy development and learning throughout life The ability to communicate with key stakeholders (early childhood education and care sector, not for profit agencies, government, families and children) Research and/or evaluation skills Strong time management skills The ability to work with limited direction as part of a small team
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Professor Donna Cross Email: donna.cross@telethonkids.org.au Telephone: (08) 9489 7612

BRAIN & BEHAVIOUR

Title of Project	**Is Prenatal Brain Development Related to Developmental Disorders?**
Key Focus Area	**Brain & Behaviour** Developmental Health & Education Autism & Intellectual Disability & FASD
Research Group	Autism and Developmental Disorders Research Group
Start Date	January 2017
Chief Supervisor	Professor Andrew Whitehouse (Telethon Kids Institute)
Other Supervisors	Professor Murray Maybery (School of Psychology UWA)
Project Outline	The specialisation of the left brain hemisphere for language is considered critical to supporting the complexity of human language. There is evidence for sex differences in patterns of brain specialisation, which has led to popular but unconfirmed hypotheses linking prenatal testosterone levels and language development. This project study is using innovative neuroimaging, endocrine and genetic techniques to track neurodevelopment longitudinally from prenatal life to 3-years of age. The research aim is to provide key insights into how fetal hormone exposure and early brain growth support child language and development. The findings of this research have important implications for our understanding of autism and other developmental disorders.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	Honours degree
Essential Skills	Excellent writing skills Quick learner Keenness to immerse oneself in research
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Professor Andrew Whitehouse Email: andrew.whitehouse@telethonkids.org.au Telephone: (08) 9489 7700

Title of Project	**3D Facial Scanning of Transgender Individuals**
Key Focus Area	**Brain & Behaviour** Autism & Intellectual Disability & FASD Mental Health & Wellbeing Youth Health & Wellbeing
Research Group	Autism and Development Disorders Research Group
Start Date	From September 2016
Chief Supervisor	Dr Ashleigh Lin (Telethon Kids Institute)
Other Supervisors	Professor Andrew Whitehouse (Telethon Kids Institute) Dr Gail Alvarez (Telethon Kids Institute)
Project Outline	Transgender or gender diverse individuals do not identify as the gender they were assigned at birth. Within the trans population, there is evidence of higher rates of Autism Spectrum Disorder (ASD) in compared to the gender population. However, evidence of why this may be the case is limited. One theory of the mechanisms underlying ASD is exposure to higher levels of testosterone in utero. This has been investigated by examining 3D scans of the faces of people with ASD and their families, with the hypothesis that they should show slightly masculinised faces. This is very subtle and unlikely to be detected with the eye – computerised algorithms are used to detect these subtle differences. In this study, we would like to conduct 3D face scanning of the faces of trans individuals with both high and low autism traits. The aim is to investigate if a testosterone hypothesis may be used to explain the observed overlap between being transgender and ASD.
Project suitable for	☒ Honours ☒ MD ☒ Masters ☐ PhD
Essential Qualifications	Bachelor degree or medical student
Essential Skills	A positive attitude and openness to diversity
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☐ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Ashleigh Lin Email: ashleigh.lin@telethonkids.org.au Telephone: (08) 9489 7772

Title of Project	**Building Bridges and Looking Forward: Moving Forward**
Key Focus Area	Aboriginal Research **Brain & Behaviour** Mental Health & Wellbeing Youth Health & Wellbeing
Research Group	The Looking Forward Team
Start Date	From January 2017
Chief Supervisor	Dr Michael Wright (Telethon Kids Institute)
Other Supervisors	Dr Ashleigh Lin (Telethon Kids Institute)
Project Outline	The aim of the Looking Forward Project (2011-2015) was to work together with Aboriginal (Nyoongar) Elders and mental health and drug and alcohol providers in Perth to build strong and sustainable relationships. This in turn builds the foundation for improving community trust in these services, providing more accessible and responsive mental health and drug and alcohol services for Aboriginal (Nyoongar) people. We have worked with 18 Nyoongar Elders and service providers for over 5 years using community based participatory action research methodology. This means that they were co-designers in the research. Together we have developed a process for research engagement known as the *Minditj Kaart-Moorditj Kaart* ('Sick Head, Good Head') Framework. We have applied for funding to validate the Framework in both adult and youth mental health service settings. The proposed projects will develop and sustain engagement and improve mental health outcomes for Aboriginal people in Perth, across WA and elsewhere. The student would work closely with the research team, Aboriginal (Nyoongar) Elders and young people, and service providers to co-design the evaluation of the Framework. The specific scope of the project is adaptable, but could include: conditions for engagement; key attributes of relationships; integrating Aboriginal knowledge with non-Aboriginal ways of working. These areas can be shaped further by the specific interests of the student and would suit Honours, Masters or PhD projects. Support for Aboriginal students would be provided to secure a scholarship, and top up funds would also be sought to support their research and encourage a transition into research.
Project suitable for	☒Honours ☐MD ☒Masters ☒PhD
Essential Qualifications	Bachelor degree in social sciences, psychology, public health, education
Essential Skills	A passion for Aboriginal health, ability to work independently, be adaptable, open to diversity, have a keen interest in applied, community based research theory and practice.
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Michael Wright Email: michael.wright@telethonkids.org.au Telephone: (08) 9489 7770

Title of Project	**Biological Embedding of Peer Bullying Victimisation in Adolescence**
Key Focus Area	**Brain & Behaviour** Developmental Health & Education Mental Health Youth Health & Wellbeing
Research Group	Health Promotion, Education & Research Translation Group
Start Date	February 2016
Chief Supervisor	Dr Kevin Runions (Telethon Kids Institute, Child & Adolescent Psychiatry UWA)
Other Supervisors	Professor Donna Cross (Telethon Kids Institute)
Project Outline	Recent research indicates that being a target of bullying in childhood and adolescences predicts low-grade chronic inflammation into adulthood (Copeland et al., 2014, PNAS), controlling for other risks of chronic inflammation like BMI. This finding is in need of replication and extension, and the Raine dataset provides a great opportunity to do so. The Raine study data would also provide a capacity to test a broad range of potential protective factors in any link between victimisation experiences and biological system responsivity. Depending on student interest, this could include temperament, family functioning, school functioning, and other aspects of the biopsychosocial model. Alternately, students could consider the wide range of biomarker data in the Raine study to extend the understanding of the neuroendocrine mechanisms in play. Whether focusing on the psychosocial context or the biological mechanisms, this work would provide an important step in understanding the biological embedding of social experiences.
Project suitable for	☒ Honours ☐ MD ☒ Masters ☐ PhD
Essential Qualifications	Academic background in psychology, health promotion, neuropsychology, or other relevant area required.
Essential Skills	Skills in data management and analyses would be beneficial
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Kevin Runions Email: kevin.runions@telethonkids.org.au Telephone: (08) 9489 7931

Title of Project	**Motivational Interviewing with Youth Who Bully**
Key Focus Area	**Brain & Behaviour** Developmental Health & Education Mental Health Youth Health & Wellbeing
Research Group	Health Promotion, Education & Research Translation Group
Start Date	ASAP
Chief Supervisor	Professor Donna Cross (Telethon Kids Institute)
Other Supervisors	Dr Kevin Runions (Telethon Kids Institute, Child & Adolescent Psychiatry UWA)
Project Outline	Peer bullying is a stubborn social problem. To date, one of the chief challenges has been stopping bullying at the source: the young people who engage in repeated or severe bullying behaviours. The Beyond Bullying project is trialling an innovative approach known as Motivational Interviewing (MI). Motivational Interviewing is particularly powerful when the problem behaviour elicits resistance from the client. MI has previously been successfully used in counselling and guidance settings to help young people change and resolve problems with alcohol and substance use, eating disorders, gambling problems, and, most importantly, to reduce violent behaviour. We will be examining the efficacy of MI as a targeted intervention in conjunction with the Friendly Schools Plus whole-school bullying prevention program, which an evidence-based program that helps limit problems with bullying. We are seeking a PhD or Masters student interested in examining the process of motivational interviewing with youth, and with young people who bully others in particular. Possibilities for extending this to examine MI in other contexts are possible. Alternately, students could focus on issues in the implementation of Friendly Schools Plus, a whole-school bullying intervention program. The Beyond Bullying project is funded through a NHMRC project grant. A scholarship may be available, conditional on acceptance into the postgraduate program. The researchers include Professor Donna Cross, Dr Kevin Runions, and Dr Thérèse Shaw (Telethon Kids Institute, UWA; Perth), Professor Marilyn Campbell (QLD), Professor Philip Slee and Dr Barbara Spears (SA), Professor Christina Salmivalli (Turku, Finland), and Professor Ken Resnicow (Michigan, USA). We have a unique opportunity for exceptional individuals wishing to undertake postgraduate study with the Beyond Bullying team in Perth.
Project suitable for	☐ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	• Have achieved a First Class Honours (or equivalent) and/or a research Masters in Psychology, Education, Health Promotion or another relevant degree including a clear research component. • Eligible to enrol in a PhD or a Masters at UWA.
Essential Skills	Capacity to work both in a team and independently. Schools are complex places to conduct research, so adaptability is an essential attribute for this position.
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Kevin Runions Email: kevin.runions@telethonkids.org.au Telephone: (08) 9489 7931

Title of Project	**High School Students' Attitudes towards Electronic Image Sharing**
Key Focus Area	**Brain & Behaviour** Mental Health & Wellbeing
Research Group	Health Promotion, Education & Research Translation Group
Start Date	February 2017
Chief Supervisor	Professor Donna Cross (Telethon Kids Institute)
Other Supervisors	Lisa Patterson (Telethon Kids Institute)
Project Outline	The Cyber Savvy project aims to inform the development of resources for Western Australian schools to support young people to make positive choices about their online behaviour, and in particular the use of images sent via mobile phones and the Internet. The overall aim of the research is to reduce young peoples' mental and health harms from negative online behaviours. A Student Summit was held in 2014 which was attended by 68-Year 9 Student Cyber Ambassadors from non-government schools as well as 15 school staff. At the Summit participants took part in focus groups exploring how young people use online digital media and share images of themselves and how this impacts on their relationships with others. The project team is seeking a student who would be interested in leading the analysis and write up of the focus groups results. As the focus groups have already been undertaken (instrument development, implementation and data transcription) it is envisaged that complementary research work may also be required to fulfil the requirements for an Honours or project placement load. Potential complementary projects are, in part, dependent on the results of the data analysis of the focus groups however, some suggestions of potential complementary projects have been identified below: • Complete an environmental scan of current organisations and services that provide support to young people on electronic image sharing. • Explore in more depth the attitudes, beliefs and norms surrounding appropriate and inappropriate image sharing in relation to the variables of interest explored in the focus groups. • Explore in more depth any gender differences that arise from the three focus group types (female, male, mixed male/female focus groups). • Explore the role of bystanders on electronic image sharing. • Explore the major issues facing young people supporting their friends when they experience a negative outcome from electronic image sharing.
Project suitable for	☒ Honours ☐ MD ☐ Masters ☐ PhD
Essential Qualifications	Academic background in psychology, health promotion, social science, or other relevant area required.
Essential Skills	Skills in data management and analyses would be beneficial
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☐ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Melanie Epstein Email: melanie.epstein@telethonkids.org.au Telephone: (08) 9489 7601

Title of Project	**Exploiting the Point Subtraction Aggression Paradigm (PASP) to Test Theories of Reactive/Proactive Aggression and Moral Disengagement**
Key Focus Area	**Brain & Behaviour** Developmental Health & Education Mental Health Youth Health & Wellbeing
Research Group	Child & Adolescent Psychiatry
Start Date	February 2016
Chief Supervisor	Dr Kevin Runions (Telethon Kids Institute, Child & Adolescent Psychiatry UWA)
Other Supervisors	Professor Florian Zepf (Child & Adolescent Psychiatry UWA)
Project Outline	Measuring aggression in a valid way remains a challenge to psychology and psychiatry alike. Current paradigms that can be used in lab settings. But tasks designed to assess aggression in lab settings face important challenges that pose risk to their validity (Tedeschi & Quigley, 1996; Ritter & Eslea, 2005), due in no small part to the different drivers and types of aggression (see Runions, 2013, e.g.). The Point Subtraction Aggression Paradigm presents opportunities to experimentally investigate proactive and reactive aggression and to test mechanisms of moral disengagement that have not been exploited. This project aims to provide a richer conceptual and operational framework for using the PSAP more broadly to test specific drivers and modes of aggression. References: Runions K. Toward a conceptual model of motive and self-control in cyber-aggression: Rage, revenge, reward, and recreation. 2013. Journal of Youth and Adolescence, 42 (5): 751-771. Tedeschi J, Quigley B. Limitations of laboratory paradigms for studying aggression. 1996. Aggression & Violent Behaviour, 1: 163-177.
Project suitable for	☒ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	Academic background in psychology, health promotion, or other relevant area required.
Essential Skills	Skills in data management and analyses would be beneficial
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Kevin Runions Email: kevin.runions@telethonkids.org.au Telephone: (08) 9489 7931

Title of Project	**A Role for Inflammation in the Development of Internalising Problems?**
Key Focus Area	**Brain & Behaviour** Developmental Health & Education Mental Health Youth Health & Wellbeing
Research Group	Child & Adolescent Psychiatry, Psychosomatics & Psychotherapy
Start Date	February 2016
Chief Supervisor	Dr Kevin Runions (Telethon Kids Institute, Child & Adolescent Psychiatry UWA)
Other Supervisors	Professor Florian Zepf (Child & Adolescent Psychiatry UWA)
Project Outline	Over the past decade, theory & research has pointed to a potential role for inflammation in depressive disorder (e.g., Raison, Capuron & Miller, 2006). But longitudinal research over the early development of internalising problems has been scarce. The Raine study's longitudinal birth cohort dataset has a rich set of inflammation and depression data to enable unprecedented analyses on the development sequencing of the relationship between inflammation and depression. The Raine study data would also provide a capacity to test a broad range of potential protective factors in any link between the two. Depending on student interest, this could include temperament, family functioning, school functioning, and other aspects of the biopsychosocial model. Whether focusing on the psychosocial context or the biological mechanisms, this work would provide an important step in understanding the etiology of depression. References: Raison CL, Capuron L, Miller AH. Cytokines sing the blues: inflammation and the pathogenesis of depression. 2006. Trends in Immunology, 27.
Project suitable for	☒Honours ☐MD ☒Masters ☒PhD
Essential Qualifications	Academic background in psychology, health promotion, neuropsychology, or other relevant area required.
Essential Skills	Skills in data management and analyses would be beneficial
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Kevin Runions Email: kevin.runions@telethonkids.org.au Telephone: (08) 9489 7931

Title of Project	**What are the Domains of Quality of Life that are Important to Children with the CDKL5**
Key Focus Area	**Brain & Behaviour** Autism & Intellectual Disability & FASD
Research Group	Child Disability Research Group
Start Date	January 2017
Chief Supervisor	Dr Jenny Downs (Telethon Kids Institute)
Other Supervisors	A/Professor Helen Leonard (Telethon Kids Institute)
Project Outline	The CDKL5 disorder is a relatively newly identified severe childhood disability caused by a pathogenic mutation on the CDKL5 gene. It was previously thought to be a variant of Rett syndrome, another severe childhood disability but caused by a pathogenic mutation on the MECP2 gene. We are now conducting a program of research investigating quality of life in children with intellectual disability including Rett syndrome, Down syndrome, autism spectrum disorder and severe cerebral palsy. In the first instance we are developing a specific quality of life measure based on interview data collected from parents about what aspects of life are satisfying for the children and what aspects are challenging. Thus far, several unique domains not yet described in the quality of life literature have emerged. This project will extend this work to include the CDKL5 disorder. Families who are participating in the International CDKL5 Database will be recruited to this study. The student will conduct qualitative interviews with the parents and will thereafter use thematic analysis to code the transcript data and identify the domains of quality of life.
Project suitable for	☒Honours ☐MD ☐Masters ☐PhD
Essential Qualifications	BSc
Essential Skills	Interest in working with data and conducting analyses
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☐ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Jenny Downs Email: jenny.downs@telethonkids.org.au Telephone: (08) 9489 7774

Title of Project	**The International CDKL5 Disorder Database – Follow-Up Study**
Key Focus Area	**Brain & Behaviour** Autism & Intellectual Disability & FASD
Research Group	Child Disability Research Group
Start Date	January 2017
Chief Supervisor	Dr Jenny Downs (Telethon Kids Institute)
Other Supervisors	A/Professor Helen Leonard (Telethon Kids Institute) Dr Kingsley Wong (Telethon Kids Institute)
Project Outline	The CDKL5 disorder is caused by mutations within the Cyclin-dependent Kinase-like 5 (CDKL5) gene. Key clinical features include seizure onset in the majority before 3 months of age, global developmental delay and impaired gross motor abilities, gastrointestinal and sleep issues, impaired muscle tone and bruxism. The International CDKL5 Disorder Database was established in 2012 in collaboration with the International Foundation for CDKL5 Research to further develop our understanding of the clinical features of this disorder. The database aims to collect information from families and clinicians on individuals with the CDKL5 disorder. It also aims to become a resource so that researchers from across the world can conduct meaningful and collaborative research into the CDKL5 disorder. The aim of this project is to design and implement the first family follow-up questionnaire with a focus on administering short modules in the areas of epilepsy and sleep disturbances. You will also work to maintain the good collaborations with the CDKL5 centres of Excellence in the USA to potentially collect clinician data.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	Bachelor's degree in science, health science or other health-related areas including genetics. First class Honours.
Essential Skills	Computer and basic statistical skills
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: A/Professor Helen Leonard Email: helen.leonard@telethonkids.org.au Telephone: (08) 9489 7790

Title of Project	**MECP2 Duplication Syndrome: a New Cause of Intellectual Disability**
Key Focus Area	**Brain & Behaviour** Autism & Intellectual Disability & FASD
Research Group	Child Disability Research Group
Start Date	January 2016
Chief Supervisor	A/Professor Helen Leonard (Telethon Kids Institute)
Other Supervisors	Dr Jenny Downs (Telethon Kids Institute)
Project Outline	Individuals who have two or more copies of the Methyl CpG Binding Protein 2 (*MECP2*) gene, located on the Xq28 chromosome, have been found to share a distinct clinical phenotype known as *MECP2* duplication syndrome. Loss or mutation of the protein produced by this gene is associated with the rare disorder Rett syndrome which mostly affects females and is well described in the literature. By contrast, the clinical outcomes arising from excess dosage of *MECP2* are less well understood and cases of *MECP2* duplication reported to date are predominantly male. The incidence and prevalence of the syndrome are totally unknown, as there have been no population-based studies undertaken. However we have recently published a description of 56 individuals with a MECP2 DUPLICATION who were registered with the InterRett database that is housed at the Telethon Kids Institute. The aim of the current project will be to develop a family questionnaire specific for the MECP2 Duplication Disorder in order to collect phenotype information at a deeper level from both national and international group of families affected by MECP2 Duplication. Thereafter, the goals will be to estimate the birth prevalence of the disorder in Australia; describe the natural history of *MECP2* duplication syndrome and investigate associations between the phenotype and underlying genetic anomalies.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	Bachelor's degree in science, health science or other health-related area including genetics
Essential Skills	Computer and basic statistical skills
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: A/Professor Helen Leonard Email: helen.leonard@telethonkids.org.au Telephone: (08) 9489 7790

Title of Project	**Are those with the CDKL5 Disorder who would also fit the Criteria for Rett Syndrome Similar or Different to the Remaining Sample with CDKL5**
Key Focus Area	**Brain & Behaviour** Autism & Intellectual Disability & FASD
Research Group	Child Disability Research Group
Start Date	January 2017
Chief Supervisor	A/Professor Helen Leonard (Telethon Kids Institute)
Other Supervisors	Dr Jenny Downs (Telethon Kids Institute) Dr Kingsley Wong (Telethon Kids Institute)
Project Outline	The CDKL5 disorder is a relatively newly identified severe childhood disability caused by a pathogenic mutation on the CDKL5 gene. It was previously thought to be a variant of Rett syndrome, another severe childhood disability but caused by a pathogenic mutation on the MECP2 gene. Approximately 25% of those with the CDKL5 disorder still meet the clinical criteria for Rett syndrome and
Project suitable for	☒Honours ☐MD ☒Masters ☐PhD
Essential Qualifications	BSc
Essential Skills	Interest in working with data and conducting analyses
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☐ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: A/Professor Helen Leonard Email: helen.leonard@telethonkids.org.au Telephone: (08) 9489 7790

Title of Project	**The Western Australian Pregnancy Cohort (Raine) Study**
Key Focus Area	**Brain & Behaviour** Developmental Health & Education Mental Health & Wellbeing Youth Health & Wellbeing
Research Group	Raine Study, Longitudinal cohort
Start Date	Any time
Chief Supervisor	Professor Nick de Klerk (Telethon Kids Institute, UWA)
Other Supervisors	Jenny Mountain (School of Population Health UWA)
Project Outline	The Raine Study is a longitudinal pregnancy birth cohort and a rich resource for the study of genetic and environmental factors that affect health and development. The cohort have been assessed at during pregnancy, birth and at 1, 2, 3, 5, 8, 10, 14, 17, 20 and 22 years of age. Data available includes questionnaires (socio economic, developmental, psychological), clinical assessment (anthropometry, DXA, physical fitness, sleep, ophthalmology), genetics (GWAS, EXOME, EWAS) and blood assays. There are wide range of research opportunities in many areas including cardio-metabolic, mental health, nutrition, sleep, genetics, ophthalmology, stress, asthma, risk taking behaviour, physical activity. Findings from the Raine Study include foetal and infant exposures influence metabolic risk, behaviour, language and emotional development. Better mental health in teenagers is associated with healthy eating, less television and leisure computer use and less risk taking behaviour. Respiratory allergy is important to teenage asthma, and exposure to environmental tobacco smoke increased the risk of wheeze. Back pain affects over a third of teenagers and impinges on their daily lives. Posture, obesity, drug use and mental health are related to back pain. Teenagers who had been bullied were more likely to have depression and emotional problems. Teenagers who had bullied others were more likely to have depression and to abuse alcohol. Raine study GWAS data has contributed to the identification of new genetic loci influencing birth weight, age of menarche and lung function.
Project suitable for	☐ Honours ☒ MD ☒ Masters ☒ PhD
Essential Qualifications	University pre-requisites
Essential Skills	Data analysis, post graduate knowledge of the specific area of interest e.g. mental health, respiratory function, sleep science, epidemiology, and genetic epidemiology.
All ethics approvals have been obtained for this project?	☐ Yes ☒ No – The ethics committee approvals will be dependent on the project. Assistance will be provided in obtaining relevant approval.
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Jenny Mountain Email: jenny.mountain@uwa.edu.au Telephone: (08) 6488 6957

Title of Project	**Motives in Cyberbullying and Cyber-Aggression**
Key Focus Area	**Brain & Behaviour** Developmental Health & Education Mental Health Youth Health & Wellbeing
Research Group	Social & Emotional Development
Start Date	February 2016
Chief Supervisor	Dr Kevin Runions (Telethon Kids Institute, Child & Adolescent Psychiatry UWA)
Other Supervisors	Professor Donna Cross (Telethon Kids Institute) Dr Thérèse Shaw (Telethon Kids Institute)
Project Outline	As a new field of study, cyberbullying research provides an important foundation for intervention and prevention development. Heterogeneity in why online aggression (commonly referred to as cyberbullying) arises has the potential to obstruct intervention efforts. This project will build on a new self-report scale for adolescents and young people (the Cyber-Aggression Typology Questionnaire; CATQ) that assesses motives including revenge, rage, reward and recreation (Runions, Bak & Shaw, 2016). Your work would sit at the cutting-edge of cyberbullying research, with supervision by internationally recognised leaders in cyberbullying prevention. References: Runions, K; Bak, M; & Shaw, T. (2016; in press). Disentangling functions of online aggression: The Cyber-Aggression Typology Questionnaire. *Aggressive Behaviour*.
Project suitable for	☒Honours ☐MD ☒Masters ☒PhD
Essential Qualifications	Academic background in psychology, health promotion, or other relevant area required.
Essential Skills	Skills in data management and analyses would be beneficial
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Kevin Runions Email: kevin.runions@telethonkids.org.au Telephone: (08) 9489 7931

Title of Project	**Understanding Barriers to Working with Students in Bullying**
Key Focus Area	**Brain & Behaviour** Developmental Health & Education Mental Health Youth Health & Wellbeing
Research Group	Social & Emotional Health and Development
Start Date	February 2016
Chief Supervisor	Dr Kevin Runions (Telethon Kids Institute, Child & Adolescent Psychiatry UWA)
Other Supervisors	Professor Donna Cross (Telethon Kids Institute)
Project Outline	Student bullying is a high profile issue facing schools. Prevention strategies that work for younger students may be counterproductive by high school as bullying evolves into a more covert interpersonal process. Intervention responses by school staff are based on disciplinary modes or on restorative approaches, neither of which have a base of evidence to either support or discourage their use. How do schools decide how to respond? And what are barriers to using new approaches? This project would built upon the NHMRC-funded Beyond Bullying: Positive Change for All project, which has been working to test the use of motivational interviewing. The supervisors are internationally recognised experts in school-based health promotion and bullying.
Project suitable for	☒ Honours ☐ MD ☒ Masters ☐ PhD
Essential Qualifications	Academic background in psychology, health promotion, or other relevant area required.
Essential Skills	Skills in data management and analyses would be beneficial
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Kevin Runions Email: kevin.runions@telethonkids.org.au Telephone: (08) 9489 7931

Title of Project	**Young Minds Matter**
Key Focus Area	**Brain & Behaviour** Developmental Health & Education Mental Health & Wellbeing Youth Health & Wellbeing
Research Group	Human Capability Team
Start Date	2017
Chief Supervisor	A/Professor David Lawrence (Telethon Kids Institute, Graduate School of Education UWA)
Other Supervisors	Professor Steve Zubrick (Telethon Kids Institute, Graduate School of Education UWA) Dr Cate Taylor (Telethon Kids Institute, Graduate School of Education UWA)
Project Outline	Young Minds Matter, the Second Australian Child and Adolescent Survey of Mental Health and Wellbeing was funded by the Australian Government Department of Health and conducted by the Telethon Kids Institute at The University of Western Australia in collaboration with Roy Morgan Research. Interviews were conducted with a random sample of over 6,000 families with children aged between 4-17 years, selected from around Australia. The survey aimed to determine how many children and adolescents have mental disorders, the nature of these disorders and the impact they have on children and their families, as well as examining the use of services and the unmet need for services in the health and education sectors. Face-to-face diagnostic interviews were conducted with the parents or carers of children and adolescents, and if the selected survey child was aged 11 years or older, they also completed a self-report questionnaire on a tablet computer. The survey assessed 7 common mental disorders in children and adolescents using DSM-IV criteria: social phobia, separation anxiety disorder, generalised anxiety disorder, obsessive-compulsive disorder, major depressive disorder, attention-deficit/hyperactivity disorder and conduct disorder. The survey found 13.9% of Australian children and adolescents had a mental disorder in the 12 months prior to the survey. The diagnostic interviews were supplemented by information about family structure, socio-demographic factors, family functioning, parental mental health and wellbeing, and health risk behaviours. In addition to comprehensive information about mental health and wellbeing, and service use, the survey also collected information from young people about their connectedness and engagement with school, and parent and self-rated performance in key subject areas. Young people also reported on their experiences of bullying and cyber-bullying. The data set is available through the Australian Data Archive and is a rich resource for research projects which could include examining aspects of the relationship between social and emotional wellbeing, and attendance, connectedness, engagement and performance at school.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	Postgraduate qualifications in a related field of study (public health, biostatistics/epidemiology, information science/linked data analysis/child development/economics/psychology). Applicants with a bachelor's degree only, but who have subsequent wide research experience may be considered.
Essential Skills	Strong quantitative analysis skills. Experience with SAS, SPSS, Stata or equivalent.
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☒ Full scholarship available
Contact for further information	Name: A/Professor David Lawrence Email: david.lawrence@telethonkids.org.au Telephone: (08) 9489 7720

Title of Project	**Lifecourse Centre Projects**
Key Focus Area	**Brain & Behaviour** Developmental Health & Education
Research Group	Human Capability Team
Start Date	2017
Chief Supervisor	Dr Cate Taylor (Telethon Kids Institute, Graduate School of Education UWA)
Other Supervisors	Professor Steve Zubrick (Telethon Kids Institute, Graduate School of Education UWA) A/Professor David Lawrence (Telethon Kids Institute, Graduate School of Education UWA)
Project Outline	Lifecourse Centre Projects The ARC Centre for Excellence for Children and Families over the Life Course (the Lifecourse Centre) aims to identify the drivers of deep and persistent disadvantage in Australia and develop innovative and practical solutions to reverse the impact of disadvantage on the lives of children and families. The Telethon Kids/ UWA Node has an interest in the intergenerational transfer of disadvantage, mental health, human capability formation, and the use of Commonwealth administrative datasets.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	Postgraduate qualifications in a related field of study (public health, biostatistics/epidemiology, information science/linked data analysis/child development/economics/psychology). Applicants with a bachelor's degree only, but who have subsequent wide research experience may be considered.
Essential Skills	Strong quantitative analysis skills. Experience with SAS, SPSS, Stata or equivalent. Ability to work as part of a team.
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☒ Full scholarship available
Contact for further information	Name: Dr Cate Taylor Email: cate.taylor@telethonkids.org.au Telephone: 0429 204 525

Title of Project	**Childhood Influences on Language and Literacy**
Key Focus Area	**Brain & Behaviour** Developmental Health & Education
Research Group	Human Capability Team
Start Date	2017
Chief Supervisor	Dr Cate Taylor (Telethon Kids Institute, Graduate School of Education UWA)
Other Supervisors	Professor Steve Zubrick (Telethon Kids Institute, Graduate School of Education UWA) A/Professor David Lawrence (Telethon Kids Institute, Graduate School of Education UWA)
Project Outline	**Childhood Influences on Language and Literacy** Children's language development builds the foundation for literacy, educational achievement and employment. It is one of the major pathways that supports the expansion of human capital and human capability. Promoting children's language and literacy development is a central focus in early childhood policies and strategies. This project proposes using longitudinal data, including the Longitudinal Study of Australian Children (LSAC) to look at factors which influence the development of language and literacy, particularly in the context of deep and persistent disadvantage. Specific questions include patterns of stability and change, the best timing and administration of interventions, and the role of the broader developmental environment.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	Postgraduate qualifications in a related field of study (public health, biostatistics/epidemiology, information science/linked data analysis/child development/economics/psychology). Applicants with a bachelor's degree only, but who have subsequent wide research experience may be considered.
Essential Skills	Strong quantitative analysis skills. Experience with SAS, SPSS, Stata or equivalent. Ability to work as part of a team.
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☒ Full scholarship available
Contact for further information	Name: Dr Cate Taylor Email: cate.taylor@telethonkids.org.au Telephone: 0429 204 525

Title of Project	**Empowering Regional Families of Children with Developmental Disability**
Key Focus Area	**Brain & Behaviour** Autism & Intellectual Disability & FASD Mental Health & Wellbeing Youth Health & Wellbeing
Research Group	Developmental Disorders Research Group
Start Date	2017
Chief Supervisor	Dr Rachel Skoss (Telethon Kids Institute)
Other Supervisors	Dr Jenny Downs (Telethon Kids Institute) Dr Jeneva Ohan (School of Psychology UWA)
Project Outline	Stress in families where a child with developmental disability (DD) has challenging behaviours can lead to poor family functioning, social isolation, and poor mental health outcomes for all family members. This is especially true for families outside the Perth metropolitan area for whom support services are limited. This study aims to help these families by further developing the Side-by-Side program to suit the circumstances and needs of families in rural and regional Western Australia. The program is designed to empower them to better manage their child's challenging behaviour, effectively advocate for appropriate support services for their child with DD, navigate the mainstream services such as health and education, and to create peer-support groups with other families of children with DD. A trial to be conducted in the Great Southern and Midwest Regions of Western Australia will test and evaluate the program. If effective, it will offer strategies to make a profound difference to the life circumstances to many families across Western Australia. Importantly, the research will inform policy-makers how to act to best support these families within the future National Disability Insurance Scheme, and through existing state services such as health and education.
Project suitable for	☐ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	Various backgrounds may be suitable including psychology, public health, allied health, education, and health promotion
Essential Skills	Qualitative research, good communication, and contemporary understanding of disability
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Rachel Skoss Email: rachel.skoss@telethonkids.org.au Telephone: (08) 9489 7959

Title of Project	**Projects Utilising Linked Administrative Data to Investigate Developmental Pathways and Outcomes for Children**
Key Focus Area	**Brain & Behaviour**
Research Group	Developmental Pathways Research Group
Start Date	March 2017
Chief Supervisors	Dr Rebecca Glauert (Telethon Kids Institute) Dr Melissa O'Donnell (Telethon Kids Institute)
Other Supervisors	A/Professor Helen Leonard (Telethon Kids Institute) Professor Nick de Klerk (Telethon Kids Institute, UWA)
Project Outline	The Developmental Pathways in WA Children Program has built the capacity for researchers to undertake interdisciplinary research by linking cross jurisdictional data held by a number of government departments, including the Western Australian Departments of Health, Child Protection and Family Support, Education, Corrective Services, Police, School Curriculum and Standards Authority, and Disability Services Commission. The linking of population level data across these government agencies offers researchers an unparalleled opportunity to take an integrated and holistic approach to answering important questions concerning the health, development and wellbeing of children and youth. There is scope within our program to recruit PhD students who have an interest in using linked administrative data to conduct translational research in the areas of physical health, mental health, child maltreatment, offending, injury, education, child development and disability. Please come and talk to us if you have an interest in any of these broad areas of research.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	A minimum of 2A Honours degree or a Masters degree in a related field
Essential Skills	Background knowledge in relevant areas, such as education, developmental health, psychology, disability, epidemiology and population health. Knowledge of quantitative data analyses.
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Rebecca Glauert Email: rebecca.glauert@telethonkids.org.au Telephone: (08) 9489 7754

Title of Project	**Interprofessional Adoption of the Australian Guide to the Diagnosis of Fetal Alcohol Spectrum Disorder (FASD)**
Key Focus Area	**Brain & Behaviour** Autism & Intellectual Disability & FASD
Research Group	Reducing the Effects of Antenatal Alcohol on Child Health CRE
Start Date	October 2016
Chief Supervisor	Professor Carol Bower (Telethon Kids Institute)
Other Supervisors	Professor Elizabeth Elliot (University of Sydney)
Project Outline	The REAACH Centre of Research Excellence aims to prevent alcohol use in pregnancy and its effects on child health in order to decrease the incidence of FASD and improve national FASD diagnostic capacity and management through effective interventions. There are three research themes in the Centre – prevention, diagnosis and management. Under-diagnosis of FASD has been acknowledged in several epidemiological studies in Australia. Lack of diagnostic capacity limits steps to management and prevention. Ideally, FASD diagnosis involves a multidisciplinary team (at least a paediatrician, psychologist and speech or occupational therapist). In many regional settings such an assessment is resource intensive and unrealistic. Clinicians require guidance about minimum testing required to make a diagnosis. This project involves evaluating the recently released the Australian Guide to the diagnosis of Fetal Alcohol Spectrum Disorder (FASD) and the related on –line training modules for health professionals, with an emphasis on adoption and impact. This will include uptake and effectiveness of the training modules, measuring improvements in diagnosis of FASD and methods of assessment for diagnosis, using information from multiple sources. The research will also include developing and evaluating a screening instrument for high risk, including Indigenous, populations.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	Have achieved a First Class Honours (or equivalent) and/or a research Masters in Public Health or another relevant degree including a clear research component. Eligible to enrol in a PhD at the University of Western Australia. Scholarship is conditional on acceptance into a PhD program.
Essential Skills	Background knowledge in relevant area (population health, health promotion, developmental health), computer literacy, epidemiology
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Narelle Mullan Email: narelle.mullan@telethonkids.org.au Telephone: (08) 9489 7619

Title of Project	**Early Childhood Development & Learning – Various**
Brain & Behaviour	**Brain & Behaviour** Developmental Health & Education Autism & Intellectual Disability & FASD Physical Disability Mental Health & Wellbeing
Research Group	Early Childhood Development and Learning Collaboration
Start Date	Various
Chief Supervisor	Professor Donna Cross (Telethon Kids Institute)
Other Supervisors	Various
Project Outline	The Early Childhood Development and Learning Collaboration is a new initiative of the Institute and seed funded by the Minderoo Foundation. It is an evidence partner, working alongside services, families and communities to improve outcomes for children. Its focus is on research translation. The Collaboration is currently developing its strategy in consultation with a wide range of internal and external stakeholders. Once finalised, the strategic plan will inform the key areas for research. If you have a strong interest in early childhood and are passionate about seeing on the ground change, please contact us to discuss potential projects.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	Undergraduate degree (any discipline) & eligible for admission into a PhD program
Essential Skills	Deep appreciation of the importance of early childhood and its importance for healthy development and learning throughout life The ability to communicate with key stakeholders (early childhood education and care sector, not for profit agencies, government, families and children) Research and/or evaluation skills Strong time management skills The ability to work with limited direction as part of a small team
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Professor Donna Cross Email: donna.cross@telethonkids.org.au Telephone: (08) 9489 7612

Title of Project	**Interventions to Improve Mental Health and Well-Being in Children with Hearing Loss**
Key Focus Area	**Brain & Behaviour**
Research Group	Youth Health and Well-being
Start Date	January 2017
Chief Supervisor	Professor Donna Cross (Telethon Kids Institute)
Other Supervisors	Mr Chris Brennan-Jones (UWA), Dr Kevin Runions (Telethon Kids Institute), Dr Rob Eikelboom (UWA)
Project Outline	Children with hearing loss are at a greater risk of being socially isolated, perform less well at school and are up to four times more likely to experience mental health problems than children without hearing loss. However, specific, evidence-based resources to support the mental health and wellbeing of this vulnerable group of students are not currently available to families and primary and secondary WA schools. This research will, together with Aboriginal and non-Aboriginal children with hearing loss, their parents and teachers, examine why they may not do as well as their peers and how their school environment can positively impact on their wellbeing. Previous studies have examined the mental health and behavioural development of children with hearing loss, and showed that hearing loss in children is associated with an increased risk of mental health problems, including both internalizing and externalizing symptoms. The aim of this study (funded by Healthway) is to develop and test by randomised-trial a novel intervention to improve mental health and well-being. The project runs for a 3-year period. Depending on the postgraduate degree being sought, there are a range on projects available including epidemiological studies examining the influence hearing loss on mental health outcomes and primary data collection from the randomised-trial.
Project suitable for	☒ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	Various backgrounds may be suitable including education, psychology, audiology, medicine, epidemiology, public health and health promotion
Essential Skills	
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Chris Brennan-Jones Email: chris.brennan-jones@earscience.org.au Telephone: (08) 6380 4900

Title of Project	**Examining the School Experiences, Mental Health and wWll-Being of Children with Hearing Loss**
Key Focus Area	**Brain & Behaviour**
Research Group	Youth Health and Well-being
Start Date	January 2017
Chief Supervisor	Professor Donna Cross
Other Supervisors	Mr Chris Brennan-Jones, Dr Ashleigh Lin
Project Outline	A child's ability to hear well has significant impacts on the development of their language, communication and socialization skills. Children with a hearing loss can have more difficulties making friends and are more socially isolated than their peers with typical hearing levels. Previous studies have examined the mental health and behavioural development of children with hearing loss, and showed that hearing loss in children is associated with an increased risk of mental health problems, including both internalizing and externalizing symptoms. However, the relationship between hearing loss and behavioural problems in childhood has been equivocal. Three honours projects are available: 1. Characterising the school experiences of children with hearing loss in WA using an established online survey. 2. Examining the needs of school staff to support children with hearing loss. 3. Scoping review of current classroom and whole school-level actions/interventions to support students with hearing loss The aim of these projects is to better understand the school experiences, mental health and well-being of children with a hearing loss, the staff working with these children and the interventions available to support them.
Project suitable for	☒Honours ☐MD ☒Masters ☒PhD
Essential Qualifications	Various backgrounds may be suitable including education, psychology, audiology, medicine, epidemiology, public health and health promotion
Essential Skills	
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Chris Brennan-Jones Email: chris.brennan-jones@earscience.org.au Telephone: (08) 6380 4900

CHRONIC & SEVERE DISEASES

Title of Project	**Air Freshener Use and its Impacts upon Lung Health and Asthma**
Key Focus Area	**Chronic & Severe Diseases** Respiratory Health
Research Group	Respiratory Environmental Health
Start Date	February/March 2017
Chief Supervisor	A/Professor Alexander Larcombe (Telethon Kids Institute)
Other Supervisors	A/Professor Anthony Kicic (Telethon Kids Institute, SPACH) Dr Amanda Wheeler (Curtin University, University of Tasmania)
Project Outline	Air freshener use is pervasive in society. They are a primary source of known hazardous pollutants within homes, buildings, and other indoor environments. Air fresheners are designed to impart an aroma or mask odours, with the intent of providing a pleasant air environment. However, they can cause respiratory problems, especially for asthmatics. For instance, two studies in the US found that ~20% of the general public, and 34% of asthmatics experienced breathing difficulties and other health problems when exposed to air fresheners. It is therefore surprising that it is largely unknown how exposure to air fresheners impacts respiratory health, or how they may facilitate asthma flare-ups. The objectives of this study are to determine whether and how air fresheners are associated with adverse respiratory effects and exacerbations of asthma symptoms. To achieve these objectives we will employ our knowledge and expertise in pre-clinical models of allergy and environmental exposures to address the hypotheses that exposure to air fresheners will negatively impact lung function and exacerbate asthma symptoms through inflammatory mechanisms. Techniques to be used: • Mouse model of air freshener exposure; • Lung function analysis; • Lung structure assessment / stereology; • Assessment of broncho-alveolar lavage inflammation.
Project suitable for	☒Honours ☒MD ☒Masters ☒PhD
Essential Qualifications	Distinction average in BSc or equivalent
Essential Skills	Above average written and oral communication skills; Motivation and organisational skills; Able to work as part of a team.
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: A/Professor Alexander Larcombe Email: alexander.larcombe@telethonkids.org.au Telephone: (08) 9489 7814

Title of Project	**Latent Viral Detection in Human White Blood Cells**
Key Focus Area	**Chronic & Severe Diseases** Respiratory Health Princess Margaret Hospital for Children (PMH) UWA School of Paediatrics and Child Health (SPACH)
Research Group	Airway infection research
Start Date	March 2016
Chief Supervisor	Dr Angela Fonceca (SPACH)
Other Supervisors	Professor Mark Everard (SPACH) A/Professor Deborah Strickland (Telethon Kids Institute)
Project Outline	Respiratory syncytial virus causes annual epidemics every winter globally. In our current mouse model of infection we have shown this virus remains co-localised to a specific subset of white blood cells after the effects of infection have subsided. With access to adult lung tissue (ethics amendment in progress) we now intend to correlate our mouse findings with human data. You will be trained in all methods required for this project, which includes tissue preparation, cryopreservation and flow cytometry analysis. We anticipate the findings from this project to be imminently publishable and can be used in conjunction with our other projects as part of a PhD project if desired.
Project suitable for	☒ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	BSc or completed first 3 years of medical school as a minimum (i.e. medical students looking to do an intercalated Masters degree).
Essential Skills	An interest in viral infection and onset of viral induced disease Ability to work independently with instruction Ability and willingness to work within in a team
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No – ethics amendment is in progress
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Angela Fonceca Email: angela.fonceca@uwa.edu.au Telephone: (08) 9340 8540

Title of Project	**Viral Genotyping from Cord Blood Samples**
Key Focus Area	**Chronic & Severe Diseases** Respiratory Health Early Environment Infections & Vaccines Princess Margaret Hospital for Children (PMH) UWA School of Paediatrics and Child Health (SPACH)
Research Group	Airway infection research
Start Date	March 2016
Chief Supervisor	Dr Angela Fonceca (SPACH)
Other Supervisors	Professor Mark Everard (SPACH) Dr Avram Levy (School of Pathology and Laboratory Medicine UWA) Dr Abha Chopra (Murdoch University)
Project Outline	Respiratory syncytial virus (RSV) causes annual epidemics every winter globally. We have recently identified RSV in cord blood samples, demonstrating this virus is able to cross the placenta. We hypothesise that the virus is then triggered by environmental stimuli to cause symptoms associated with infection observed in the community. To demonstrate this we intend genotyping RSV strains in archival samples and those released by stimulated cord blood samples collected in the same year. Confirming the presence of unmatched strains between these groups will verify our hypothesis. We anticipate the findings from this project to be imminently publishable and can be used in conjunction with our other projects as part of a PhD project if desired.
Project suitable for	☒ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	BSc or completed first 3 years of medical school as a minimum (i.e. medical students looking to do an intercalated Masters degree).
Essential Skills	An interest in viral infection and onset of viral induced disease Ability to work independently with instruction Ability and willingness to work within in a team
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No – ethics amendment is in progress
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Angela Fonceca Email: angela.fonceca@uwa.edu.au Telephone: (08) 9340 8540

Title of Project	**Resetting Developmental Trajectories to Shape Phenotypic Traits**
Key Focus Area	**Chronic & Severe Diseases** Respiratory Health
Research Group	Systems Immunology
Start Date	Continuous
Chief Supervisor	Dr Anthony Bosco (Telethon Kids Institute)
Other Supervisors	Alex Larcombe (Telethon Kids Institute) Michael Kormann (University of Tubingen)
Project Outline	Environmental exposures in early life can have dramatic consequences for organismal development and physiological function in adulthood. We have developed a mouse model of respiratory viral infection, in which infected neonates have impaired lung function as adults, long after the infection has cleared. Conversely, when infection occurs in adulthood, there are no long-term functional impairments. This study has two main objectives. First, we will identify virus-induced perturbations to pulmonary gene networks that are linked to developmental and physiological changes. Second, we will employ multiplex transcriptome engineering to rewire virus-induced network perturbations to restore normal lung development and function. The student will develop expertise in experimental animal work, measurement of lung function mechanics, RNA-Seq analysis, and transcriptome engineering.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	BSc (Hons) in biological discipline
Essential Skills	We are looking for someone who is creative, ambitious, self-motivated, proactive, positive, passionate, reliable, hard-working, and has good communication skills.
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Anthony Bosco Email: anthony.bosco@telethonkids.org.au Telephone: (08) 9489 7895

Title of Project	**Assessing the Effects of Community Derived Rhinoviral Infection on Airway Epithelial cells**
Key Focus Area	**Chronic & Severe Diseases** Respiratory Health
Research Group	Epithelial Research Group
Start Date	2017
Chief Supervisor	A/Professor Anthony Kicic (Telethon Kids Institute)
Other Supervisors	Professor Stephen Stick (Telethon Kids Institute, SPACH, PMH) Dr Luke Garratt (Telethon Kids Institute) Dr Kevin Looi (Telethon Kids Institute)
Project Outline	Epithelial cells of the lung airways function as a barrier that prevents injurious particles, toxins and infectious agents from entering the body. They are also important for maintaining the airway structure and function. In addition, epithelial cells had been suggested to play role in the host's response to infection and contribute to inflammatory damage seen in several respiratory diseases such as asthma, cystic fibrosis and COPD. Respiratory viral infections play a role as the most common cause of childhood wheezing. Although there are a number of pathogens, respiratory syncytial virus (RSV) and rhinovirus (RV) are the most common amongst them. Particular attention has been focused on RV as its infection during infancy is a significant risk factor for development of wheezing and asthma in later life. It has also been suggested that RV plays a role in serious respiratory diseases leading to increased morbidity and mortality. This project will aim to (i) identify and culture community strains of RV, (ii) investigate the propensity of epithelial cells to cause inflammation in response to respiratory viruses and compare responses in cells from children with respiratory diseases from healthy children and (iii) compare newly identified community strains of RV with currently utilized laboratory strains of RV to determine whether inflammatory responses are non-specific or dependent upon the type of virus. The generation of a repository of community isolates of RV will facilitate many investigations that will be beneficial for patients, hospital and the community at large.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	BSc. (hons)
Essential Skills	Cell culture Some understanding of molecular biology and cell biology.
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: A/Professor Anthony Kicic Email: anthony.kicic@telethonkids.org.au Telephone: (08) 9340 8140

Title of Project	**The Asthmatic Epithelium from Childhood to Adulthood**
Key Focus Area	**Chronic & Severe Diseases** Respiratory Health
Research Group	Epithelial Research Group
Start Date	2017
Chief Supervisor	A/Professor Anthony Kicic (Telethon Kids Institute)
Other Supervisors	Professor Stephen Stick (Telethon Kids Institute, SPACH, PMH) Dr Anthony Bosco (Telethon Kids Institute) Professor Timo Lassmann (Telethon Kids Institute) Dr Kevin Looi (Telethon Kids Institute)
Project Outline	In recent years our group has led a paradigm shift in understanding with regard to the pathobiology of asthma revealing the epithelium as an important contributor to disease pathogenesis. The functional evidence that the epithelium can play a primary role in asthma has accumulated relatively slowly due to the difficulty obtaining airway tissue from patients with asthma & crucially, from healthy controls. The paucity of airway tissue has particularly limited our ability to investigate the roles of the epithelium in childhood asthma. We aim to better understand the role of the epithelium in asthma and to determine whether there is a distinct epithelial endotype that characterises asthma in both children and adults. We believe that the approach we have taken will result in new therapeutic targets and a means to better understand the development of asthma from childhood. ***Aims: (1)*** to measure global gene expression in AEC from adults with asthma and healthy controls***, (2)*** to measure gene expression in nasal epithelium from adults and children with asthma and from healthy controls***, (3)*** to determine using systems biology tools the pathways that characterize a specific asthma "signature" in the lower airway and nasal epithelium from children and adults with asthma. The assembled team are leaders in epithelial biology and asthma and will use cutting edge technology to determine epithelial genetic "signatures" that will indicate potential modifiable pathways and to the development of early biomarkers that can identify individuals at risk of developing asthma.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	BSc. (hons)
Essential Skills	Cell culture, understanding of molecular biology and cell biology.
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: A/Professor Anthony Kicic Email: anthony.kicic@telethonkids.org.au Telephone: (08) 9340 8140

Title of Project	**Treatments to Combat Viral-Induced Inflammation in Cystic Fibrosis**
Key Focus Area	**Chronic & Severe Diseases** Respiratory Health
Research Group	Epithelial Research Group
Start Date	2017
Chief Supervisor	A/Professor Anthony Kicic (Telethon Kids Institute)
Other Supervisors	Professor Stephen Stick (Telethon Kids Institute, SPACH, PMH) Dr Luke Garratt (Telethon Kids Institute)
Project Outline	Cystic fibrosis (CF) is a genetically inherited disease affecting mostly the Caucasian population. There are over 300 individual with CF in WA and 12-15 newborns are diagnosed each year following newborn screening. As part of the Australian Respiratory Early Surveillance Team for CF, we have demonstrated that early lung damage present early in life and that the lungs of children with CF are prone to inflammation from birth. The airways in the lungs are lined with specific type of cells, the epithelial cells, whose roles are to provide barrier to the external environment and as such are continually exposed to pollutants, allergens and pathogens. In CF, this epithelial function is defective, and one of the earliest trigger for inflammation is viral infection, which are common in young children. Recently, we have published data demonstrating the abnormal responses of CF cells to viral infection compared to healthy cells. This study aims to investigate the potential of using various treatments, including antibiotics to ameliorate these responses. Outcomes from this study would help us to better understand the mechanism(s) involve in innate immune response to viral infection and to provide an avenue for better patient management.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	BSc. (hons)
Essential Skills	Cell culture Some understanding of molecular biology and cell biology.
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: A/Professor Anthony Kicic Email: anthony.kicic@telethonkids.org.au Telephone: (08) 9340 8140

Title of Project	**Dysregulated Repair of the Airway Epithelium in Preterm Infants with Bronchopulmonary Dysplasia?**
Key Focus Area	**Chronic & Severe Diseases** Respiratory Health Princess Margaret Hospital for Children (PMH) UWA School of Paediatrics and Child Health (SPACH)
Research Group	Children's Lung Health
Start Date	February 2017
Chief Supervisor	A/Professor Anthony Kicic (Telethon Kids Institute)
Other Supervisors	Dr Shannon Simpson (Telethon Kids Institute) A/Professor Graham Hall (Telethon Kids Institute, Curtin Univeresity) Dr Luke Garratt (Telethon Kids Institute)
Project Outline	Rates of preterm birth have increased in almost all countries over the past 20 years such that more than 11 % of the world's babies are delivered preterm. Of these 15 million preterm babies annually, 25 % will be born very preterm (less than 32 weeks gestation) and in developed countries a quarter of these very preterm babies will be diagnosed with chronic lung disease of prematurity, or bronchopulmonary dysplasia (BPD). Recently, some studies have speculated that this may be, in part, to dysregulated repair of the airway epithelium. However, there is currently no evidence to support this theory. This project would aim to characterise the airway epithelial cells in very preterm babies (with and without BPD) and determine whether epithelial cell repair is dysfunctional in this population. Specifically, this would involve: - Collecting samples of nasal epithelial cells from sedated preterm infants at 12-15 months of age and culturing these cells. - Wounding the cells using a specialized tool optimized in our laboratory and assessing the rate of healing - Correlating the characteristics of the epithelium with the clinical characteristics of the child and comparing the cell characteristics and rate of wound healing to cell taken from full term infants. Techniques to be employed in this project will include, cell culture utilizing stringent aseptic technique, protein arrays and western blot analysis, wound repair assays, RNA isolation and quantitative PCR, immunohistochemistry and ELISAs as well as interaction with the infants and families during the lung function and nasal brushing.
Project suitable for	☒Honours ☐MD ☒Masters ☒PhD
Essential Qualifications	BSc or equivalent, Working With Children Check
Essential Skills	
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: A/Professor Anthony Kicic Email: anthony.kicic@telethonkids.org.au Telephone: (08) 9340 8140

Title of Project	**HLA-Genotypes and Childhood Type 1 Diabetes in Western Australia: Trends and Associations**
Key Focus Area	**Chronic & Severe Diseases** Diabetes Early Environment Immunity & Inflammation Princess Margaret Hospital for Children (PMH)
Research Group	Children's Diabetes Research and Education Centre
Start Date	2017
Chief Supervisor	Dr Aveni Haynes (Telethon Kids Institute, PMH)
Other Supervisors	A/Professor Elizabeth Davis (Telethon Kids Institute, SPACH, PMH) Grant Smith (Telethon Kids Institute)
Project Outline	Childhood type 1 diabetes (T1D), thought to be the result of environmental and genetic factors, continues to increase in Western Australia but the cause of this increase unknown. Although over 60 genes have now been associated with T1D, over 40% of the genetic risk is attributed to HLA (human leukocyte antigen) genotypes. Broadly, HLA genotypes can be classified as being high risk, low risk or protective of T1D. In Western Australia, >99% of children diagnosed with T1D <15 years of age are managed by the diabetes team at Princess Margaret Hospital. Since 2000, HLA genotyping has been completed for 80-90% of children newly diagnosed with T1D and data are available for more than 1200 patients in total. In addition, detailed phenotypic data are available from the Western Australian Children's Diabetes Database (WACDD). This project aims to analyse the HLA genotyping data for children diagnosed with T1D in Western Australia to: 1. Determine whether the HLA risk profile of patients has changed over time for the cohort as a whole and for different age groups (0-4, 5-9 and 10-14 years). 2. Analyse the association between HLA genotype and clinical characteristics (e.g. age at diagnosis, gender, glycaemic control , total insulin dose, severe hypoglycaemia events, DKA, diabetes related complications such as microalbuminuria, co-occurrence of coeliac disease and autoimmune thyroid disease, family history of T1D)
Project suitable for	☐ Honours ☒ MD ☒ Masters ☐ PhD
Essential Qualifications	BSc and experience with statistics
Essential Skills	Use of SPSS/STATA or other statistical package
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Aveni Haynes Email: aveni.haynes@health.wa.gov.au Telephone: (08) 9340 8090

Title of Project	**How does Mode of Delivery Influence Risk of Childhood Type 1 Diabetes in Western Australia?**
Key Focus Area	**Chronic & Severe Diseases** Diabetes Early Environment Immunity & Inflammation Princess Margaret Hospital for Children (PMH)
Research Group	Children's Diabetes Research and Education Centre
Start Date	2017
Chief Supervisor	Dr Aveni Haynes (Telethon Kids Institute, PMH)
Other Supervisors	A/Professor Elizabeth Davis (Telethon Kids Institute, SPACH, PMH) Grant Smith (Telethon Kids Institute)
Project Outline	Childhood type 1 diabetes (T1D), thought to be the result of environmental and genetic factors, continues to increase in Western Australia (WA) but the cause of this increase unknown. Birth by Caesarean-section delivery has been shown to increase the risk of childhood type 1 diabetes by 20%, but the mechanism for this association remains unclear. Technological and methodological advances in the burgeoning area of microbiome research have provided evidence that mode of delivery is a significant modifier of the infant gut microbiome, and importantly, that the infant gut microbiome has an important influence on early immune system development and maturation. Therefore, there is now a biologically plausible mechanism via which birth by Caesarean section may influence risk of later onset T1D. In WA, >99% of children diagnosed with T1D <15 years of age are managed by the diabetes team at Princess Margaret Hospital (PMH) and their data are stored in the Western Australian Children's Diabetes Database (WACDD). In addition, data are available on all births in WA from the Midwives' Notification System (MNS), a statutory data collection maintained by the Department of Health. This project aims to better define the relationship between mode of delivery and risk of childhood using a case-control study design and data linkage. Cases will be identified from the WACDD and defined as all children with T1D diagnosed <15 years, born in WA between 1995 and 2010. Controls will be identified in a 10:1 ratio from the MNS and perinatal records obtained for both cases and controls. Perinatal variables to be analysed will include e.g. gestational age, infant birth weight, maternal age, parity, maternal pre-existing diabetes, complications of pregnancy and labour, labour onset and mode of delivery.
Project suitable for	☐ Honours ☒ MD ☒ Masters ☐ PhD
Essential Qualifications	BSc and experience with statistics
Essential Skills	Use of SPSS/STATA or other statistical package
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Aveni Haynes Email: aveni.haynes@health.wa.gov.au Telephone: (08) 9340 8090

Title of Project	**Effect of Blood Glucose Level on Eye Movement Performance in People with Type 1 Diabetes**
Key Focus Area	**Chronic & Severe Diseases** Diabetes Princess Margaret Hospital for Children (PMH)
Research Group	Children's Diabetes Research and Education Centre
Start Date	March 2016
Chief Supervisor	Professor Paul Fournier (School of Sport Science, Exercise and Health UWA)
Other Supervisors	Professor Tim Jones (Telethon Kids Institute, SPACH, PMH) A/Professor Elizabeth Davis (Telethon Kids Institute, SPACH, PMH)
Project Outline	It is well established that poorly controlled type 1 diabetes mellitus (T1D), in the long term, can be detrimental to the central and peripheral nervous systems. In particular, eye movement skills such as eye tracking speed, saccadic reaction times, velocities and accuracies of eye movement have been reported to be adversely affected by T1D. Unfortunately, none of the studies concerned with eye movement performance in T1D has controlled for blood glucose level during testing, thus making it difficult to distinguish the long term effect of T1D from the acute effect of elevated blood glucose levels. It is also unclear to what extent acute changes in blood glucose levels have the capacity to affect eye movement performance in T1D individuals. Finally, given the reported strong association between asynchronism of saccades and poor glycaemic control, this raises the issue of whether there is an association between long term glycaemic control and eye movement performance in T1D. For these reasons, our primary aims are to test the hypotheses that (1) T1D individuals in good glycaemic control and with normal blood glucose level at the time of testing have unimpaired eye movement performance compared to non-diabetic matched controls; (2) acute hyperglycaemia (blood glucose > 15 mmol/L) compared to euglycaemia is associated with a fall in eye movement performance including lower saccadic velocity, accuracy and reaction time, and reduced eye tracking capacity; and (3) type 1 diabetics individuals chronically in poor glycaemic control (HbA1c>9%) display lower eye movement performance skills compared with T1D individuals in good glycaemic control (HbA1c<7%).
Project suitable for	☒ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	BSc
Essential Skills	Excel skills, good communication
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☒ Full scholarship available
Contact for further information	Name: Dr Charles Czank Email: charles.czank@health.wa.gov.au Telephone: (08) 9340 7858

Title of Project	**Is the Recommendation to Decrease Basal Insulin Dose Pre-Exercise Conducive to Marked Glycaemic Excursions and Hyperglycaemia during and after Exercise?**
Key Focus Area	**Chronic & Severe Diseases** Diabetes Princess Margaret Hospital for Children (PMH)
Research Group	Children's Diabetes Research and Education Centre
Start Date	March 2016
Chief Supervisor	Professor Paul Fournier (School of Sport Science, Exercise and Health UWA)
Other Supervisors	A/Professor Elizabeth Davis (Telethon Kids Institute, SPACH, PMH) Professor Tim Jones (Telethon Kids Institute, SPACH, PMH)
Project Outline	Current guidelines recommend that, in preparation for exercise, individuals with type 1 diabetes (T1D) should reduce their basal insulin dose by 25-50% to minimise their risks of hypoglycaemia both during and after exercise. However, these recommendations are challenged by our recent findings that when exercise is performed under basal insulinaemic conditions, blood glucose levels remain stable or change little, with no or only minor amounts of carbohydrates (<15g/h) being required to maintain stable blood glucose levels. This implies that reducing basal insulin level by 25 or 50% pre-exercise might be conducive to severe hyperglycaemia and thus be detrimental to blood glucose management. For this reason, our aim is to test the hypothesis that the recommendation to reduce basal insulin dosage by 25 or 50% prior to exercise in T1D individuals is conducive to marked increases in blood glucose levels irrespective of exercise types (e.g. interval exercise) and intensities.
Project suitable for	☒ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	BSc
Essential Skills	Good communication, Excel experience
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☒ Full scholarship available
Contact for further information	Name: Professor Paul Fournier Email: paul.fournier@uwa.edu.au Telephone: (08) 6488 1356

Title of Project	**Two Novel Experimental Strategies to use Intravenous Glucose Infusion Rate Data to Calculate the Oral Intake of Carbohydrates Required for the Prevention of Exercise-Mediated Hypoglycaemia in Type 1 Diabetic Individuals**
Key Focus Area	**Chronic & Severe Diseases** Diabetes Princess Margaret Hospital for Children (PMH) UWA School of Sport Science, Exercise and Health
Research Group	Children's Diabetes Research and Education Centre
Start Date	March 2016
Chief Supervisor	Professor Paul Fournier (School of Sport Science, Exercise and Health UWA)
Other Supervisors	A/Professor Elizabeth Davis (Telethon Kids Institute, SPACH, PMH) Professor Tim Jones (Telethon Kids Institute, SPACH, PMH)
Project Outline	One way to reduce the risk of hypoglycaemia during and after exercise is to ingest carbohydrates (CHO) before exercise, but it is unclear how much CHO should be ingested. Recently, we have shown that one approach to answer this question is to infuse glucose intravenously to measure precisely those CHO requirements during and after exercise. One limitation with using the glucose infusion rate (GIR) data thus obtained is that the relationship between oral CHO intake and GIR is unknown. This is an important issue to address as some mismatches are expected because of the role gastrointestinal glucose absorption rate plays in determining glucose entry rate. For this reason, our aim is to develop two experimental approaches to calculate one or several conversion factors relating GIR and oral CHO intake. One approach involves the ingestion of fixed multiples of CHO based on GIR data to calculate by interpolation such a conversion factor. The other approach requires the ingestion of [13C]glucose-enriched CHO meals to measure how gastrointestinal glucose absorption rate following a CHO meal relates with GIR. Since a number of factors (e.g. exercise intensity and type, size of CHO meal, plasma glucose and insulin levels) have the potential to affect gastrointestinal glucose absorption rates, it is also our aim to examine their effects on our conversion factor.
Project suitable for	☒ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	BSc
Essential Skills	Good communication, Excel experience
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☒ Full scholarship available
Contact for further information	Name: Professor Paul Fournier Email: paul.fournier@uwa.edu.au Telephone: (08) 6488 1356

Title of Project	**Effect of Using a Watch with Multiple Daily Vibrating Alarms on both Hypoglycaemia Prevention and Magnitude of Glycaemic Excursions in Free Living Individuals with Type 1 Diabetes Mellitus**
Key Focus Area	**Chronic & Severe Diseases** Diabetes Princess Margaret Hospital for Children (PMH) UWA School of Sport Science, Exercise and Health
Research Group	Children's Diabetes Research and Education Centre
Start Date	March 2016
Chief Supervisor	Professor Paul Fournier (School of Sport Science, Exercise and Health UWA)
Other Supervisors	A/Professor Elizabeth Davis (Telethon Kids Institute, SPACH, PMH) Professor Tim Jones (Telethon Kids Institute, SPACH, PMH)
Project Outline	It is generally acknowledged that regular self-monitoring of blood glucose level provides an effective means to minimise both hypoglycaemia risk and the magnitude of the glycaemic excursions experienced by individuals with type 1 diabetes (T1D). However, one limitation with this technology is that its optimal use requires that blood glucose be measured not only several times daily, but also at very specific times of the day (e.g. before and post-meals). Unfortunately, the many daily distractions faced by diabetic patients together with the absence of regular cues to remind them to self-monitor their blood glucose levels are an ongoing challenge for those who self-monitor compared with those who use of continuous glucose monitors. The recent introduction of watches with multiple daily vibrating alarms designed to remind people of the specified times they should take their medications has the potential to help T1D individuals measure their blood glucose levels at specific times. Our primary aim is to test the hypothesis that the use of such watches with multiple daily vibrating alarms provides an effective means to facilitate and improve blood glucose management in individuals with type 1 diabetes.
Project suitable for	☒Honours ☐MD ☐Masters ☐PhD
Essential Qualifications	BSc
Essential Skills	Good Communication, excel experience
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☐ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Professor Paul Fournier Email: paul.fournier@uwa.edu.au Telephone: (08) 6488 1356

Title of Project	**Effect of Exercise Modality and Glycaemic Control on Oxidative Stress in Individuals with Type 1 Diabetes Mellitus**
Key Focus Area	**Chronic & Severe Diseases** Diabetes Princess Margaret Hospital for Children (PMH) UWA School of Sport Science, Exercise and Health
Research Group	Children's Diabetes Research and Education Centre
Start Date	March 2016
Chief Supervisor	Professor Paul Fournier (School of Sport Science, Exercise and Health UWA)
Other Supervisors	A/Professor Elizabeth Davis (Telethon Kids Institute, SPACH, PMH) Professor Tim Jones (Telethon Kids Institute, SPACH, PMH)
Project Outline	There is compelling evidence that the acute oxidative stress associated with exercise in non-diabetic individuals plays an important role in muscle adaptive responses to exercise. Paradoxically, chronic oxidative stress is well established to contribute to the development of many of the long term complications experienced by diabetic individuals in poor glycaemic control and to impair muscle function. Given the evidence that muscle contractile performance is also impaired in T1D individuals in poor glycaemic control, this raises the issue of whether their chronic exposure to oxidative stress may dampen the magnitude of the acute increase in oxidative stress associated with a bout of exercise, thus explaining the reduced contractile performance of these individuals compared to the general population. Since this issue has never been addressed before, our aim is to test the hypothesis that, irrespective of exercise intensity and modality, the acute increase in blood markers of oxidative stress (e.g. thiol oxidised albumin, isoprostane, and reduced and oxidised glutathione levels) that occurs in response to exercise is lower in T1D individuals in poor glycaemic control compared with both non-diabetic people and well controlled T1D individuals.
Project suitable for	☒ Honours ☐ MD ☐ Masters ☐ PhD
Essential Qualifications	BSc
Essential Skills	Good communication, Excel experience
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☐ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Professor Paul Fournier Email: paul.fournier@uwa.edu.au Telephone: (08) 6488 1356

Title of Project	**Assessment of Glucose Profiles for 24 Hours following Exercise of Different Intensities in Individuals with Type 1 Diabetes (T1D)**
Key Focus Area	**Chronic & Severe Diseases** Diabetes Princess Margaret Hospital for Children (PMH)
Research Group	Children's Diabetes Research and Education Centre
Start Date	October 2016
Chief Supervisor	Dr Vinutha B Shetty (PMH)
Other Supervisors	Professor Paul Fournier (School of Sport Science, Exercise and Health UWA) Professor Tim Jones (Telethon Kids Institute, SPACH, PMH)
Project Outline	**Background:** Type 1 diabetes (T1D) is a complex chronic condition and prevention of hypo- and hyperglycaemia is an enduring challenge for patients and practitioners alike. Exercise makes this challenge even more difficult because it causes profound changes in glucose homeostasis. In addition to its numerous other health benefits, exercise is an important diabetes management strategy, since it aids in glycaemic control. Due to the risk of hypoglycaemia during and after exercise, many individuals with T1D are reluctant to participate in sports and games. The intensity of exercise may be important in determining the propensity of these individuals to experience hypoglycaemia in response to physical activity. **Aim:** The objectives of this study are to determine in individuals with T1D, the glucose profiles and frequency of hypoglycaemic episodes for 24 hours following four different intensities of exercise by continuous glucose monitoring (CGM). **Methods:** This project will be part of an ongoing study where 10 participants with T1D will be tested on four different days, during which they will exercise at 4 different intensities for up to 40 minutes. On completion of the testing session, the participants will have a continuous glucose monitoring system (CGMS) inserted. The participants will be wearing the CGMS for 24 hours which will record the interstitial blood glucose concentration for 24 hours. The participants will be instructed to maintain a food and exercise dairy for this 24 hours. The interstitial plasma glucose assessed by CGMS is analysed to obtain the glucose profile. The information gathered will allow us to find out the differences in the glucose profile following four different exercise intensities.
Project suitable for	☐ Honours ☒ MD ☐ Masters ☐ PhD
Essential Qualifications	Completed undergraduate degree but not honours
Essential Skills	Should be motivated and able to work well in a multidisciplinary team. Have good written and verbal communication skills. Statistical and data analysis skills.
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☐ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Vinutha B Shetty Email: vinutha.shetty@health.wa.gov.au Telephone: (08) 9340 7542

Title of Project	**A Follow-Up of Neuropsychological Functioning in Children with Type 1 Diabetes**
Key Focus Area	**Chronic & Severe Diseases** Diabetes Princess Margaret Hospital for Children (PMH)
Research Group	Children's Diabetes Research and Education Centre
Start Date	February 2016
Chief Supervisor	Dr Ashleigh Lin (Telethon Kids Institute)
Other Supervisors	Grant Smith (Telethon Kids Institute) Professor Tim Jones (Telethon Kids Institute, SPACH, PMH)
Project Outline	There is evidence that children and adolescents with type 1 diabetes show mild neurocognitive impairments compared to their healthy peers. These appear across a range of abilities, including verbal and executive functioning. Impairments appear to be associated with diabetes-related factors, such as the age of diabetes onset, episodes of severe hypoglycaemia and poor metabolic control. The aim of this study is follow-up a group of children with type 1 diabetes to document their neuropsychological performance over a period of 3-4 years. In 2014 we collected neurocognitive baseline data on this cohort, as well as MRI and EEG measures. We propose to follow them up and readminister the neurocognitive tests and EEG. The student will be tasked with recontacting the participants, administering the neurocognitive tasks and analysing and writing up the data. There is scope for involvement in the EEG aspect of the study only.
Project suitable for	☒Honours ☐MD ☐Masters ☐PhD
Essential Qualifications	Bachelor degree in psychology or health related area
Essential Skills	Ability to communicate well with children and adolescents
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☐ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Ashleigh Lin Email: ashleigh.lin@telethonkids.org.au Telephone: (08) 9489 7772

Title of Project	**The Mental Health of Adolescents with Type 1 Diabetes – a Population Based Study**
Key Focus Area	**Chronic & Severe Diseases** Diabetes Princess Margaret Hospital for Children (PMH)
Research Group	Children's Diabetes Research and Education Centre
Start Date	January 2016
Chief Supervisor	Dr Ashleigh Lin (Telethon Kids Institute)
Other Supervisors	A/Professor Elizabeth Davis (Telethon Kids Institute, SPACH, PMH) Professor Tim Jones (Telethon Kids Institute, SPACH, PMH)
Project Outline	Adolescence is the peak period of risk for the onset of mental health problems. We know that adolescents with type 1 diabetes are at greater risk for mental health issues that young people without diabetes. This is likely related to having a chronic condition and the constant vigilance needed to monitor their diabetes. Poor mental health affects quality of life, school performance and relationships. In people with diabetes is also related to their glycaemic control and the management of their diabetes. Poor glycaemic control is a risk for long-term complications associated with diabetes later in life. Many studies have assessed the mental health of adolescents with type 1 diabetes. However, there is no study of a large, representative, population-based sample. The Diabetes Clinic at PMH sees >99% of all young people with type 1 diabetes in WA, providing us the unique opportunity to conduct such a study. We will ask all adolescents to complete a mental health questionnaire at their regular Diabetes Clinics. This data can then be matched to comprehensive demographic and clinical details from The Western Australia Childhood Diabetes Database. We are looking for passionate and dedicated student/s to join a great team of researchers and doctors who care for young people with type 1 diabetes.
Project suitable for	☒Honours ☒MD ☒Masters ☐PhD
Essential Qualifications	Bachelor degree in Psychology, Public Health or other health-related area; or a medical student
Essential Skills	Ability to communicate well with children and adolescents
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☐ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Ashleigh Lin Email: ashleigh.lin@telethonkids.org.au Telephone: (08) 9489 7772

Title of Project	**Treating Cancer with Type I Interferons**
Key Focus Area	**Chronic & Severe Diseases** Cancer
Research Group	Cancer Immunology Unit
Start Date	March 2017
Chief Supervisor	Dr Jason Waithman (Telethon Kids Institute)
Other Supervisors	Dr Bree Foley (Telethon Kids Institute)
Project Outline	Immunotherapy is a promising approach to cancer treatment. Adoptive T cell therapy and immune checkpoint blockade inhibitors both have enhanced clinical outcomes. However, these treatments don't help everyone and further refinement will improve patient outcomes. Thus, it is rationale for creative combination treatment strategies to improve existing immunotherapy protocols so that more patients with cancer respond long term to treatment. Immunity commonly observed during acute viral infection is identical to what we would like to induce and sustain against cancer. Type I interferons are one of the first cytokines produced during a viral infection and are responsible for directly and indirectly modulating the immune response. Thus, it is logical that type I interferons have the potential to enhance anti-tumour immunity. However, systemic administration of type I interferon to treat patients with melanoma or hairy cell leukaemia has failed to improve overall survival. IFN-α2 has been the only subtype of type I interferon to be tested in the clinic. Thirteen other subtypes exist and our group is focused on determining if these other type I interferon subtypes are effective at eliminating cancer. This project has been designed to determine the ability of different type I interferon subtypes to enhance the anti-tumour immune response and use these findings to develop novel therapies. Techniques to be used: cell culture, flow cytometry, molecular biology and small animal handling.
Project suitable for	☒Honours ☐MD ☒Masters ☒PhD
Essential Qualifications	Greater than credit average for Hons; BSc (Hons) or equivalent in biological discipline for Masters or PhD
Essential Skills	Good organisational skills, motivation and dedication
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Jason Waithman Email: jason.waithman@telethonkids.org.au Telephone: (08) 9489 7833

Title of Project	**Manipulating the Immune Response against Leukaemia**
Key Focus Area	**Chronic & Severe Diseases** Cancer
Research Group	Cancer Immunology Unit
Start Date	March 2017
Chief Supervisor	Dr Bree Foley (Telethon Kids Institute)
Other Supervisors	Dr Jason Waithman (Telethon Kids Institute) Dr Laurence Cheung (Telethon Kids Institute)
Project Outline	Our research program is focusing on developing new techniques and treatments for treating children and adolescents with leukaemia. Whilst survival rates for childhood leukaemia have increased, it remains a leading cause of cancer-related deaths in children and adolescents. New treatments are consistently needed to treat patients who fail to respond to conventional cancer therapies. The paradigm for cancer treatment is evolving from relatively non-specific cytotoxic agents to selective, mechanism-based therapies such as immunotherapy. Adoptive cell therapy and antibodies targeting negative regulators are examples of successful immunotherapies that can result in remission in some patients. These promising results are altering how oncologists approach the treatment of cancer and *Science* recently declared cancer immunotherapy the Breakthrough of 2013. There is a need however to develop new immunotherapy protocols so that this treatment will be successful for not a minority of patients, but a majority of patients. Due to their ability to target a wide range of different cancers, natural killer (NK) cells are ideal candidates for immunotherapy. NK cell immunotherapy has been used clinically to treat cancer, with the most promising results observed in the treatment of leukaemia. The goal of this project is to determine which subset of NK cells are the most potent at eliminating leukaemic cells and how we can manipulate these cells to treat patients. This project will also focus on the interactions between NK cells and other immune cells. This is important as the most effective approach to treating cancer will involve all aspects of the immune system. Techniques to be used: cell culture, flow cytometry, molecular biology and small animal handling.
Project suitable for	☒ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	Greater than credit average for Hons; BSc (Hons) or equivalent in biological discipline for Masters or PhD
Essential Skills	Good organisational skills, motivation and dedication
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Bree Foley Email: bree.foley@telethonkids.org.au Telephone: (08) 9489 7883

Title of Project	**The Bone Marrow Microenvironment during Leukaemogenesis**
Key Focus Area	**Chronic & Severe Diseases** Cancer
Research Group	Telethon Kids Cancer Centre
Start Date	February 2017
Chief Supervisor	Dr Laurence Cheung (Telethon Kids Institute)
Other Supervisors	Professor Ursula Kees (Telethon Kids Institute)
Project Outline	The tumour microenvironment is well documented to be a key factor in multiple stages of cancer progression. It plays a particularly important role in resistance to therapy, relapse, and metastasis. While the tumour microenvironment in solid tumours has been intensely investigated, the importance of the leukaemia microenvironment has only recently been appreciated. Novel studies have demonstrated that the leukaemia microenvironment confers resistance in leukaemia, and that leukaemia cells usurp the normal haematopoietic microenvironment and are capable of altering the bone marrow microenvironment. However the underlying mechanisms are not fully understood and the bone marrow microenvironment of the most common childhood leukaemia has not been studied. With respect to children with this disease, bone marrow fibrosis correlates with worse survival, suggesting the importance of the bone marrow microenvironment in leukaemia progression. We have developed a model that enables the comprehensive investigation of the architecture of bone marrow microenvironment during leukaemia progression. This project will define in detail the changes of the bone marrow microenvironment during leukaemogenesis and this is the first step towards the goal of identifying novel therapeutic targets in the leukaemia microenvironment. To perform the project, the student will develop expertise in • Animal handling and tissue preparation; • Tissue culture; • Paraffin sectioning and Immunohistochemistry; • Flow cytometry and cell sorting; • RNA and protein extraction; • Gene expression analysis
Project suitable for	☒ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	BSc or equivalent
Essential Skills	Good oral and written communication skills
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Laurence Cheung Email: laurence.cheung@telethonkids.org.au Telephone: (08) 9489 7705

Title of Project	**The Role of Epigenetic Modifying Genes on Therapeutics in Infant Leukaemia**
Key Focus Area	**Chronic & Severe Diseases** Cancer
Research Group	Leukaemia Genomics
Start Date	March 2017
Chief Supervisor	Dr Mark Cruickshank (Telethon Kids Institute)
Other Supervisors	Dr Jason Waithman (Telethon Kids Institute)
Project Outline	Acute lymphoblastic leukaemia (ALL) is the most common cancer in children. The overall cure rates for ALL has improved significantly with time and currently exceeds 90%, however, there are still high risk sub-types with poor prognosis. Infants diagnosed with ALL (iALL) less than one year of age with a *mixed lineage leukemia* (*MLL*) gene rearrangement are a high-risk group with five-year event-free survival at less than 40%. We are studying gene mutations and gene expression patterns that could trigger leukaemia; and exploring ways to target these aberrations with precision therapy. This is achieved through (1) genome- and transcriptome-sequencing large cohorts of patients; (2) generating *in vitro* and *in vivo* models for testing therapies; and (3) testing the functional impact of these alterations. This knowledge sheds light on the cancer genome and how it can be targeted providing better treatment. The project is designed to elucidate the role of alterations to histone-modifying enzymes in infant ALL and to determine if they serve as therapeutic targets. The student will be part of the leukaemia genomics team, performing mechanistic studies. To perform the project, the student will develop expertise in: • Molecular biology; • Epigenetics; • Tissue culture; • Drug dose response analysis; • RNA and protein extraction; • Q-PCR and western blotting • Immunohistochemistry
Project suitable for	☒ Honours ☐ MD ☐ Masters ☐ PhD
Essential Qualifications	Honours – eligibility to enroll, bachelors in appropriate subject
Essential Skills	Excellent organisational skills; competence in computing and at the laboratory bench; familiarity with basic molecular techniques
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☐ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Mark Cruickshank Email: mark.cruickshank@telethonkids.org.au Telephone: (08) 9489 7859

Title of Project	**A Randomised Control Trial of Inhaled Corticosteroids in Children and Young People who were Born Preterm and Have Ongoing Respiratory Problems**
Key Focus Area	**Chronic & Severe Diseases** Respiratory Health Princess Margaret Hospital for Children (PMH)
Research Group	Children's Lung Health
Start Date	Feb 2017
Chief Supervisor	Dr Shannon Simpson (Telethon Kids Institute)
Other Supervisors	A/Professor Graham Hall (Telethon Kids Institute, Curtin University) Dr Andrew Wilson (Telethon Kids Institute)
Project Outline	Survivors of preterm birth go on to have a high burden of respiratory disease beyond infancy. Studies have demonstrated that preterm infants are 3 to 5 times more likely to develop preschool wheezing and later childhood "asthma" than their term counterparts. In addition to asthma-like respiratory symptoms (such as wheeze) and reduced lung function, approximately half of all children born very preterm (<32 w GA) also exhibit bronchial hyper- responsiveness and airway obstruction that appears to be at least partially reversible with bronchodilators (e.g. Ventolin); both of which are objective measures for the identification of asthma. While asthmatic children are treated with inhaled corticosteroids (ICS) it remains unknown if ICS benefit preterm children with ongoing respiratory symptoms. Therefore, our primary aim is to conduct a randomised control trial to determine if ICS improves lung function and/or decreases respiratory symptoms in children with BPD and ongoing respiratory symptoms. In this study, the student will be recruiting children and young people who were born very preterm and have asthma-like symptoms in childhood and adolescence. They will be conducting lung function testing before and after a 12-week trial of inhaled corticosteroids (or placebo). A secondary aim of this study is to profile the inflammatory fingerprint of preterm children with ongoing asthma-like symptoms to determine if responsiveness to ICS is associated with a particular inflammatory profile in BPD and therefore predict which preterm children will benefit from ICS treatment in the future. The student will collect exhaled breath condensate for future inflammatory fingerprinting using ELISA and GC/MS metabolomics approaches. Note: This part of the project is subject to funding opportunities.
Project suitable for	☐ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	BSc (Hons) or equivalent, Working With Children Check
Essential Skills	As this is a clinical project, the student must be good with people.
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Shannon Simpson Email: shannon.simpson@telethonkids.org.au Telephone: (08) 9489 7794

Title of Project	**Assessing the Effects of Community Derived Rhinoviral Infection on Airway Epithelial Cells**
Key Focus Area	**Chronic & Severe Diseases** Respiratory Health
Research Group	Epithelial Research Group
Start Date	2017
Chief Supervisor	A/Professor Anthony Kicic (Telethon Kids Institute)
Other Supervisors	Professor Stephen Stick (Telethon Kids Institute, SPACH, PMH) Dr Luke Garratt (Telethon Kids Institute) Dr Kevin Looi (Telethon Kids Institute)
Project Outline	Epithelial cells of the lung airways function as a barrier that prevents injurious particles, toxins and infectious agents from entering the body. They are also important for maintaining the airway structure and function. In addition, epithelial cells had been suggested to play role in the host's response to infection and contribute to inflammatory damage seen in several respiratory diseases such as asthma, cystic fibrosis and COPD. Respiratory viral infections play a role as the most common cause of childhood wheezing. Although there are a number of pathogens, respiratory syncytial virus (RSV) and rhinovirus (RV) are the most common amongst them. Particular attention has been focused on RV as its infection during infancy is a significant risk factor for development of wheezing and asthma in later life. It has also been suggested that RV plays a role in serious respiratory diseases leading to increased morbidity and mortality. This project will aim to (i) identify and culture community strains of RV, (ii) investigate the propensity of epithelial cells to cause inflammation in response to respiratory viruses and compare responses in cells from children with respiratory diseases from healthy children and (iii) compare newly identified community strains of RV with currently utilized laboratory strains of RV to determine whether inflammatory responses are non-specific or dependent upon the type of virus. The generation of a repository of community isolates of RV will facilitate many investigations that will be beneficial for patients, hospital and the community at large.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	BSc (Hons)
Essential Skills	Cell culture Some understanding of molecular biology and cell biology.
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: A/Professor Anthony Kicic Email: anthony.kicic@telethonkids.org.au Telephone: (08) 9340 8140

Title of Project	**Assessing the Long Term Impact of Preterm Birth**
Key Focus Area	Chronic and Severe Diseases of Childhood Respiratory Health Princess Margaret Hospital for Children (PMH)
Research Group	Paediatric Respiratory Physiology
Start Date	Feb 2017
Chief Supervisor	Professor Graham Hall (Telethon Kids Institute)
Other Supervisors	Dr Shannon Simpson (Telethon Kids Institute) Dr Andrew Wilson (Telethon Kids Institute) Professor Jane Pillow (UWA)
Project Outline	Infants born very preterm (<32 weeks gestation) are at significant risk of poor health with life-long implications. Bronchopulmonary dysplasia (BPD), a chronic neonatal lung condition, is one of the most common health problems in preterm infants and highly prevalent in infants born very preterm. Although the oldest survivors of contemporary preterm birth and new BPD are in their 20s, the natural history of the respiratory outcomes of these individuals into adulthood are unknown. Cross-sectional studies in children, adolescents and young adults born preterm with new BPD have reported reduced lung function, increased respiratory symptoms and structural lung damage. However, the long term respiratory outcomes for young adults born preterm with new BPD are unknown. The West Australian Lung Health in Preterm children (WALHIP) cohort includes preterm children with and without new BPD and healthy, term-born controls and are now approaching early adulthood. Preliminary analysis of longitudinal data in 103 children revealed a third of preterm children with BPD exhibited airway obstruction at 6 years of age, increasing to over two thirds of children 11 years. These early data suggest progressive lung disease. The specific aims of this project are to: **AIM 1:** Undertake a follow-up of the WALHIP cohort at 18 years of age and to comprehensively characterise functional, inflammatory and structural respiratory outcomes and establish the assess of respiratory health, including - Detailed lung function testing and bronchodilator responsiveness - Characterisation of lung structure and perfusion using chest CT and MRI - Quantifying airway inflammation using both targeted analysis and untargeted metabolomics **AIM 2:** To identify those factors within the 6 and 11 year data that predict the progression and/or development of lung disease in the WALHIP cohort at 18 years of age.
Project suitable for	☐ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	BSc (hons) or equivalent, Working With Children Check
Essential Skills	N/A
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: A/Professor Graham Hall Email: graham.hall@telethonkids.org.au Telephone: (08) 9489 7816

EARLY ENVIRONMENT

Title of Project	**Duration and Quality of Pertussis Booster Vaccine Induced Immunity: a Study of Healthcare Workers**
Key Focus Area	**Early Environment** Infections & Vaccines
Research Group	Wesfarmers Centre of Vaccines & Infectious Diseases
Start Date	Negotiable (can start immediately)
Chief Supervisor	A/Professor Peter Richmond (Telethon Kids Institute, SPACH)
Other Supervisors	Dr Anita van den Biggelaar (Telethon Kids Institute)
Project Outline	Adult pertussis booster vaccines have been developed in order to reduce the transmission of *Bordetella pertussis* from adolescents and adults to vulnerable infants. Revaccination is recommended every 10 years. Pertussis booster vaccines were introduced into Western Australia in 2004. Health care workers (HCWs) in paediatric hospitals are recommended to receive pertussis booster immunisations every 10 years (Australian Immunisation Handbook 2013) as they are both at increased of exposure to pertussis in the hospital and have causing nosocomial transmission to their patients. Since 2015, WA is also recommending pertussis booster vaccination to pregnant women, to be repeated each pregnancy, to reduce the risk of transmission to newborn infants. Despite these recommendations, little is known about the duration and quality of pertussis booster-induced immunity in adults. No studies have yet provided an in-depth analysis of the immune responses induced by acellular pertussis booster vaccines, how fast these may wane over time, and the immunological consequences of repeating boosters. We are currently conducting a trial using the unique opportunity of a cohort of HCWs being offered booster dTpa immunisation to study the duration and quality of both serologic and cellular immunity in response to a first (n = 75) or repeated pertussis booster (n =75). Venous blood samples for isolation of peripheral blood mononuclear cells (PBMC) and plasma are collected before, and 1 week, 1 month and 1 year after vaccination. The PhD project includes conducting established assays to assess B-cell and T-cell immune memory responses and measuring circulating antibody titers using multiplex assays, and establishing new assays and technologies in our laboratory including functional pertussis antibody assays titers and systems vaccinology related approaches. This is a unique opportunity for a PhD student to be involved in a clinical trial and use innovative techniques to assess the immunity induced by pertussis booster vaccines and inform policies on repeated booster vaccination. **There is the opportunity for an Honours Student Project involving the analysis of antibody responses using the multiplex assay.**
Project suitable for	☒ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	BSc (Hon) in relevant field
Essential Skills	Preferable completed a Hon or MSc project relating to human immunology
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Anita van den Biggelaar Email: anita.vandenbiggelaar@telethonkids.org.au Telephone: (08) 9489 7783

Title of Project	**Systems Vaccinology in Infants: Optimal Outcomes with Minimal Blood Volumes Collected Using Finger Pricks**
Key Focus Area	**Early Environment** Infections & Vaccines
Research Group	Wesfarmers Centre of Vaccines & Infectious Diseases
Start Date	Negotiable (can start immediately pending ethics approval)
Chief Supervisor	Dr Anita van den Biggelaar (Telethon Kids Institute)
Other Supervisors	Dr Anthony Bosco (Telethon Kids Institute) A/Professor Peter Richmond (Telethon Kids Institute, SPACH)
Project Outline	Vaccination is one of the greatest achievements of modern medicine, yet we remain largely ignorant of the mechanisms by which successful vaccines stimulate protective immunity, in particular in very young infants whose immune systems are still relatively underdeveloped. Current developments in the so-called field of 'Systems Biology' now offer unprecedented opportunities to study immune responses in humans. Where immunologists and molecular biologists used to work by isolating and characterizing individual components of the immune system, Systems Biology allows studying the structure and dynamics of the whole system. Using a Systems Biology approach to identify molecular signatures induced rapidly in the blood after vaccination that correlate with and predict later development of protective immune responses, represents a novel and exciting strategy to prospectively determine vaccine efficacy. Our institute has a longstanding track record in conducting vaccine trials to improve our understanding of how vaccine works, informing vaccination policies and vaccine development efforts, and are in the process of expanding and incorporating a Systems Biology (Systems Vaccinology) approach to our studies. Although Systems Biology allows working with significant smaller blood samples than conventional immunological approaches, repeated blood samples are needed from very young infants, some as young as less than a day old. The aim of this project is to study and optimize the collection of as small as possible blood samples needed, using a 'finger prick' method instead of 'venous puncture'. Such method would increase the feasibility to recruit young infants into our Systems Vaccinology studies. The project involves the collection of blood samples by venepuncture versus finger prick from adults receiving a pertussis booster vaccination and comparing transcriptomics responses, optimizing collection protocols, minimizing blood volumes needed, and if feasible validate the method in a small group of newborns. **This project can be extended into a more extensive Systems Vaccinology project for an interested Masters student, using this approach in one of our ongoing cohort studies.**
Project suitable for	☒ Honours ☐ MD ☒ Masters ☐ PhD
Essential Qualifications	BSc in relevant field
Essential Skills	Good feeling for and interest in 'big data' analysis
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☐ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Anita van den Biggelaar Email: anita.vandenbiggelaar@telethonkids.org.au Telephone: (08) 9489 7783

Title of Project	**Understanding the 'Blunting' of Vaccine Responses in Infants following Pertussis Vaccination at Birth**
Key Focus Area	**Early Environment** Infections & Vaccines
Research Group	Wesfarmers Centre of Vaccines & Infectious Diseases
Start Date	Negotiable (can start immediately)
Chief Supervisor	Dr Anita van den Biggelaar (Telethon Kids Institute)
Other Supervisors	Dr Anthony Bosco (Telethon Kids Institute) A/Professor Deborah Strickland (Telethon Kids Institute) Professor Patrick Holt (Telethon Kids Institute) A/Professor Peter Richmond (Telethon Kids Institute, SPACH)
Project Outline	Newborns and young infants are the most susceptible to infectious diseases and benefit most from vaccines; however, due to the relatively immaturity of the immune system shortly after birth only a few vaccines work well when given to newborns and most are delayed to 6-8 weeks of age when the immune system has had time to undergo first stages of development. As a consequence newborns often are unprotected against potential fatal infections such as pertussis (whooping cough). We recently completed a clinical trial studying the feasibility to give infants their first dose of pertussis vaccine immediately after birth instead of at 8 weeks of age. Analysis of antibody responses indicates that the newborn dose induces pertussis-antibodies in the first vulnerable weeks and months of life; however, antibodies against other infant vaccines given at 2, 4 and 6 months of age were found to be reduced ('blunted'). This project aims to study and identify the cellular mechanisms induced by the newborn pertussis vaccine that are associated with inducing protective immunity versus those that are responsible for the blunting of other vaccine responses. We will use advanced cellular immunological technologies established in our laboratories to study innate, T- and B-cell responses in cryopreserved peripheral mononuclear cells (PBMC) obtained from the study infants, as well as apply a novel 'Systems Vaccinology' approach that allows studying the structure and dynamics of the whole system rather than individual components of the immune system in response to the vaccine. This is a great opportunity for an MSc or PhD student to be involved in a unique clinical trial using innovative techniques to study immune responses to neonatal pertussis vaccination that is likely to provide novel insight into the immune pathways activated by vaccines when administered at birth.
Project suitable for	☐ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	BSc in relevant field
Essential Skills	Good feeling for and interest in 'big data' analysis, immunology and vaccinology
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Anita van den Biggelaar Email: anita.vandenbiggelaar@telethonkids.org.au Telephone: (08) 9489 7783

Title of Project	**The Influence of Exposures in Pregnancy on the Development of Immune Responses in Newborns in Papua New Guinea**
Key Focus Area	**Early Environment** Infections & Vaccines
Research Group	Wesfarmers Centre of Vaccines & Infectious Diseases
Start Date	Negotiable (can start immediately)
Chief Supervisor	Dr Anita van den Biggelaar (Telethon Kids Institute)
Other Supervisors	A/Professor Deborah Strickland (Telethon Kids Institute)
Project Outline	There is increasing evidence that exposures and experiences during pregnancy can influence the immune system of the foetus, and that the consequent differences in the functional state of the immune system at the time of birth are predictive for how an individual's immune system further develops during childhood as well as is susceptible to the development of communicable and non-communicable diseases in later life. We have completed a neonatal immunology study in Papua New Guinea, collecting information on a number of factors pregnant women and hence their unborn children in this environment are exposed to, including intestinal infections, malaria infections, indoor air pollution as well as the consumption of substances such as beer, cigarettes and betelnut. A questionnaire seeking additional information on the pregnant women's socio-economic status and living conditions was completed. Blood samples were collected from the mothers during pregnancy and stored to measure immune responses. Information on obstetrics and health of the infant were collected at the time of delivery, and were feasible a cord blood sample for immunological studies was collected and stored. Infants were followed up and their growth status assessed at a one-off time point during the study; infants at the time varied in age between 3 and 12 months of age. At this time point the infant's vaccination and medical history was recorded based on his/her infant health book. A small blood sample was collected for immunological experiments. A number of immunological experiments have been conducted on the samples collected and findings from these experiments have been published. However, many questions on the effect of *in utero* exposures remain hidden and unexplored in this database due to time limitations. This opens opportunities for Honours students interested in analysing the database for a number of yet unexplored, pre-defined questions. There may be opportunities to conduct additional immunological experiments on stored samples; however, this may be more applicable for a Masters student.
Project suitable for	☒ Honours ☐ MD ☒ Masters ☐ PhD
Essential Qualifications	BSc in relevant field
Essential Skills	Interest in epidemiology (data analysis) and immunology (experiments)
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☐ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Anita van den Biggelaar Email: anita.vandenbiggelaar@telethonkids.org.au Telephone: (08) 9489 7783

Title of Project	**The Immunogenicity of Pneumococcal Conjugate Vaccines (PCV) in Adults: Studies to Predict if PCV be used in Pregnant Women to Protect Newborns**
Key Focus Area	**Early Environment** Infections & Vaccines
Research Group	Wesfarmers Centre of Vaccines & Infectious Diseases
Start Date	Negotiable (can start immediately)
Chief Supervisor	Dr Anita van den Biggelaar (Telethon Kids Institute)
Other Supervisors	A/Professor Peter Richmond (Telethon Kids Institute, SPACH)
Project Outline	*Streptococcus pneumoniae* (pneumococcus) is a bacterium that can cause severe infections of the lungs (pneumonia), blood (bacteremia), and lining of the brain (meningitis), in particular in young children. Protection against infections in the first months of life can be provided through antibodies transferred from mother to child through the placenta during the third trimester of pregnancy and later through breastfeeding. Where this protection does not occur naturally, it can be induced by vaccinating women during pregnancy if suitable vaccines against the infectious pathogens are available. Two types of pneumococcal vaccines are currently available: pneumococcal polysaccharide vaccines (PPV) that are predominantly used in adults as do not induce good immune responses in young infants, and pneumococcal conjugate vaccines (PCV) that are highly efficacious and induce protective memory responses in young infants. PPV has been studied in a number of maternal vaccination trials, but so far there is no evidence that this approach induces protection in newborns and young infants. Our aim is to conduct a clinical trial studying whether vaccinating pregnant women with PCV increases protective immune responses in their infants. However, before starting a large clinical trial and vaccinating pregnant women with PCV, we would like to demonstrate that vaccinating (non-pregnant) adults with PCV results in increased protective antibody responses to pneumococci. To this end we aim to analyse stored samples collected from three different trials: 1. A study including adult volunteers (Australia) who received one dose of PPV or one dose of the 7-valent PCV (serum samples); 2. A study involving women (Australia) who received one dose of the 7-valent PCV post-partum (breast milk and serum samples); and 3. A study including non-pregnant women from Papua New Guinea (PNG) who received one dose of the 13-valent PCV (serum samples). Pneumococcal-serotype specific antibody titers as well as functional antibody titers using the opsonophagocytosis assay (both using a multiplex system) will be measured in available serum and breast milk samples. Findings from these studies will inform the feasibility to conduct a maternal PCV immunization trial in PNG.
Project suitable for	☒ Honours ☐ MD ☒ Masters ☐ PhD
Essential Qualifications	BSc in relevant field
Essential Skills	Interest in epidemiology (data analysis) and immunology (experiments)
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☐ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Anita van den Biggelaar Email: anita.vandenbiggelaar@telethonkids.org.au Telephone: (08) 9489 7783

Title of Project	**Investigating the Burden of Paediatric Respiratory Infections in WA**
Key Focus Area	**Early Environment** Infections & Vaccines
Research Group	Wesfarmers Centre of Vaccines & Infectious Diseases (Infectious Disease Epidemiology & Data Linkage)
Start Date	March 2017
Chief Supervisor	Dr Hannah Moore (Telethon Kids Institute)
Other Supervisors	Dr Chris Blyth (Telethon Kids Institute, SPACH, PMH) Professor Nick de Klerk (Telethon Kids Institute, UWA)
Project Outline	Acute lower respiratory infections, or chest infections, such as bronchiolitis, influenza, pneumonia and whooping cough are a major cause of morbidity in children. The pathogens most commonly associated with acute lower respiratory infections include respiratory syncytial viruses, influenza viruses, parainfluenza viruses, rhinoviruses, adenoviruses, *Streptococcus pneumoniae* and *Bordetella pertussis*. Some of these pathogens have vaccines targeted against them that are included on the National Immunisation Program. Through the linkage of administrative data on births, deaths, perinatal records, hospitalisations, emergency department presentations, laboratory notifications and detections and immunisation records we have a total population birth cohort on which to conduct numerous epidemiological analyses. Possible future aims to investigate with these data include investigations of maternal and infant risk factors to pathogen-specific outcomes, investigating the impact of co-infection of certain pathogens and evaluating the indirect impact of paediatric immunisations on respiratory infection related hospitalisations and emergency department presentations through the conduct of temporal trend analyses.
Project suitable for	☒ Honours ☒ MD ☒ Masters ☐ PhD
Essential Qualifications	BSc in a public health-related field
Essential Skills	Data analysis Knowledge and appreciation of data linkage using administrative data
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Hannah Moore Email: hannah.moore@telethonkids.org.au Telephone: (08) 9489 7775

Title of Project	**SToP (See, Treat, Prevent) Scabies and Skin Sores: Evaluation of a Stepped Wedge, Cluster Randomised Controlled Trial**
Key Focus Area	**Early Environment** Infections & Vaccines
Research Group	Wesfarmers Centre of Vaccines & Infectious Diseases (Group A Streptococcal Diseases Research)
Start Date	March 2017
Chief Supervisor	Dr Asha Bowen (Telethon Kids Institute)
Other Supervisors	Professor Jonathan Carapetis (Telethon Kids Institute) Dr Julie Marsh (Telethon Kids Institute)
Project Outline	The PhD student would be involved in a skin disease control program in the Kimberley. The study involves evaluation of a stepped wedge cluster randomised controlled trial assessing whether streamlined, evidence based treatment of impetigo with cotrimoxazole and scabies with ivermectin will have an impact on reducing the burden of skin infections in Aboriginal school children.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	High level pass in Honours degree or equivalent
Essential Skills	Data analysis, writing skills, clinical experience.
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Asha Bowen Email: asha.bowen@telethonkids.org.au Telephone: (08) 9340 7576

Title of Project	**SToP (See, Treat, Prevent) Scabies and Skin Sores: Health Promotion and Environmental Health**
Key Focus Area	**Early Environment** Infections & Vaccines
Research Group	Wesfarmers Centre of Vaccines & Infectious Diseases (Group A Streptococcal Diseases Research)
Start Date	March 2017
Chief Supervisor	Dr Asha Bowen (Telethon Kids Institute)
Other Supervisors	Professor Jonathan Carapetis (Telethon Kids Institute) A/Professor Roz Walker (Telethon Kids Institute)
Project Outline	The PhD student would be involved in a skin disease control program in the Kimberley. The study involves the development, implementation and evaluation of health promotion and environmental health activities to achieve a reduction in the burden of skin infections in remote living Aboriginal children.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	High level pass in Honours degree or equivalent
Essential Skills	The PhD student would be based in Broome. Health promotion expertise, writing skills, community consultation.
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Asha Bowen Email: asha.bowen@telethonkids.org.au Telephone: (08) 9340 7576

Title of Project	**Determinants of Adherence to Secondary Prophylaxis to Prevent Rheumatic Fever Recurrence among Aboriginal and Torres Strait Islander People**
Key Focus Area	**Early Environment** Infections & Vaccines
Research Group	Wesfarmers Centre of Vaccines & Infectious Diseases (Group A Strep)
Start Date	Immediately
Chief Supervisor	Dr Clancy Read (Telethon Kids Institute)
Other Supervisors	Professor Jonathan Carapetis (Telethon Kids Institute)
Project Outline	Rheumatic fever (RF) is caused by an abnormal reaction to group A streptococcal infection of the throat (and potentially, the skin). This abnormal reaction causes damage to the heart valves (RHD) which culminates in heart failure and increases the risk of arrhythmias, heart valve infections and stroke. RHD is endemic in low and middle income countries and in vulnerable populations in high resource settings. Australia's Aboriginal and Torres Strait Island communities live with one of the greatest burden of RHD in the world. Providing secondary antibiotic prophylaxis (SP) injected intramuscularly every 3-4 weeks for up to 10 years to prevent recurrences of group A strep infection and RF can halt the progression of disease, however, adherence to SP remains low in many settings. Current research is evaluating a health systems based intervention aimed at improving delivery of SP across the Northern Territory. As part of this research qualitative data has been progressively collected to support the evaluation of the intervention. In recognition of the established rich qualitative data set, this project will analyse existing qualitative data to establish the determinants of adherence to secondary prophylaxis. Cultural sensitivity towards Aboriginal peoples, their world views and belief systems, and the intergenerational effects of colonization is expected. This research may suit part-time or fulltime MD student or Masters. This project falls within the scope of the END RHD Centre for Research Excellence funded by the National Health and Medical Research Council, an ambitious and broad-ranging program of work that aims to build a comprehensive evidence based strategy for ending RHD.
Project suitable for	☒ Honours ☒ MD ☒ Masters ☐ PhD
Essential Qualifications	Qualifications in a related field of study (public health, global health, humanities, social science, Aboriginal studies, etc.).
Essential Skills	Exceptional interpersonal and communication skills, Cultural awareness, Self-motivation. Some experience in qualitative research design, implementation and analysis would be beneficial.
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☐ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Clancy Read Email: clancy.read@telethonkids.org.au Telephone: (08) 9489 7639

Title of Project	**Global Experiences of People Living with Rheumatic Heart Disease (RHD): a Systematic Literature Review**
Key Focus Area	**Early Environment** Infections & Vaccines
Research Group	Wesfarmers Centre of Vaccines & Infectious Diseases (Group A Streptococcal Diseases Research)
Start Date	Immediately
Chief Supervisor	Dr Clancy Read (Telethon Kids Institute)
Other Supervisors	Professor Jonathan Carapetis (Telethon Kids Institute)
Project Outline	Rheumatic fever (RF) is caused by an abnormal reaction to group A streptococcal infection of the throat (and potentially, the skin). This abnormal reaction causes damage to the heart valves (RHD) which culminates in heart failure and increases the risk of arrhythmias, heart valve infections and stroke. RHD is endemic in low and middle income countries and in vulnerable populations in high resource settings. Through qualitative inquiry, the experiences of people living with RHD as well as how people live through and respond to those experiences as they navigate their journey of their disease through the health system can be explored. A better understanding of the experiences of people living with RHD, their choices, options and how those factors influence their perception of knowledge can be beneficial in improving the outcomes of people living with rheumatic heart disease. This study aims to build on a completed systematic literature review that aimed to summarise the knowledge gained from qualitative inquiry on the experiences of people living with RHD in Australia. We now seek to expand the literature review to the global scale. This research may suit part-time or fulltime MD student or Masters. This project falls within the scope of the END RHD Centre for Research Excellence funded by the National Health and Medical Research Council, an ambitious and broad-ranging program of work that aims to build a comprehensive evidence based strategy for ending RHD.
Project suitable for	☒ Honours ☒ MD ☒ Masters ☐ PhD
Essential Qualifications	Qualifications in a related field of study (public health, global health, humanities, social science, Aboriginal studies, etc.).
Essential Skills	Exceptional interpersonal and communication skills, Cultural awareness, Self-motivation. Some experience in qualitative research design, implementation and analysis would be beneficial.
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☐ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Clancy Read Email: clancy.read@telethonkids.org.au Telephone: (08) 9489 7639

Title of Project	**Evaluation of Support Initiatives to Prevent Rhematic Fever Recurrence among Aboriginal and Torres Strait Islander People**
Key Focus Area	**Early Environment** Infections & Vaccines
Research Group	Wesfarmers Centre of Vaccines & Infectious Diseases (Group A Strep)
Start Date	January 2017
Chief Supervisor	Dr Clancy Read (Telethon Kids Institute)
Other Supervisors	Professor Jonathan Carapetis (Telethon Kids Institute)
Project Outline	Rheumatic fever (RF) is caused by an abnormal reaction to group A streptococcal infection of the throat (and potentially, the skin). This abnormal reaction causes damage to the heart valves (RHD) which culminates in heart failure and increases the risk of arrhythmias, heart valve infections and stroke. RHD is endemic in low and middle income countries and in vulnerable populations in high resource settings. Australia's Aboriginal and Torres Strait Island communities live with one of the greatest burden of RHD in the world. Providing secondary antibiotic prophylaxis (SP) injected intramuscularly every 3-4 weeks to prevent recurrences of group A strep infection and RF can halt the progression of disease, however, adherence to SP remains low in many settings. Current research is evaluating a health systems based intervention aimed at improving delivery of SP. Relatively little has been documented to understand how to support people living with RHD (PLWRHD) to manage their disease and adhere to SP. In a number of locations, multiple, sporadic initiatives to support people's uptake of SP (such as incentive programs) have been initiated. However, formal evaluation of initiatives and an understanding of "what works" in supporting people living with RHD is currently lacking. We are looking for a highly motivated individual who is interested in mixed-method research to investigate current initiatives being applied in the Australian context to: (i) improve SP adherence; (ii) evaluate these initiatives; and (iii) explore acceptability of potential new novel approaches. Travel to remote Australian communities is expected as well as cultural sensitivity towards Aboriginal peoples, their world views and belief systems, and the intergenerational effects of colonization. This research may suit fulltime Masters or PhD study. This project falls within the scope of the END RHD Centre for Research Excellence funded by the National Health and Medical Research Council, an ambitious and broad-ranging program of work that aims to build a comprehensive evidence based strategy for ending RHD.
Project suitable for	☐ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	Postgraduate qualifications in a related field of study (public health, global health, humanities, social science, Aboriginal studies, etc.). Does not have to be enrolled in MPhil or PhD but must demonstrate ability for enrolment through track record of academic performance.
Essential Skills	Exceptional interpersonal and communication skills, cultural awareness, self-motivation
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☒ Full scholarship available
Contact for further information	Name: Dr Clancy Read Email: clancy.read@telethonkids.org.au Telephone: (08) 9489 7639

Title of Project	**SMS Reminders to Improve Vaccination Timeliness – a Simple 'Nudge' for a Complex Problem**
Key Focus Area	**Early Environment** Infections & Vaccines
Research Group	Wesfarmers Centre of Vaccines & Infectious Diseases (Implementation Research)
Start Date	January 2017 (or as soon as available)
Chief Supervisor	Dr Tom Snelling (Telethon Kids Institute)
Other Supervisors	Dr Julie Marsh (Telethon Kids Institute, UWA) Dr Yue Wu (Telethon Kids Institute)
Project Outline	In many parts of Australia under-vaccination and delayed vaccination is putting children at unnecessary risk of infections (e.g. whooping cough). Recent data from the Australian Childhood Immunisation Register shows that vaccination rates across Australian states are still below the recommended target of 95%. Our research has shown that although vaccine decision making is complex, most WA parents support vaccination, including parents of under-vaccinated children. Simply reminding parents of due or overdue vaccinations may be an effective 'nudge' to boost vaccination rates across Australia. Sending simple reminders to parents using SMS, has been shown to improve vaccine uptake and timeliness in other countries like the United States. Previous research has suggested that embedding educational information within reminders (e.g. emphasising the importance of vaccination or the risks of catching disease) may be more effective than traditional appointment scheduling reminders. Considering the risks and consequences of under-vaccination and delayed vaccination, it is important to develop communication strategies that encourage vaccination acceptance and positive health behaviours. SMS reminders for childhood vaccination has never been trialled before in Australia. We believe that providing timely reminders to parents will be an effective nudge to improve vaccination rates and timeliness. A system to automate SMS reminders by infiltrating electronic medical records has already been developed (SmartVax). We plan to assess the effectiveness of this modern and powerful technology using an adaptive clinical trial design to inform the roll-out of this system across GP clinics in Australia.
Project suitable for	☐ Honours ☒ MD ☒ Masters ☒ PhD
Essential Qualifications	An undergraduate degree with Honours in social science, medical and health sciences, psychology or a related discipline
Essential Skills	• Excellent written and spoken communication skills • Interest in child health research • Previous experience in clinical trial research is desirable, but not necessary
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Tom Snelling Email: tom.snelling@telethonkids.org.au Telephone: (08) 9489 7785

Title of Project	**Estimating the Burden of Rheumatic Heart Disease in Australia**
Key Focus Area	**Early Environment** Aboriginal Health Rheumatic Heart Disease
Research Group	Wesfarmers Centre of Vaccines & Infectious Diseases (Group A Strep)
Start Date	July 2016
Chief Supervisor	A/Professor Judith Katzenellenbogen (Telethon Kids Institute)
Other Supervisors	Professor Nick de Klerk (Telethon Kids Institute, UWA) Professor Jonathan Carapetis (Telethon Kids Institute) Dr Julie Marsh (Telethon Kids Institute)
Project Outline	Acute rheumatic fever (ARF) is an illness caused by the body's inflammatory response to infection with Streptococcal bacteria that are often found in sore throats. Rheumatic heart disease (RHD) is a long-term condition caused by permanent damage to one or more of the heart valves following inflammation of the heart as a result of ARF. This can lead to complications such as heart failure and stroke, and premature death. ARF has become rare in developed countries but remains common among disadvantaged communities in these countries. Although rates of ARF/RHD among Australia's Aboriginal and Torres Strait Island communities are among the highest in the world, the total national burden of RF and RHD is unknown. This complicates the establishment and evaluation of achievable targets for the expanding national program to control the disease. The project falls within the scope of the END RHD Centre for Research Excellence funded by the National Health and Medical Research Council, an ambitious and broad-ranging program of work that aims to lead to the reduction of RHD burden in Australia in the short to medium term. A definitive baseline disease burden needs to be established and a valid monitoring system put in place to evaluate the effect of interventions. Specifically, this project aims to use the increasingly high quality routinely collected information available in Australia to determine key indices of ARF/RHD burden. Thus, data from hospital admissions, deaths, disease registers and other sources in different jurisdictions will be linked and used to determine the incidence, disease progression, prevalence, mortality and health resource utilisation associated with ARF/RHD at the population level. We are looking for a highly motivated individual interested in quantitative, public health research to undertake doctoral work under the supervision of leading researchers in the field.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	Postgraduate qualifications in a related field of study (public health, biostatistics/epidemiology, information science/linked data analysis). The applicant must demonstrate ability for enrolment in a PhD through a track record of academic performance.
Essential Skills	Computer literacy, epidemiology/biostatistics, statistical programming skills
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: A/Professor Judith Katzenellenbogen Email: judith.katzenellenbogen@telethonkids.org.au Telephone: (08) 9489 7649

Title of Project	**Aboriginal Housing and Health**
Key Focus Area	**Early Environment** Aboriginal Health Environmental Health & Risk Factors
Research Group	Wesfarmers Centre of Vaccines & Infectious Diseases (Group A Streptococcal Diseases Research)
Start Date	2016/2017
Chief Supervisor	A/Professor Judith Katzenellenbogen (Telethon Kids Institute)
Other Supervisors	Dr Annette Regan (Telethon Kids Institute) A/Professor Roz Walker (Telethon Kids Institute)
Project Outline	A program of work around Aboriginal housing and health is currently being developed within the Wesfarmers Centre for Infectious Diseases. We will be developing particular projects over the coming months but the scope of work is as yet undefined.
Project suitable for	☐ Honours ☒ MD ☒ Masters ☒ PhD
Essential Qualifications	Undergraduate health-related degree; Honours or Masters for PhD
Essential Skills	Quantitative and/or qualitative research skills
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☒ Full scholarship available
Contact for further information	Name: A/Professor Judith Katzenellenbogen Email: judith.katzenellenbogen@telethonkids.org.au Telephone: (08) 9489 7649

Title of Project	**The Use of Routine Health Data Sources in RHD Control among High Risk Australians**
Key Focus Area	**Early Environment** Aboriginal Health Aboriginal Youth Health & Wellbeing Environmental Health & Risk Factors
Research Group	Wesfarmers Centre of Vaccines & Infectious Diseases (Group A Streptococcal Diseases Research)
Start Date	2016/2017
Chief Supervisor	A/Professor Judith Katzenellenbogen (Telethon Kids Institute)
Other Supervisors	Professor Nick de Klerk (Telethon Kids Institute, UWA)
Project Outline	Acute rheumatic fever (ARF) is an illness caused by the body's inflammatory response to infection with Streptococcal bacteria that are often found in sore throats. Rheumatic heart disease (RHD) is a long-term condition caused by permanent damage to one or more of the heart valves following inflammation of the heart as a result of ARF. This can lead to complications such as heart failure and stroke, and premature death. ARF has become rare in developed countries but remains common among disadvantaged communities in these countries. Although rates of ARF/RHD among Australia's Aboriginal and Torres Strait Island communities are among the highest in the world, the total national burden of RF and RHD is unknown. This complicates the establishment and evaluation of achievable targets for the expanding national program to control the disease. The project falls within the scope of the END RHD Centre for Research Excellence funded by the National Health and Medical Research Council, an ambitious and broad-ranging program of work that aims to lead to the reduction of RHD burden in Australia in the short to medium term. This project aims to utilise a range of routinely collected data source to contribute to the work of the CRE. In particular, an analysis will be undertaken of audit data collected from primary health care clinics serving Aboriginal people around Australia to identify determinants and gaps in ARF/RHD primary care delivery for Indigenous Australians. Hospital records will be used to undertake case finding in rural areas as well as evaluate ICD coding of RHD/ARF. Capture-recapture methods will be used as a tool for correcting under-ascertainment of ARF/RHD burden using linked hospital, death and RHD register data.
Project suitable for	☐ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	Undergraduate health-related degree; Honours or Masters
Essential Skills	Epidemiology/biostatistics, data analysis skills
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☒ Full scholarship available
Contact for further information	Name: A/Professor Judith Katzenellenbogen Email: judith.katzenellenbogen@telethonkids.org.au Telephone: (08) 9489 7649

Title of Project	**Randomised Controlled Trial of the Bioenterics Intragastric Balloon (BIB) Versus Lifestyle Intervention Alone on Weight Loss and Reversal of Weight Related Diseases in Overweight Adolescents**
Key Focus Area	**Early Environment** Nutrition & Obesity
Research Group	Children's Diabetes Research and Education Centre
Start Date	September 2016
Chief Supervisor	A/Professor Elizabeth Davis (Telethon Kids Institute, SPACH, PMH)
Other Supervisors	Dr Jacqueline Curran (PMH)
Project Outline	This project comprises part of a larger randomised clinical trial 'Randomised Controlled Trial of the Bioenterics Intragastric Balloon (BIB) Versus Lifestyle Intervention Alone on Weight Loss and Reversal of Weight Related Diseases in Overweight Adolescents'. The trial aims to determine the use and potential role of an intragastric balloon in obese adolescents. The primary outcome measure is BMI z-score change and secondary outcome measures are changes in adiposity, obesity related co-morbidities, fitness, psychological health and dietary intake. Data is collected across three time points for each of the 50 participants throughout the trial. With data collection to be finalised by June 2017, the study requires a dietician or similar health professional to prepare and analyse dietary data. Using current and relevant dietary knowledge and guidelines the student will also provide advice assistance in developing the best method of reporting dietary outcomes. The initial focus will be on entering three day food diaries and 24 hour dietary recall data into the Foodworks dietary program. Analysis of afore mentioned data, as well as children's dietary questionnaire and Eating Habits Questionnaire will follow.
Project suitable for	☒ Honours ☐ MD ☒ Masters ☐ PhD
Essential Qualifications	Bachelor of Nutrition and Dietetics or equivalent major
Essential Skills	- Experience in or knowledge of nutritional analysis program Foodworks or similar software - Experience in or knowledge of food diary analysis
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Jacqueline Curran Email: jacqueline.curran@health.wa.gov.au Telephone: (08) 9340 7023

Title of Project	**Evidence-Based Recommendations for Interpregnancy Intervals in High-Income Countries**
Key Focus Area	**Early Environment**
Research Group	Pregnancy outcomes group
Start Date	March 2017
Chief Supervisor	Dr Gavin Pereira (Telethon Kids Institute, Curtin University)
Other Supervisors	Professor Nick de Klerk (Telethon Kids Institute, UWA) A/Professor Natasha Nassar (University of Sydney)
Project Outline	Interpregnancy interval (IPI) is the time between birth and start of the next pregnancy with short IPI linked to adverse maternal and child health outcomes. The current World Health Organisation (WHO) recommendations for IPI are heavily driven by studies on low-middle income populations, where women's recovery time must be considered against a background of nutritional depletion and extraordinary burden of disease. The current WHO recommendations are not relevant in high-income countries, where the changing obstetric profile (increasing maternal age, increasing caesarean section rates and increasing chronic morbidities) is most relevant. Importantly, IPI recommendations must be balanced against an increasing prevalence of women starting a family later in life. For the majority of women, the harms of longer IPIs at advanced maternal age might outweigh the benefits of avoiding adverse pregnancy outcomes associated with shorter IPIs. However, there is a paucity of studies to inform such context specific IPI recommendations. This project will identify the optimal and harmful IPIs for a range of maternal and child outcomes in three high-income countries – Australia, Denmark and the U.S. With a study population of 7.5 million births and a longitudinal design that matches pregnancies to the same women, this will be the largest and most accurate study of its kind. This is an NHMRC funded project. There are two PhD projects. The PhD students will receive support of $1400 per year for project costs plus $2500 to attend a conference. Both are expected to apply for an APA, however there is also one fully funded scholarship.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	Honours (1st class) or Master degree (by research) or Master degree (by coursework with at least 50% research) in Statistics, Public Health or a health science
Essential Skills	Completion of a statistics unit at 3rd (preferably 4th) year level
All ethics approvals have been obtained for this project?	☐ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☒ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☒ Full scholarship available
Contact for further information	Name: Dr Gavin Pereira Email: gavin.pereira@telethonkids.org.au Telephone: (08) 9266 3940

Title of Project	**Identifying New Populations at Risk of Stillbirth and Pregnancy Morbidity**
Key Focus Area	**Early Environment**
Research Group	Pregnancy outcomes
Start Date	Available now
Chief Supervisor	Dr Gavin Pereira (Telethon Kids Institute, Curtin University)
Other Supervisors	Professor Nick de Klerk (Telethon Kids Institute, UWA) A/Professor Helen Leonard (Telethon Kids Institute) Dr Carrington Shepherd (Telethon Kids Institute)
Project Outline	Complications and outcomes of pregnancy recur in subsequent pregnancies or within families. Only a fraction of this has been explained by genetic studies. This project will identify whether pregnancy outcomes cluster in families and possibly propose a design to ascertain the contribution of socioeconomic/environmental exposures. Use of secondary data i.e. information in health registries that has already been collected i.e. no fieldwork is necessary. The student will learn to use leading open source software for data analysis used in many settings beyond health e.g., finance, marketing, other basic/applied sciences, in various industries and government.
Project suitable for	☒Honours ☒MD ☒Masters ☒PhD
Essential Qualifications	A complete or near complete degree in Statistics, Public Health or a health science; or MD project. For PhD: Honours (1st class) or Master degree (by research) or Master degree (by coursework with at least 50% research) in Statistics, Public Health or a health science
Essential Skills	Completion of a statistics unit at 3rd (preferably 4th) year level
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available PhD students will receive support of $1400 per year for project costs plus $2500 to attend a conference. Research Masters students also receive some funding. For PhD (and Research Masters) projects, students are to apply for an APA/UPA.
Contact for further information	Name: Dr Gavin Pereira Email: gavin.pereira@telethonkids.org.au Telephone: (08) 9266 3940

Title of Project	**Airborne Particulates, Ambient Temperature Extremes, and Adverse Pregnancy Outcomes**
Key Focus Area	**Early Environment** Built Environment, Pollutants and Toxicants
Research Group	Pregnancy outcomes
Start Date	Available now
Chief Supervisor	Dr Gavin Pereira (Telethon Kids Institute, Curtin University)
Other Supervisors	Professor Nick de Klerk (Telethon Kids Institute, UWA) A/Professor Helen Leonard (Telethon Kids Institute) Dr Brad Zhang (Telethon Kids Institute, Curtin University)
Project Outline	There is accumulating evidence that ambient levels of fine particulate matter is harmful to health. More recently we have identified adverse associations between fine particulate matter exposure among pregnant women and adverse pregnancy outcomes such as preterm delivery and pre-labour rupture of membranes. Due to the seasonality of exposure, ambient temperature is a potential confounder as well as an independent putative risk factor. This project will use existing secondary data from health registries in WA, and already developed models for exposure (based on satellite imagery) to investigate the association between these exposures and risk of adverse pregnancy outcomes in WA.
Project suitable for	☒Honours ☒MD ☒Masters ☒PhD
Essential Qualifications	A complete or near complete degree in Statistics, Public Health or a health science; or MD project. For PhD: Honours (1st class) or Master degree (by research) or Master degree (by coursework with at least 50% research) in Statistics, Public Health or a health science
Essential Skills	Completion of a statistics unit at 3rd (preferably 4th) year level
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available PhD students will receive support of $1400 per year for project costs plus $2500 to attend a conference. Research Masters students also receive some funding. For PhD (and Research Masters) projects, students are to apply for an APA/UPA.
Contact for further information	Name: Dr Gavin Pereira Email: gavin.pereira@telethonkids.org.au Telephone: (08) 9266 3940

Title of Project	**Environmental Influences on Early Health Behaviours**
Key Focus Area	**Early Environment** Physical Activity Physical Environment Nutrition & Obesity
Research Group	Population Science
Start Date	Flexible
Chief Supervisor	A/Professor Hayley Christian (Telethon Kids Institute, School of Population Health and Centre for the Built Environment and Health UWA)
Other Supervisors	Professor Steve Zubrick (Telethon Kids Institute, Graduate School of Education UWA) Dr Gina Trapp (Telethon Kids Institute, School of Population Health and Centre for the Built Environment and Health UWA)
Project Outline	This research forms part of the PLAYCE program of research – Places Spaces & Environments for Children's Physical Activity. PLAYCE examines the influence of the physical, social and policy environment on young children's physical activity, sedentary behaviour, eating behaviour, weight status, sun exposure and development at home, around the neighbourhood and whilst at childcare. This project will provide information on how best to create a healthy childcare environment. The project will involve qualitative research with children, parents, staff and key stake holders in the childcare setting, objectively measuring health behaviours (e.g., physical activity) and outcomes (overweight/obesity) of young children and the physical, policy and social environment of childcare centres. There is scope to investigate the influence of the home and neighbourhood environment on young children's health behaviours as well as evaluate the impact of interventions to improve the childcare environment. There is growing interest in built environment interventions targeted at increasing children's physical activity because of their potential reach and impact on the health and well-being of future generations. In the last decade there has been a 20% increase in the number of 0-4 year olds in Western Australia (WA) with 63% of WA 2-3 year olds attending some type of child care. The child care setting is where children spend a considerable portion of their time, thus this is an important setting in which children should have the opportunity to accumulate physical activity and other forms of unstructured physical play to facilitate their health and development.
Project suitable for	☒Honours ☒MD ☒Masters ☒PhD
Essential Qualifications	For PhD candidates: minimum of 2A Honours degree For Masters candidates: degree in public health, epidemiology, or related
Essential Skills	Ability to conduct quantitative and qualitative research; Excellent writing skills; Statistical analysis (SPSS and SAS); Ability to work as part of a team; Good interpersonal and communication skills
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: A/Professor Hayley Christian Email: hayley.christian@uwa.edu.au Telephone: (08) 6488 8501

Title of Project	**Influence of the Built Environment on Early Child Health and Development**
Key Focus Area	**Early Environment** Physical Environment Physical Activity Nutrition & Obesity
Research Group	Population Science
Start Date	Flexible
Chief Supervisor	A/Professor Hayley Christian (Telethon Kids Institute, School of Population Health and Centre for the Built Environment and Health UWA)
Other Supervisors	Professor Steve Zubrick (Telethon Kids Institute, Graduate School of Education UWA) A/Professor Sally Brinkman (Telethon Kids Institute)
Project Outline	Developmental delays in physical health and wellbeing, social competence, emotional maturity, language, cognitive, and communication skills have significant health, social and economic consequences for later life. Across Australian suburbs there are inequalities in the proportion of children developmentally at risk. A significant amount of this inequality in developmental vulnerability remains unexplained. This project will examine the influence of the neighbourhood and home physical environment on early child health and development. It will provide evidence to inform the design of urban areas that are supportive of child health and development. The built environment incorporates land use patterns, transportation systems, building design, access to shops and services and social infrastructure, and creates conditions that are optimal (or detrimental) for early child health and development. This research will use data from the Australian Early Development Census (AEDC) to examine neighbourhood attributes (e.g., access to child education and health services) associated with early child health and development outcomes. It will provide evidence to determine what a child-friendly environment is in the context of neighbourhoods and what are optimal levels of built environmental features for early child health and development?
Project suitable for	☒Honours ☒MD ☒Masters ☒PhD
Essential Qualifications	For PhD candidates: minimum of 2A Honours degree For Masters candidates: degree in public health, epidemiology, or related
Essential Skills	Ability to conduct quantitative and qualitative research; Excellent writing skills; Statistical analysis (SPSS and SAS); Ability to work as part of a team; Good interpersonal and communication skills
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☒ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: A/Professor Hayley Christian Email: hayley.christian@uwa.edu.au Telephone: (08) 6488 8501

Title of Project	**Impact of Nature Contact on Young Children's Health**
Key Focus Area	**Early Environment** Physical Environment Physical Activity Nutrition & Obesity
Research Group	Population Science
Start Date	Flexible
Chief Supervisor	A/Professor Hayley Christian (Telethon Kids Institute, School of Population Health and Centre for the Built Environment and Health UWA)
Other Supervisors	Professor Steve Zubrick (Telethon Kids Institute, Graduate School of Education UWA)
Project Outline	Contact with nature (plants and animals) is associated with children developing a sense of identity, autonomy, psychological resilience, self-regulation, gross motor skills and learning healthy behaviours. However, while the pathways through which contact with nature facilitates child health and development have been examined in older children, studies to date have not examined the effect of nature contact on young children's health and development. This project will involve collaboration with industry partner Nature Play WA. The project will evaluate the impact of Nature Play WA's education program aimed at providing early childhood education and care staff with the knowledge and skills to create nature play spaces within the childcare setting. The student will conduct a literature review on the effects of nature contact on young children's health and development. The student will undertake a follow-up survey of early childhood education and care staff to ask them about changes to their childcare centre (e.g., changes to the outdoor physical environment, program content, care and teaching practices) post taking part in the Nature Play WA program. Visits to childcare centres to objectively assess changes to the childcare environment and its effect on young children's health and development can also be done. There is also scope for this project to examine child health and developmental benefits of contact with animals (via family pets).
Project suitable for	☒ Honours ☒ MD ☒ Masters ☒ PhD
Essential Qualifications	For PhD candidates: minimum of 2A Honours degree For Masters candidates: degree in public health, epidemiology, or related
Essential Skills	Ability to conduct quantitative and qualitative research; Excellent writing skills; Statistical analysis (SPSS and SAS); Ability to work as part of a team; Good interpersonal and communication skills
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: A/Professor Hayley Christian Email: hayley.christian@uwa.edu.au Telephone: (08) 6488 8501

Title of Project	**Maternal Health Practitioners Knowledge, Awareness and Practices of Consuming Alcohol during Pregnancy**
Key Focus Area	**Early Environment** Nutrition & Obesity
Research Group	Alcohol, Pregnancy and FASD Program (AAP&FASD)
Start Date	October 2016
Chief Supervisor	Dr Roslyn Giglia (Telethon Kids Institute)
Other Supervisors	Dr Tracy Reibel (Telethon Kids Institute) Dr Jan Payne Dr Kathryn Francis
Project Outline	Fetal Alcohol Spectrum Disorder (FASD) is characterised by brain damage from prenatal alcohol exposure; the effects are lifelong. Prevention of FASD requires research to identify, test, implement and evaluate coordinated approach to reduce alcohol use in pregnancy (e.g. mass media, targeted health promotion, workforce upskilling). This project will conduct an analysis and interpretation of data collected in 2016 on the knowledge, awareness and practices of maternal health practitioners (Midwives, GPs, Obstetricians and Paediatricians) around drinking alcohol during pregnancy. This research will build on research conducted by the Alcohol, Pregnancy and FASD research team in 2002/3 and provide feedback on how our maternal health practitioners working in this space over a decade later.
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	Have achieved a First Class Honours (or equivalent) and/or a research Masters in Psychology, Education, Health Promotion or another relevant degree including a clear research component. Eligible to enrol in a PhD at the University of Western Australia. Scholarship is conditional on acceptance into the program.
Essential Skills	Background knowledge in relevant area (population health, health promotion, developmental health), computer literacy, statistics
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Roslyn Giglia Email: roslyn.giglia@telethonkids.org.au Telephone: (08) 9489 7726

Title of Project	**Patterns of Maternal Alcohol Consumption during Pregnancy**
Key Focus Area	**Early Environment** Nutrition & Obesity
Research Group	Alcohol, Pregnancy and FASD Program (AAP&FASD)
Start Date	As soon as possible
Chief Supervisor	Dr Roslyn Giglia (Telethon Kids Institute)
Other Supervisors	Dr Paula Wyndow (Telethon Kids Institute)
Project Outline	To improve the health and well-being of mothers and babies, Telethon Kids Institute in partnership with the WA State Government have collected information about women's health during pregnancy. The survey, Western Australian Health and Pregnancy Survey (HAPS) 2015, asked questions about what women were doing in the lead up to pregnancy and during pregnancy. This survey can tell us if government programs, such as folate supplementation and alcohol in pregnancy campaigns are working and what other information and support women might need. This project will conduct an analysis and interpretation of data collected from the HAPS database. It will also involve linking the survey data to other health records (e.g. births or hospitalisations) in order to extract more meaningful results and understand the relationship between pregnancy and health outcomes beyond birth. This presents a unique opportunity to influence the priority of child health prevention programs in Western Australia.
Project suitable for	☐ Honours ☐ MD ☒ Masters ☒ PhD
Essential Qualifications	Have achieved a First Class Honours (or equivalent) and/or a research Masters in Public Health, Education, Health Promotion or another relevant degree including a clear research component. Eligible to enrol in a Masters or PhD at the University of Western Australia.
Essential Skills	Background knowledge in relevant area (population health, health promotion, developmental health), computer literacy, statistics
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Roslyn Giglia Email: roslyn.giglia@telethonkids.org.au Telephone: (08) 9489 7726

Title of Project	**Exploring the Mechanisms by which Ultraviolet Radiation Suppresses the Development of Obesity**
Key Focus Area	**Early Environment** Immunity & Inflammation Nutrition & Obesity Physical Activity
Research Group	Inflammation
Start Date	Academic year 2017, or mid-year intake for Honours/Masters/PhD
Chief Supervisor	Dr Shelley Gorman (Telethon Kids Institute)
Other Supervisors	A/Professor Vance Matthews (School of Medicine and Pharmacology UWA)
Project Outline	Skin exposure to the ultraviolet radiation (UVR) component of sunlight results in the production of biological mediators, like vitamin D, nitric oxide and alpha-melanocyte stimulating hormone that can modulate disease development. Our novel studies have shown that chronic skin exposure to low dose UVR suppressed the development of obesity through a nitric oxide-dependent mechanism in adult mice fed a high fat diet. In this project we will continue to use our pre-clinical modelling approach to explore the mechanisms by which chronic UVR exposure may curb the development of signs of obesity and type-2 diabetes. These mechanisms may include the role of UVR-induced nitric oxide on metabolic processes in brown adipose tissue; the capacity of UVR-induced alpha-melanocyte stimulating hormone to regulate appetite and/or whether UVR acts through an interleukin-6-dependent mechanism. These studies may have important ramifications for the development of health policies that consider both the beneficial and detrimental effects of early life exposure to sunlight.
Project suitable for	☒Honours ☒MD ☒Masters ☒PhD
Essential Qualifications	Distinction average in Bachelor of Science or equivalent discipline
Essential Skills	Basic statistical skills Very good organisational skills, motivation and dedication
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ PhD applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Shelley Gorman Email: shelley.gorman@telethonkids.org.au Telephone: (08) 9489 7884

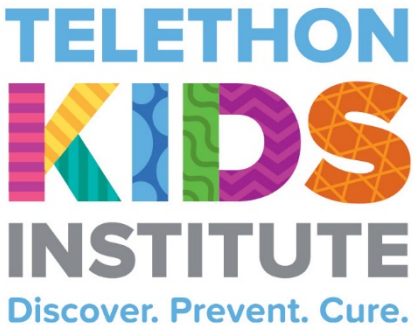
Title of Project	**Does Sun Exposure in Childhood Affect the Development of Obesity?**
Key Focus Area	**Early Environment** Immunity & Inflammation Nutrition & Obesity Physical Activity
Research Group	Inflammation
Start Date	Academic year 2017, or mid-year intake for Honours/Masters/PhD
Chief Supervisor	Dr Shelley Gorman (Telethon Kids Institute)
Other Supervisors	Professor Robyn Lucas (Australian National University)
Project Outline	Sun exposure has benefits and harms for human health. Our animal modelling studies indicate that chronic skin exposure to low dose ultraviolet radiation (UVR) limits the development of obesity and signs of metabolic syndrome in mice fed a high fat diet (1). However, we do not know the effects of sun exposure on the development of obesity and cardiometabolic dysfunction in humans. Early adulthood (18-34 years) is the age with the highest prevalence of vitamin D deficiency in non-Indigenous Australians (Australian Health Survey, April 2014), indicating that young adults spend less time in the sun than other age groups. We hypothesize that this diminishing pattern of sun exposure from childhood through adolescence and into early adulthood increases the risk of obesity and cardiometabolic dysfunction. This project is an epidemiological investigation that will use two differing, but complementary datasets derived from Western Australian and Tasmanian children and adolescents. We propose to investigate how sun exposure modulates the development of obesity in children of the Western Australian Pregnancy (Raine) Cohort and the Tasmanian Infant Health Study. We will determine whether sun exposure throughout early life, from in utero through adolescence, affects the development of obesity and cardiometabolic dysfunction. We will also assess when (in life) sun exposure is most important and how much sun exposure may be protective. References: 1. Geldenhuys S, Hart PH, Endersby R, Jacoby P, Feelisch M, Weller RB, et al. Ultraviolet radiation suppresses obesity and symptoms of metabolic syndrome independently of vitamin D in mice fed a high-fat diet. Diabetes. 2014 Nov;63(11):3759-69.
Project suitable for	☒Honours ☒MD ☒Masters ☒PhD
Essential Qualifications	Distinction average in Bachelor of Science or equivalent discipline
Essential Skills	Advanced statistical skills (e.g. Masters of Public Health or Biostatistics) Very good organisational skills, motivation and dedication
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ PhD Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Shelley Gorman Email: shelley.gorman@telethonkids.org.au Telephone: (08) 9489 7884

Title of Project	**Early Life Exposures, Maternal Obesity and their Effects on Respiratory Function in Childhood**
Key Focus Area	**Early Environment** Immunity & Inflammation Nutrition & Obesity
Research Group	Inflammation
Start Date	Academic year 2017, or mid-year intake for Honours/Masters/PhD
Chief Supervisor	Dr Shelley Gorman (Telethon Kids Institute)
Other Supervisors	A/Professor Alex Larcombe (Telethon Kids Institute)
Project Outline	The in utero and neonatal times of early life are critical developmental periods that can shape an individual's predisposition for asthma. Indeed, the effects of maternal obesity may have irreversible or exacerbating effects on the development of respiratory dysfunction and asthma in offspring. Epidemiological studies support this notion, but we are yet to determine if maternal obesity causes respiratory dysfunction/asthma. Moreover the effects of early life environmental factors like sun exposure or infection are unknown. In this project we will use an in vivo model of maternal obesity to examine lung function and asthma pathogenesis in her offspring testing the effects of insults (like viral infection) or possible interventions (like exposure to low dose ultraviolet radiation) administered during and/or beyond the early developmental window. These studies provide us with an opportunity to explore potential mechanisms that may contribute towards the development of obesity-induced asthma.
Project suitable for	☒Honours ☒MD ☒Masters ☒PhD
Essential Qualifications	Distinction average in Bachelor of Science or equivalent discipline
Essential Skills	Basic statistical skills Very good organisational skills, motivation and dedication
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ PhD applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Shelley Gorman Email: shelley.gorman@telethonkids.org.au Telephone: (08) 9489 7884

Title of Project	**Understanding the Mechanisms driving "Trained Immunity"**
Key Focus Area	**Early Environment** Immunity & Inflammation Infections & Vaccines
Research Group	Cell Biology
Start Date	January or February 2017
Chief Supervisor	Dr Jeff Lauzon-Joset (Telethon Kids Institute)
Other Supervisors	Dr Naomi Scott (Telethon Kids Institute) A/Professor Deborah Strickland (Telethon Kids Institute)
Project Outline	Infection during pregnancy can have a severe impact on the mothers, as well as the fetuses, and even compromise the health of the child later in life. Prevention of infection during pregnancy mostly targets vaccination approaches, however this is limited by the lack of vaccines against many infectious agents, and by variable uptake and efficacy (especially for influenza vaccine). Our group is interested in new therapeutic approach, which used the concept of trained immunity. The trained immunity theory arose from studies in traditional European farming and in the Amish communities that showed striking beneficial effects of environmental microbial exposure (via inhalation or dietary intake) during pregnancy on subsequent inflammatory disease resistance in offspring. This theory is also supported by evidence of protective effect of vaccination against unrelated infections. Thus, by applying these concepts towards developing novel therapeutic strategies, we aim to protect the developing child and the pregnant mother against inflammatory mediated complications. In our laboratory, we have previously shown that by repurposing an immune modulating agent, we can prevent the heightened maternal disease severity and premature pregnancy termination and/or fetal weight loss in response to maternal microbial infection. The aim of this project is to understand the key mechanisms that drive the trained immunity. Some of the techniques involved will include working with mice, cell cultures and flow cytometry.
Project suitable for	☒ Honours ☐ MD ☐ Masters ☐ PhD
Essential Qualifications	BSc or equivalent
Essential Skills	Basic immunology Optional: Experience in cell cultures and animal models
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☐ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☐ Full scholarship available
Contact for further information	Name: Dr Jeff Lauzon-Joset Email: jeff.lauzon-joset@telethonkids.org.au Telephone: (08) 9489 7895

UWA SCHOOL OF PAEDIATRICS AND CHILD HEALTH (SPACH)

Title of Project	**Comparing the Immunogenicity of Pneumococcal Vaccine Schedules in High Risk Infants in Papua New Guinea**
Key Focus Area	**UWA School of Paediatrics and Child Health (SPACH)** Early Environment Immunity & Inflammation Infections & Vaccines Princess Margaret Hospital for Children (PMH)
Research Group	Wesfarmers Centre of Vaccines & Infectious Diseases (Vaccine Trials Group)
Start Date	Available for an immediate start
Chief Supervisor	A/Professor Peter Richmond (Telethon Kids Institute, SPACH)
Other Supervisors	Dr Ruth Thornton (SPACH, Telethon Kids Institute) Dr Lea-Ann Kirkham (SPACH, Telethon Kids Institute)
Project Outline	We are looking for a dynamic researcher to join our team at the University of Western Australia, and undertake an exciting PhD in vaccine immunology. *Streptococcus pneumoniae* (the pneumococcus) is a major killer of young children in low-income countries, causing over 500,000 deaths and 14 million episodes of disease each year. In Papua New Guinea (PNG), 1 in 13 children die before their 5th birthday (75% in the first year of life) and the pneumococcus is a leading cause of infant hospitalization and death. Two pneumococcal conjugate vaccines are being introduced globally to reduce the burden of pneumococcal disease. This PhD is part of a National Health and Medical Research Council-funded clinical trial in PNG. The study aims to investigate the effect of different pneumococcal vaccines on the development of protective anti-pneumococcal antibodies in PNG infants using cutting-edge technologies including multiplex bead-based immunoassays, multiplex opsonophagocytosis assays, and B-cell and T-cell assays in our labs in Perth with all samples collected. Opportunities exist within the project to visit the field site in PNG to feedback the results to the community and our research collaborators. This study will contribute towards determining optimal pneumococcal vaccine schedules in high risk populations worldwide. Opportunities for highly competitive international PhD scholarships can be found here: http://www.scholarships.uwa.edu.au/future-students/postgrad/international Information for domestic students can be found here: http://www.scholarships.uwa.edu.au/future-students/postgrad/domestic
Project suitable for	☐ Honours ☐ MD ☐ Masters ☒ PhD
Essential Qualifications	MSc or 1st Class Honours degree
Essential Skills	Background in immunology and/or microbiology
All ethics approvals have been obtained for this project?	☒ Yes (Honours projects must already have ethics approval prior to the student commencing to ensure a timely finish to the project) ☐ No
Funding	☒ Applicant should apply for APA, UPA or other scholarship ☐ Top-up scholarship available ☒ Full scholarship available
Contact for further information	Name: Dr Ruth Thornton Email: ruth.thornton@uwa.edu.au Telephone: (08) 9340 8340



TELETHON KIDS INSTITUTE

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