



# Postgraduate Research Opportunities at the Telethon Kids Institute

## Student project booklet 2021



# WELCOME TO THE TELETHON KIDS INSTITUTE

At Telethon Kids, our vision is simple - HAPPY HEALTHY KIDS.

We bring together community, researchers, practitioners, policy makers and funders, who share our mission to improve the health, development and lives of children and young people through excellence in research. Importantly, we want knowledge applied so it makes a difference.

Telethon Kids Institute is the largest medical research facility in Western Australia. With more than 850 staff and students, we are 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.

In 2018, Telethon Kids moved to brand new premises within the children's hospital building at the QEII Campus in Nedlands. The new building includes state-of-the-art facilities with increased space and improved access to leading edge technology and research equipment.

Telethon Kids has strong affiliations with The University of Western Australia and Curtin University, as well as wide-reaching collaborations with leading research organisations around the world.

You can find out more about our current projects, Research Teams, and being a student with us by:

- Visiting our website: [www.telethonkids.org.au](http://www.telethonkids.org.au)
- Contacting our researchers listed within this booklet
- Contacting our Student Team at [study@telethonkids.org.au](mailto:study@telethonkids.org.au)

# 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 Aboriginal Health Research Focus Area integrates the needs of Aboriginal families and children into all relevant areas of our work. Improving the health and wellbeing of Aboriginal children and families is an overarching priority for every program and team at the Institute.

Aboriginal people experience greater disadvantage than the rest of the population on almost all of the determinants of health, social and emotional wellbeing including employment, education and housing.

As there are specific cultural, social and economic contexts that require more specialised investigation in collaboration and consultation with Aboriginal families, this Research Focus Area is unique in that it provides advice, technical and cultural support across the Institute to all programs of research.



## BRAIN AND BEHAVIOUR

Brain and Behaviour is a Research Focus Area which focuses on the core of many issues affecting the ongoing health and wellbeing of children and young people.

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.

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.

Brain and Behaviour consists of three programs: Development and Education, Disability, and Mental Health and Youth Health.



## CHRONIC & SEVERE DISEASES

Chronic and Severe Diseases is a Research Focus Area (RFA) which focuses on diseases in children that require a very different investigation and treatment to similar conditions in adults.

Childhood cancers, diabetes, respiratory conditions and rare diseases can be debilitating and often life threatening. Effective intervention and prevention requires an understanding of the complex interactions between genetic and environmental factors, as well as a focus on better ways of diagnosing, treating and controlling disease at the individual and population level.

Chronic and Severe Diseases consists of four programs: Cancer, Diabetes and Obesity, Genetics and Rare Diseases, and Respiratory Health.



## EARLY ENVIRONMENT

Early Environment is a Research Focus Area (RFA) which focuses on the ways that environments early in life can affect a child's life-long health and development.

Factors ranging from infection and climatic conditions to pollutants, housing and our complex microbiome all have an impact. Understanding these exposures and their impact on early growth and development is key to preventing and treating a number of common childhood conditions.

At the Telethon Kids Institute, this research encompasses the development of the immune system, infectious diseases, maternal health and the developmental origins of disease and health.

Early Environment consists of three programs: Developmental Origins of Child Health, Infection and Vaccines, and Inflammation and Immunity.



# EARLY ENVIRONMENT

Early Environment is a Research Focus Area (RFA) which focuses on the ways that environments early in life can affect a child's life-long health and development.

Factors ranging from infection and climatic conditions to pollutants, housing and our complex microbiome all have an impact. Understanding these exposures and their impact on early growth and development is key to preventing and treating a number of common childhood conditions.

At the Telethon Kids Institute, this research encompasses the development of the immune system, infectious diseases, maternal health and the developmental origins of disease and health.

# Effects of maternal prebiotics consumption on breastfeeding and infant growth

Research Focus Area	Early Environment
Research Group	<b>Childhood Allergy and Immunology Research</b>
Start Date	February 2021
Chief Supervisor	Dr Debbie Palmer (Telethon Kids Institute)
Other Supervisors	Prof Donna Geddes (University of Western Australia)
Project Outline	The Childhood Allergy and Immunology Research Team is currently conducting a randomised controlled trial, known as the SYMBA Study, which is investigating the effects of maternal prebiotic fibre supplementation during pregnancy and breastfeeding on maternal and infant outcomes. 'Prebiotics' is a general term for non-digestible dietary fibre that promote health and well-being by inducing the growth and/or activity of beneficial gut bacteria. This is a sub-study nested within the ORIGINS Birth Cohort.

A mother's diet during pregnancy and lactation may have effects on her breastfeeding, breast milk composition and development of infant body composition.

**This PhD student project will involve laboratory analysis of breast milk samples and data analysis of maternal diet, infant feeding, and infant growth outcomes. The student will be based at the Telethon Kids Institute (Joondalup Health Campus and Perth Children's Hospital sites) and at University of Western Australia (Crawley Campus).**

Suitable For	<input type="checkbox"/> Honours	<input type="checkbox"/> MD	<input type="checkbox"/> Masters	<input checked="" type="checkbox"/> PhD
Essential Skills & Qualifications	<ul style="list-style-type: none"><li>• A minimum 2A Honours degree or Masters degree in a related field</li><li>• Undergraduate degree in science/ biomedical science/relevant degree</li><li>• Eligible to enrol in a PhD at UWA</li><li>• Excellent communication skills including oral presentation and writing</li></ul>			
Ethics Approval	<input checked="" type="checkbox"/> Obtained		<input type="checkbox"/> Not Obtained	
Funding	<input checked="" type="checkbox"/> Top-up scholarship offered by project group <input type="checkbox"/> Full scholarship offered by project group			

*For more information, please contact:*

Debbie Palmer

0410 851 607

debbie.palmer@telethonkids.org.au

# Immunomodulatory effects of maternal prebiotics consumption on infant immune development

Research Focus Area	Early Environment
Research Group	<b>Childhood Allergy and Immunology Research</b>
Start Date	February 2021
Chief Supervisor	Dr Debbie Palmer (Telethon Kids Institute)
Other Supervisors	Prof Susan Prescott (UWA and Telethon Kids Institute)
Project Outline	The Childhood Allergy and Immunology Research Team is currently conducting a clinical trial, known as the SYMBA Study, which is investigating whether supplementing the mother's diet during pregnancy and breastfeeding with prebiotic fibre will reduce the development of allergies in her child. This is a sub-study nested within the ORIGINS Birth Cohort.

Allergic diseases, including eczema, asthma, hay fever and food allergies, now affect 30-40% of the Australian population. One in every four children will suffer from eczema and asthma, while one in every ten children will have at least one food allergy. We now know that a baby's immune system begins to develop even before birth, and that the mother's diet and her environment in pregnancy can have an important influence. Research now also shows that the mother's gut health may have important effects on the immune development of her baby. 'Prebiotics' is a general term for non-digestible dietary fibre that promote health and well-being by inducing the growth and/or activity of beneficial gut bacteria.

**This PhD student project will be laboratory based at the Telethon Kids Institute and focus on assessing the immunomodulatory effects of the maternal prebiotics intervention on infant immune function development.**

Suitable For	<input type="checkbox"/> Honours	<input type="checkbox"/> MD	<input type="checkbox"/> Masters	<input checked="" type="checkbox"/> PhD
Essential Skills & Qualifications	<ul style="list-style-type: none"><li>• A minimum 2A Honours degree or Masters degree in a related field</li><li>• Undergraduate degree in science/ biomedical science/relevant degree</li><li>• Eligible to enrol in a PhD at UWA</li><li>• Excellent communication skills including oral presentation and writing</li></ul>			
Ethics Approval	<input checked="" type="checkbox"/> Obtained		<input type="checkbox"/> Not Obtained	
Funding	<input checked="" type="checkbox"/> Top-up scholarship offered by project group <input checked="" type="checkbox"/> Full scholarship offered by project group			

*For more information, please contact:*

Debbie Palmer

0410 851 607

debbie.palmer@telethonkids.org.au

## Research Opportunities with The ORIGINS Project

Research Focus Area	Early Environment
Research Group	<b>The ORIGINS Project</b>
Start Date	Available now
Chief Supervisor	Dr Erika Hagemann (Telethon Kids Institute, Edith Cowan University)
Other Supervisors	Prof Susan Prescott (Telethon Kids Institute, CAHS – Princess Margaret Hospital) Prof Desiree Silva (Joondalup Health Campus, Telethon Kids Institute) Jackie Davis (Telethon Kids Institute, Curtin University) Dr Nina D’Vaz (Telethon Kids Institute) Dr Lisa Gibson (Telethon Kids Institute, University of Western Australia, Edith Cowan University)

**Project Outline** The ORIGINS Project is a longitudinal, birth cohort study investigating how early environments, maternal health, and genetics influence child health outcomes. Detailed information at various time points is being collected via biological samples, questionnaires, and routine data, creating a comprehensive databank and biobank.

There are currently a number of potential projects available within the areas of nutrition and metabolism; mental health; allergy, inflammation, and immunity; environment and lifestyle; infectious disease; oral health; paternal health; reproduction; growth and development; and omics studies. Projects may be observational or interventional, including both quantitative or qualitative data collection and analysis.

Suitable For	<input checked="" type="checkbox"/> Honours	<input type="checkbox"/> MD	<input checked="" type="checkbox"/> Masters	<input checked="" type="checkbox"/> PhD
Essential Skills & Qualifications	<ul style="list-style-type: none"><li>• Undergraduate degree in a relevant discipline/or minimum of 2A Honours</li><li>• Interest in child health and development</li><li>• Proficient writing skills</li><li>• Basic statistical analysis skills (SPSS/SAS)</li><li>• Good interpersonal and communication skills</li></ul>			
Ethics Approval	<input checked="" type="checkbox"/> Obtained		<input type="checkbox"/> Not Obtained	
Funding	<input checked="" type="checkbox"/> Top-up scholarship offered by project group <input type="checkbox"/> Full scholarship offered by project group			

*For more information, please contact:*

Dr Erika Hagemann  
(08) 6319 1330  
erika.hagemann@telethonkids.org.au

## Kindy readiness in the ORIGINS cohort

Research Focus Area	Early Environment
Research Group	<b>The ORIGINS Project</b>
Start Date	July 2020
Chief Supervisor	Dr Lisa Gibson (Telethon Kids Institute, University of Western Australia, Edith Cowan University)
Other Supervisors	Prof Susan Prescott (Telethon Kids Institute, CAHS – PCH, University of Western Australia, Edith Cowan University), Prof Desiree Silva (Joondalup Health Campus, University of Western Australia, Edith Cowan University, Telethon Kids Institute), Dr Erika Hagemann (Telethon Kids Institute, Edith Cowan University), Jackie Davis (Telethon Kids Institute, Curtin University), Sarah Whalan (Telethon Kids Institute, Curtin University)
Project Outline	<p>The aim of this study is to provide an opportunity to review the development and wellbeing of children prior to them commencing kindergarten and/or an early learning environment.</p> <p>The study will be in partnership with The ORIGINS Project and recruitment will occur when children are close to three years of age. Participants will complete a number of online surveys on child health, development, and behaviour. Feedback will be provided on development, wellbeing, and preschool readiness.</p>
Suitable For	<input checked="" type="checkbox"/> Honours <input type="checkbox"/> MD <input checked="" type="checkbox"/> Masters <input type="checkbox"/> PhD
Essential Skills & Qualifications	<ul style="list-style-type: none"><li>• Undergraduate degree in a relevant discipline</li><li>• Knowledge of quantitative and qualitative research methods</li><li>• Interest in child health and development</li><li>• Proficient writing skills</li><li>• Basic statistical analysis skills (SPSS/SAS)</li><li>• Good interpersonal and communication skills</li></ul>
Ethics Approval	<input checked="" type="checkbox"/> Obtained <input type="checkbox"/> Not Obtained
Funding	<input type="checkbox"/> Top-up scholarship offered by project group <input type="checkbox"/> Full scholarship offered by project group
<i>For more information, please contact:</i>	
Lisa Gibson (08) 6319 1405 Lisa.Gibson@telethonkids.org.au	



## Nature Play & Grow: An intervention to promote health and well-being in young children

Research Focus Area	Early Environment
Research Group	<b>The ORIGINS Project</b>
Start Date	Available now
Chief Supervisor	Dr Lisa Gibson (Telethon Kids Institute, University of Western Australia, Edith Cowan University)
Other Supervisors	Prof Susan Prescott, Prof Desiree Silva, Dr Alan Logan, Tanja Sobko, Erika Hagemann, Jackie Davis, Nina D’Vaz Prof Susan Prescott (Telethon Kids Institute, CAHS – Princess Margaret Hospital), Prof Desiree Silva (Joondalup Health Campus, Telethon Kids Institute), Dr Alan Logan (New York), Dr Tanja Sobko (University of Hong Kong), Dr Erika Hagemann (Telethon Kids Institute, Edith Cowan University), Jackie Davis (Telethon Kids Institute, Curtin University), Dr Nina D’Vaz (Telethon Kids Institute)
Project Outline	<p>Research has shown that nature related activities enhance general wellbeing as well as physical activity, diet, and sleep. This proposed project aims to develop and test the effectiveness of an intervention (“Nature Play &amp; Grow”) to promote connectedness to nature, health, and well-being.</p> <p>The project will evaluate a number of short and long-term outcome measures related to health, lifestyle behaviours and emotional wellbeing. It will be a sub project within The ORIGINS Project and will recruit a subset of families participating in this longitudinal birth cohort.</p>
Suitable For	<input type="checkbox"/> Honours <input type="checkbox"/> MD <input checked="" type="checkbox"/> Masters <input checked="" type="checkbox"/> PhD
Essential Skills & Qualifications	<ul style="list-style-type: none"><li>• Minimum of 2A Honours degree in psychology, public health, nutrition, or related</li><li>• Ability to conduct quantitative and qualitative research</li><li>• Excellent writing skills</li><li>• Strong statistical analysis (SPSS/SAS) skills</li><li>• Ability to work as part of a team and with families and young children</li><li>• Good interpersonal and communication skills</li></ul>
Ethics Approval	<input type="checkbox"/> Obtained <input checked="" type="checkbox"/> Not Obtained
Funding	<input checked="" type="checkbox"/> Top-up scholarship offered by project group <input type="checkbox"/> Full scholarship offered by project group

*For more information, please contact:*

Lisa Gibson

(08) 6319 1405

Lisa.Gibson@telethonkids.org.au

## Improving the health and well-being outcomes of families experiencing disadvantage

Research Focus Area	Early Environment
Research Group	<b>The ORIGINS Project</b>
Start Date	January 2021
Chief Supervisor	Dr Lisa Gibson (Telethon Kids Institute, University of Western Australia, Edith Cowan University)
Other Supervisors	Prof Susan Prescott (Telethon Kids Institute, CAHS – PCH, University of Western Australia, Edith Cowan University), Prof Desiree Silva (Joondalup Health Campus, University of Western Australia, Edith Cowan University, Telethon Kids Institute), Dr Erika Hagemann (Telethon Kids Institute, Edith Cowan University), Jackie Davis (Telethon Kids Institute, Curtin University)
Project Outline	<p>This project will be a partnership with The ORIGINS Project, targeting families with cultural diversity, socioeconomic disadvantage, and high disease burden, who are currently not involved with The ORIGINS Project. The project will take a family-based approach, collaborating with community organisations, local government, and service providers.</p> <p>A multidisciplinary team will work to assess, support, and assist with addressing the needs of these families in order to improve the health and well-being trajectories of the children and parents.</p>
Suitable For	<input type="checkbox"/> Honours <input type="checkbox"/> MD <input checked="" type="checkbox"/> Masters <input checked="" type="checkbox"/> PhD
Essential Skills & Qualifications	<ul style="list-style-type: none"><li>• Minimum of 2A Honours degree in social work, psychology, public health, health promotion or related</li><li>• Ability to conduct quantitative and qualitative research</li><li>• Excellent writing skills</li><li>• Strong statistical analysis (SPSS/SAS) skills</li><li>• Ability to work as part of a team and with families and young children</li><li>• Ability to work productively with external stakeholders</li><li>• Good interpersonal and communication skills</li></ul>
Ethics Approval	<input type="checkbox"/> Obtained <input checked="" type="checkbox"/> Not Obtained
Funding	<input checked="" type="checkbox"/> Top-up scholarship offered by project group <input type="checkbox"/> Full scholarship offered by project group
<i>For more information, please contact:</i> Lisa Gibson (08) 6319 1405 Lisa.Gibson@telethonkids.org.au	



TELETHON KIDS INSTITUTE

Proudly supported by the people of Western Australia through Channel 7

Telephone 08 6319 1000

Email [contact@telethonkids.org.au](mailto:contact@telethonkids.org.au)

[www.telethonkids.org.au](http://www.telethonkids.org.au)

ABN 86 009 278 755

Company limited by guarantee