

Woolworths Centre for Childhood Nutrition Research

Annual Report
2021



Bringing
together
researchers in
**public health,
immunology and
gastroenterology** to
develop new
knowledge and
solutions for
children's health
and nutrition

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Director's Report



2021, our second full year in operation was kicked off with the WCCNR Planning Day where students and staff were able to lay the foundation for the year ahead. Staff and students were also able to showcase their projects and meet the Paul Ramsay Foundation Fellow Adjunct Professor Michael Hogan. With a unified vision, we soldiered through the first half of 2021, despite the strange and sometimes challenging moments the ensuing pandemic created for us.

As we now look to the future and close the door on 2021, this Annual Report reminds us of what we have achieved. The projects and milestone achievements highlighted in this report demonstrate the breadth of research we undertake. With our discovery science stream helping us to better understand the role of the gut in allergy and mental health, the clinical science stream embedding us in health service settings; and the public health stream connecting us to the broader community, schools and organisations. Our team continues to present our work to other researchers locally, nationally and internationally as well as to staff and organisations at the frontline of service delivery.

We look forward to sharing some of the results with you in the first half of 2022. It is with Queensland families, schools, communities, organisations and agencies that we co-create solutions that will enable Queensland children to live healthier lives through better food and nutrition. Please follow us on twitter @WCCNR and connect to our website at <http://research.qut.edu.au/wccnr>.

Professor Danielle Gallegos
Centre Director

Overview

The **Woolworths Centre for Childhood Nutrition Research (WCCNR)** innovatively brings together researchers in public health nutrition, immunology and gastroenterology to develop new knowledge in partnership with the broader community and organisations to meet their needs while still providing quality independent research.

The research program works to understand the impact of diet on the role of bacteria that live in the gut and their impact on brain development, allergies and mental health.

The WCCNR also works with families, communities and schools to improve food literacy and the feeding of children especially for those doing it tough

The initiative is a joint collaboration between Queensland University of Technology (QUT) and QIMR Berghofer Medical Research Institute (QIMRB)



Our work in 2022 will continue to be guided by the following key objectives:

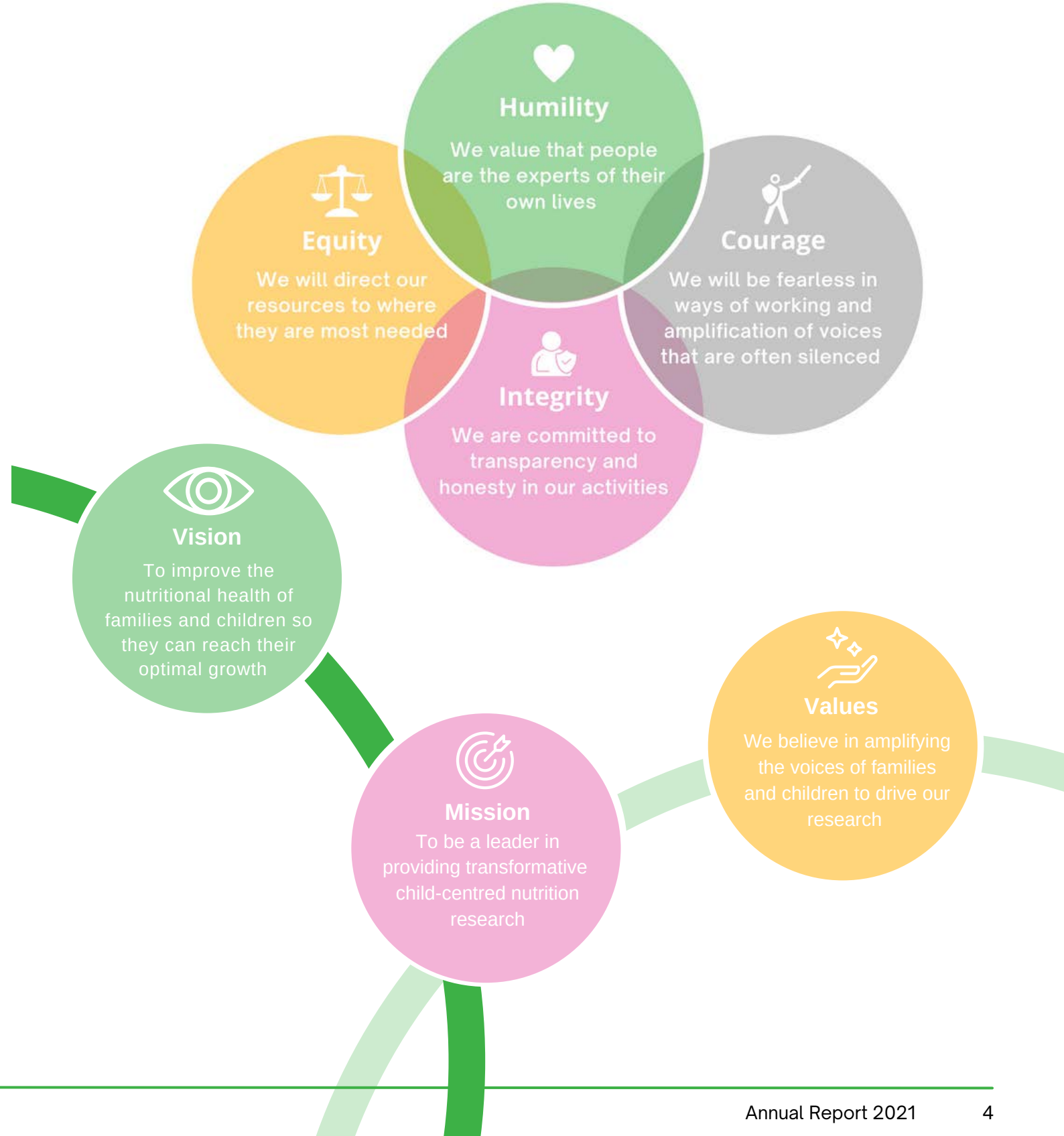
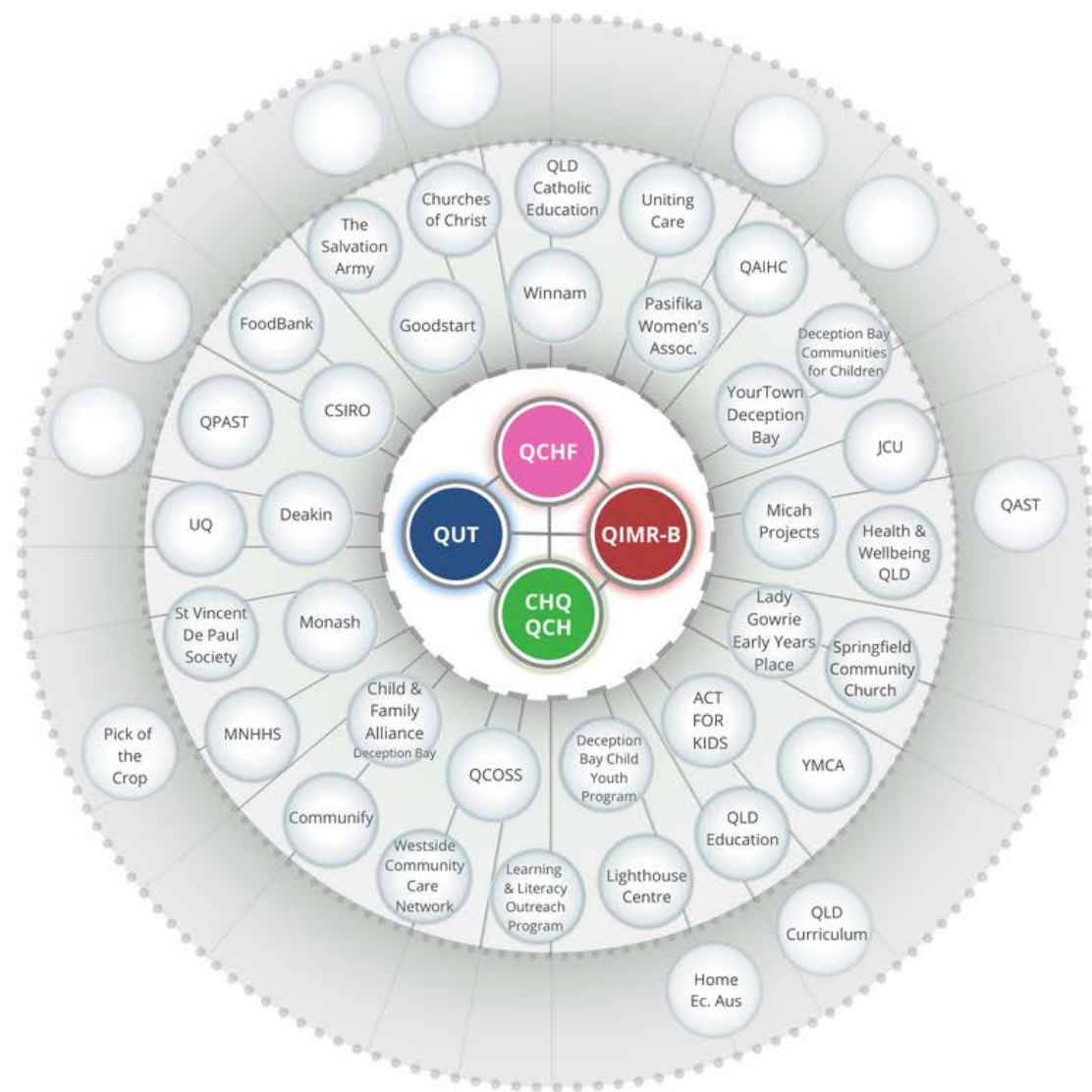
- Understanding maternal and child microbiomes and how they impact on physical and mental health leading to potential therapeutic interventions
- Building nutrition, food and feeding knowledge as well as changing school environments to increase the consumption of healthy foods
- Building affordable, accessible evidence-based dietary interventions for children living with chronic gastrointestinal conditions
- Enhanced capacity and capability of families, healthcare professionals, welfare agencies, educators and children to facilitate food security and healthy nutrition



Stakeholder Engagement and Collaboration



Mission & Values

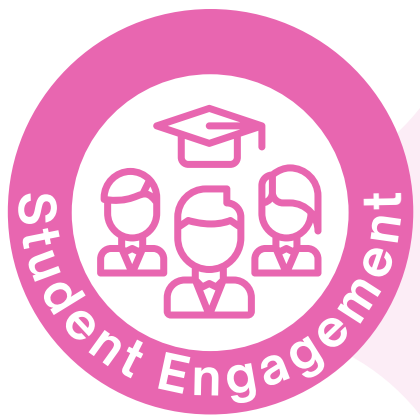


Centre Highlights



Feeding our Mana research fellow, Dr Heena Akbar was one of 36 national awardees (1 of 3 in QLD) of the Australian Health Research Alliance Women's Health Research Early and Mid-Career Researcher Funded Awards. She will be using her award to advance work in developing a culturally specific diabetes management program for women from Pasifika communities.

- Developed a researcher list and utilised ENRICH committee to begin establishing national collaboration
- ENRICH Symposia held in July & November 2021
- Co-design lead, Dr Jeremy Kerr delivered an experiential learning event for WCCNR researchers
- PhD student & researcher, Jess Cheers, ran a pilot co-design workshop with WCCNR researchers as participants
- The delivery of 7 Co-design project's key workshops across experienced, inexperienced, parent and primary school children audiences



- 6 Postdoctoral Research Fellows
- 3 Public Health Stream Lead, D. Gallegos
- 3 Discovery Science Steam Lead, S. Navarro:
- 1 PhD Students Co-design (Co-design Lead: J. Kerr)
- 7 PhD Students Discovery Science Steam (Lead: S. Navarro)
- 7 PhD Students Public Health Stream (Lead: D. Gallegos)
- 1 M/Phil Students (S Navarro) Honours Students Interns
- Honours Students

- The research centre has grown from seven members to 30 members, with eight early career researchers and nine PhD students
- 20 Publications published
- Identified additional funding (3 x currently under Embargo) and 1 CSIRO Funding for small project



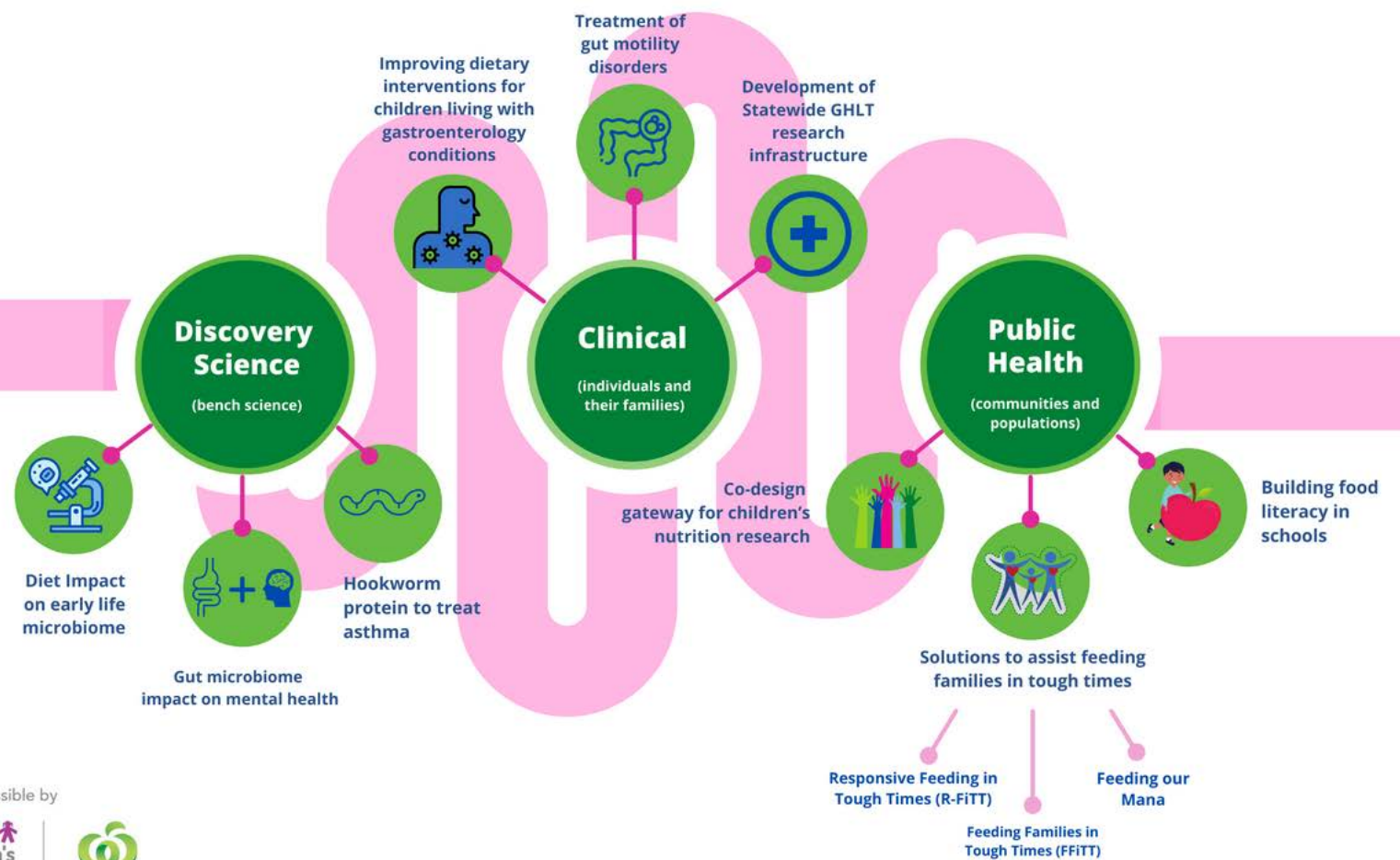
- Website, social media channels established and active.
- WCCNR Twitter account approved with 77 followers
- WCCNR Website complete
- Media & Communications Officer Appointed Nov 2021
- CNR Design campaigns created
- Knowledge Translation Plan created
- Communication Plan created

- Strategic Leadership Group convened 7 times during 2021
- External Advisory Group convened 23/06/21
- Following documents ratified by the EAG:
 - WCCNR Terms of Reference
 - Evaluation Plan Knowledge
 - Translation Plan Communication Plan
 - External relationships Strategic Framework



Areas of Research

We have successfully established a coherent, world-class research agenda encompassing a research portfolio across the three streams of **pre-clinical**, **clinical**, and **population health** that is approved by the RAC and CHF.



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Public Health

Research conducted within this health stream focuses on the impact of child and family nutrition across a wide range of social, cultural, economic, and societal perspectives. Some specific areas of research include childhood eating behaviours; solutions to assist feeding families in tough times; building food literacy in schools; food insecurity; building a co-design gateway for children's nutrition research; and connecting cultural foods. Experience among the researchers and PhD candidates within this stream include academia, dietician, and nutritionist backgrounds.

#SchoolFoodies

Optimising Primary School Food and Nutrition Environments in Queensland towards a co-design model for sustainable action

Schools have been identified as appropriate settings for nutrition education and improving diet quality as most Australian children attend school five days per week, consuming at least one meal and one snack per day in the school environment. #Schoolfoodies aims to offer a new co-design process that seeks to engage the whole school community towards optimising primary school food and nutrition environments in Queensland for sustained improvements in our children's health and wellbeing.

Project



Discovery Science

Research conducted within this health stream focuses on the role of the gut microbiome, and its links to immune health, inflammatory disease prevention and potential treatments. Specific areas of research include hookworm protein-based therapeutics for the treatment of chronic inflammatory diseases; infant gut health; improving immunotherapy response; immune development and food allergy treatment. Associate Professor and WCCNR spokesperson, Severine Navarro, works within this stream alongside various QIMRB research collaborators and PhD candidates.

The Infant Gut Health Study

Gaining a deeper understanding of the influence of intestinal parasites in the gut microbiome of pregnant women and their infants from Papua New Guinea (PNG).

Intestinal parasites affect millions of people globally and remain a problem in developing countries. A third of pregnant women living in Papua New Guinea (PNG) are infected with at least one type of intestinal parasite. The study will provide much needed knowledge on the current parasitic burden among women and infants in PNG. This study aims to understand the effects intestinal parasites have in the gut microbiome of pregnant mothers and their children over the first year of their life.

Project



Clinical Health









Research conducted within this health stream focuses on building academic and clinical research on the diagnosis, treatment and interventions of gastrointestinal disorders and conditions. Specific areas of research include improving dietary interventions for children living with gastrointestinal conditions such as Coeliac Disease; treatment of gut motility disorders; and development of statewide GHLT research infrastructure.

Developing a digital passport for children with Coeliac disease












This project is looking at improving how children are diagnosed with Coeliac disease in the community, and ensuring they have access to healthcare for regular checkups to ensure they are growing properly. The treatment for Coeliac Disease is a gluten free diet which can be difficult to follow and cause financial hardship for families. This project focuses on co-designing a digital passport to help families access health services and materials to support the implementation of a healthy gluten-free diet.

Project

Research Fellows

Researcher	Health Stream	Research Project
Dr Foluké Abigail Badejo	Public 	#SchoolFoodies – Optimising Primary School Food and Nutrition Environments in Queensland
Dr Sabine Baker	Public 	Feeding Families in Tough Times (FFITT)
Dr Kimberley Baxter Dr Rebecca Byrne	Public 	Responsive Feeding in Tough Times (R-FITT)
Dr Jeremy Kerr	Public 	Co-Design Gateway for Children's Nutrition Research
Dr Heena Akbar	Public 	Feeding Our Mana
Dr Agnieszka Malczewski	Discovery 	Metabolomics in Enhancing Responses to Cancer Immunotherapy in Melanoma
Dr Yan Lu	Discovery 	Regulating the Microbiome and Immune Development in Early Life
Dr Severine Navarro	Discovery 	Allergic Symptoms After Caesarean Section Trial (ASCENT study)

PhD Students

Researcher	Health Stream	Research Project
Sophie Wright-Pedersen	Public 	Kids to the Front: Children's food practice perspectives for enhanced public health nutrition strategies
Jeffrey So	Public 	Food insecurity and Household Chaos: Exploring fathers' food parenting, feeding goals and experiences
Mandy Taylor	Public 	Feeding Families in Tough Times: Children's perspectives of food
Jessica Cheers	Public 	From Ludic to Lucid: Exploring playful participatory approaches to designing for wicked problems in health care
Tina Gingell	Public 	Connecting With Cultural Foods
Susannah Ayre	Public 	Feeding siblings: An exploratory mixed-methods study on Australian parents and children aged 1 to 5 years
Bree Whiteoak	Public 	Exploring diet, socioeconomic disadvantage, and the faecal metabolome in pregnant women
Juciliane Haidamak	Discovery 	The Infant Gut Study
Prarthna Gopalakrishnan Bhaskaran	Discovery 	Development of Novel Compounds for the Treatment of Asthma
Madeleine Rogers	Discovery 	Immunomodulatory Properties of Schistosoma Mansoni Egg-derived Exosomes in Food Allergy
Rina Kumar	Discovery 	Understanding the Relationship between the Human Gut Microbiome and Metabolic Syndrome

Publications

Researcher

Akbar, H., Gallegos, D., Anderson, D., & Windsor, C. (2021). Deconstructing type 2 diabetes self-management of Australian Pacific Islander women: Using a community participatory research and talanoa approach. *Health and Social Care in the Community*, doi:10.1111/hsc.13580

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Researcher

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