



An essential system



Meet Sam*

Sam is 4 years old, and recently his parents discovered that he has a serious peanut allergy. The family met with a specialist and developed an allergy management plan that can help to keep him safe, but it has been a difficult adjustment for him and his family.

His parents constantly worry that he could have a severe and unexpected reaction.

Sam's parents learnt about the allergy research underway at MCRI. They hope that one day soon there will be a cure for Sam's peanut allergy, and they will no longer have to live in fear for their son's health and wellbeing.

*Sam is a representation of the experience of many young kids who develop allergies.

LifeCourse research

Health and wellbeing are complex and vary across the lifespan.

LifeCourse research provides a platform that equips researchers with the tools, collaborations and access to produce more meaningful and robust research.

Creating a healthy start to life is vital to reduce disease risk later in life, and close the gaps created by social and economic inequities.

Investment in allergic and immune disease is essential to stop the rise in children being affected in Australia and around the world. Through the LifeCourse platform, MCRI aims to understand the complex origins and pathways of these diseases, and drive innovative new therapies that can be used to combat allergy, asthma and autoimmune conditions across Australia and the world.

Mission

Our immune system allows us to fight infection and stay healthy. But occasionally, our immune systems work too hard, and overreact to their environments. This is when conditions like asthma, allergy, food intolerance, and autoimmune diseases begin to develop.

The consequences of these conditions are far reaching; they can impact mental health, quality of life, physical wellbeing and functioning at school or work.

With more and more Australian children being diagnosed with these type of conditions than ever before, MCRI researchers are on the hunt to find out why, and discover new treatments or even cures.

We also want to know the complex origins of these diseases, which could help us to design techniques to stop them before they begin.

We know that factors such as genetics, environment and hormones all play a part, but the intricate ways these factors interact are still unclear.

Where to next?

MCRI is home to some of the largest and most comprehensive population health studies of paediatric allergic disease in the world. These studies allow researchers to address the rising rate of allergic disease.

Our studies are exploring a variety of potential contributing and protective factors and how these relate to allergy, including breastfeeding, vitamin D deficiency, early introduction of foods, and maternal factors.

We are also making advances in autoimmune disease. Nationally, MCRI is at the forefront of this research, with nation-wide registries of patients with a number of rare paediatric autoimmune diseases, including juvenile idiopathic arthritis.



At Murdoch Children's Research Institute, our LifeCourse Initiative builds on our strength in population health.

In population health, we collect data and samples from people over the course of years, decades and even generations, to study the origins of common diseases. We are the home of almost two thirds of this kind of research in our region. We are leading the hunt to address our looming population-wide epidemics of obesity, mental illness, allergy and more.

The Murdoch Children's Research Institute

The Murdoch Children's Research Institute (MCRI) is Australia's leading child health research organisation.

Our researchers work to translate knowledge into effective prevention, intervention and treatment to address a range of disorders affecting infants, children and adolescents.

MCRI advocates for quality equitable care for all children and works closely with its partners, The Royal Children's Hospital and the University of Melbourne's Department of Paediatrics, within a single, purpose-built facility. The campus partnership is known as Melbourne Children's, with many of the key campus research initiatives supported by The Royal Children's Hospital Foundation.

