



Supporting Murdoch
Children's Research
Institute's drive
towards Precision
Child Health

Kidney



Key metrics

1.7 million Australians are affected by genetic kidney disease

Aboriginal and Torres Strait Islanders are **3.6 times** more likely to die from chronic kidney disease

Chronic kidney disease may lead to kidney failure, for which there is currently no cure

Chronic kidney disease is related to a number of risk factors including diabetes, cardiovascular disease, and stroke

There are currently about **11,000** Australians on dialysis and **1400** Australians on the waitlist for a kidney transplant

Treatment of chronic kidney disease and kidney failure costs Australia around **\$1 billion** annually

Kidney disease and children

Chronic kidney disease is a common and serious problem in Australia, currently impacting 1.7 million Australians, and costing our economy approximately \$1 billion every year. Over 11,000 Australians are currently on dialysis, and 1400 patients are waiting on the kidney transplant list.

Kidney disease means that a person's kidneys are damaged and cannot filter blood the way they should, which leads waste to build up in the body.

In children, a significant proportion of kidney disease is inherited, and in many instances the disease-causing mutation is unknown. This makes both diagnosis and treatment more difficult.

Left untreated, chronic kidney disease may progress into kidney failure, for which there is no cure. Kidney disease patients are usually treated with dialysis, but a replacement kidney is the best option for some.

Treatment options for chronic kidney disease and kidney failure have not advanced much in the last 70 years. Long-term dialysis can severely impact quality of life and may provide a life expectancy of just five to 10 years. The waiting period for a replacement kidney in Australia is typically three to seven years. Some patients may never receive one.

Vision

To apply genetics and stem cell biology to improve diagnosis and therapy for genetic kidney disease, starting in children and extending to those with adult-onset disease.

Mission

To build a collaborative strategic team of world-class kidney researchers and paediatric nephrologists toward a targeted and multi-faceted research program that will advance our understanding of what causes kidney disease, and improve how we diagnose and treat patients.



MCRI's Kidney flagship

At MCRI we have the right expertise, experience, and facilities to drive toward new and urgently needed treatment options for kidney disease.

Our partner in the Melbourne Children's Campus, The Royal Children's Hospital, and MCRI's wholly owned subsidiary the Victorian Clinical Genetics Service, serve and treat a significant number of Australian babies and children with kidney disease.

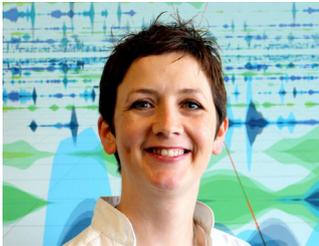
We are searching for the causes and pathways involved with paediatric kidney disease, and we have the critical capacity to develop novel, precise treatment options for our patients.

MCRI's Kidney flagship is a strategic, collaborative program uniting our best and brightest clinicians, biologists and bioinformaticians to tackle the currently unanswerable questions around kidney disease. We strive to give each and every child the opportunity for a healthy and happy future.

With the MCRI Kidney flagship, we can accelerate our understanding of the causes of paediatric kidney disease and develop new interventions.

Understanding causes and developing new interventions will not only improve children's lives, but could ultimately provide a pathway to novel interventions for adult-onset kidney disease and address a major burden on Australian lives and the Australian economy.

Leadership



A/Prof Cathy Quinlan



Prof Melissa Little

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.

