

Fetal Futures Program

Research overview

The Fetal Futures Program commenced in 2007 as a joint research venture between the Women and Infants Research Foundation and Channel 7 Telethon to assess the long-term outcomes of children who have problems in fetal life requiring medical interventions prior to delivery or soon after birth.

The Fetal Futures multidisciplinary team has now successfully completed several research projects: assessing children who required blood transfusions prior to birth secondary to the presence of maternal antibodies directed at antigens on the fetal red blood cells, reviewing the long-term physical and neurodevelopmental outcomes of children born with gastroschisis, a birth defect in the anterior abdominal wall, and most recently, reviewing the long-term outcomes of children born with a diaphragmatic hernia. The fourth project, investigating the use of non-invasive prenatal diagnosis to detect genetic disorders in the fetus, is nearing completion.

Research highlights

The Fetal Futures research team commenced its fourth project in 2014 in collaboration with Prof Nigel Laing and Dr Kirsten Nowak from the Harry Perkins Institute. In this proof of concept study we are evaluating the potential to use non-invasive genetic technology to assess pregnancies for the presence/absence of serious genetic conditions without the need to perform invasive diagnostic techniques such as amniocentesis or chorionic villus sampling. If successful, this project has the capacity to dramatically alter how prenatal diagnosis for monogenic disorders is provided by using maternal blood rather than invasive pregnancy tests. This project is nearing completion in terms of data collection and analysis will soon commence.

Research achievements

Outcome data from the Fetal Futures Program has been presented at a number of international scientific meetings and published in medical journals.

In 2015, data from the long-term follow-up of children born with a diaphragmatic hernia was presented at the Perinatal Society of Australia and New Zealand Annual Scientific Meeting by Dr Jason Tan.

Data from the long-term neurodevelopmental outcomes of children born with gastroschisis has been accepted for publication (Harris EL, Hart S, Minutillo C, Ravikumara M, Warner TM, Williams Y, Nathan EA, Dickinson JE. Neurodevelopmental and psychological outcomes of congenital gastroschisis: a cohort study. *J Pediatr Surg* 2015).

The research team of the Fetal Futures Program are grateful to the children and their families who have participated in our studies and to Channel 7 Telethon Trust for their fiscal support of this research endeavour.

THE TEAM

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Sponsors

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