

## CASE STUDY

# GENETIC TEST FOR PREGNANCY RISK CLOSER TO REALITY

**Robinson Institute researchers, led by Associate Professor Claire Roberts in the Placental Development Group, are working on developing a world-first genetic test that can predict which pregnancies are at risk of complications long before symptoms arise.**

Researchers have identified subtle variations in specific genes within the mother, father or baby that indicate the mother is more likely to suffer from pregnancy complications.

Pregnancy success is determined by a complex interaction of maternal, paternal and environmental characteristics that together dictate how well the placenta develops and functions and how the mother adapts to pregnancy.

Defects in placental development and function are implicated in common pregnancy complications ranging from miscarriage, through preeclampsia, pre-term birth and fetal growth restriction.

**The problem with complications is that we are currently unable to predict which women are at risk until symptoms develop, and then therapies can be too little, too late.**

This research advancement will permit tailored and potentially life-saving antenatal care and constitutes a significant leap forward in the care of pregnant women and their babies.

The research has also identified potential therapies for use in early pregnancy to improve placental development and function and reduce the risk of pregnancy complication.

The Research Centre for Reproductive Health is part of the international SCOPE (Screening for Obstetric and Pregnancy Endpoints) program. Through the South Australian arm of this study we have recruited almost 1,500 patients and have taken samples from mother, baby and father to build a pregnancy biobank to screen candidate markers of pregnancy disease.



Over 1500 patients recruited and samples added to our biobank.



*Below: Associate Professor Claire Roberts*

