

MRI-UQ Winter Research Project Description

Project title:	The impact of alcohol on growth pathways in the human placenta
Project duration:	6 weeks
Description:	Alcohol is one maternal insult known to affect fetal growth and development, impacting upon fetal lifelong health. Alcohol consumption during early pregnancy may alter the HPA axis and expose the fetus to excess glucocorticoids resulting in many adverse effects including risk of metabolic disease and restricted growth. Many of the current finding associated with the impact of alcohol consumption on the fetus and placenta have been conducted in animal studies but we want to know if we can detect changes in human placenta based on maternal report of alcohol consumption in the peri-conceptual period. Alcohol dehydrogenase is involved in the metabolism of alcohol and is expressed in the human placenta. The aim of the current study is To measure growth factor genes in placentae from pregnancies where mothers either consumed or did not consume alcohol in early pregnancy
Expected outcomes and deliverables:	This project will allow students to be part of a research team and gain some skills in laboratory techniques especially in relation to quantitative PCR. The data will then be analysed in relation to subject characteristics and students will gain some expertise in basic statistical methods. The work will help our team determine whether placental function changes with maternal consumption of alcohol in pregnancy and if we can identify it through changes in the expression several genes associated with fetal growth.
Suitable for:	Students with a undergraduate biomedical background are encouraged to apply
Primary Supervisor:	Prof Vicki Clifton
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