

## **Immune function after placental restriction and dietary methyl supplementation**

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Maternal methyl donor intake during pregnancy has been linked to increased incidence of asthma in children, suggesting impaired immune responses. Little is known about how growth before birth affects immune function into later life. As part of a larger NHMRC-funded study, we are testing whether feeding the mother extra methyl donors in the diet can improve metabolic outcomes, particularly for insulin action, in the growth-restricted lamb. An Honours student will be involved in testing circulating immune responses to injection of a stimulus (ovalbumin), to assess the effects of growth before birth, neonatal growth, and maternal methyl donors in late pregnancy, on immune function. We will use our model of placental restriction in the sheep for this study, allowing this hypothesis to be directly tested in induced growth restriction and within a population of similar genotype.

The student will gain skills in animal handling including venepuncture, immune challenge, analysis of circulating immunoglobulins, data analysis, written and oral presentation skills.