

Understanding the biology and consequences of nutrient sulfate deficiency in preterm infants

Project Title	Investigating the genetics and pathophysiology of sulfate deficiency in preterm infants.
Project duration:	Honours (February – November); PhD 3.0 - 3.5 years; MD-MPhil 1+ year
Availability	Commencing 2021 from Semester I or II
Description:	Sulfate is an essential nutrient for healthy growth and development. During pregnancy sulfate is supplied from mother to fetus via the placenta. Babies born very or extremely preterm (<32 weeks gestation) lack the capacity to generate their own sulfate and rapidly become sulfate deficient. Understanding the consequences of sulfate deficiency, particularly adverse neurodevelopment, and the genes that maintain sulfate supply to the developing brain is of great interest for A/Prof Dawson and his team.
Expected outcomes and deliverables:	Students will complete a lab-based and/or dry-lab project to meet the requirements of their Honours, PhD or MD-MPhil degree. Lab-based projects will use molecular biology tools to analyse sulfate biology maintenance genes and the molecular consequences of sulfate deficiency. Dry-lab projects will involve the curation and analyses of existing online resources related to sulfate biology and preterm infants.
Suitable for:	<ol style="list-style-type: none"> 1. Honours students or graduates with a background in biomedical sciences. 2. Medical students with an interest in neonatology.
Primary Supervisor:	A/Prof Paul Dawson
Further info:	<p>Students should contact A/Prof Dawson prior to submitting an application.</p> <p>e: paul.dawson@mater.uq.edu.au</p> <p>t: 07 3443 7554</p>