



Project Title: Diet and human islet transplants		Code: WIMR2
Host School / Institute: Westmead Institute for Medical Research		Address: Level 6, Westmead Institute for Medical Research, Westmead
Certificates & Clearances required: No		
Primary Supervisor: Prof Jenny Gunton		
Phone: 02 8890 8089	Email: jenny.gunton@sydney.edu.au	
Co-Supervisor/team: Heather Burns, lab manager and Charmaine Cheung, MPhil student		
Project Type: Laboratory based; Data Analysis		
Project Category: Endocrinology/Metabolism		
Skills / Attributes of a successful student: Ability to read and synthesize literature. Data entry, learning about analysis. Enthusiasm!		
Project Keywords: Diabetes; islets; transplantation; diet		
Project Description: <p>We're transplanting human islets into diabetic mice (which are immunodeficient so they don't reject the transplant), and following them for islet function and diabetes. While it sounds like a simple question, it is actually not known which diets cause human islets to fail. We will be testing a number of diets for their effect on glucose tolerance in the transplanted mice.</p> <p>Grafts (transplants) will be collected for gene expression by real-time PCR and histological studies, so the student will observe mouse physiological studies, and they will do their analysis, insulin ELISA, RNA extraction, cDNA synthesis, real time PCR and histological experiments with direct supervision from the lab manager and an MPhil student. The student will write a report based on the results. This would be very likely to be suitable for submission as an abstract to ESA / ADC next year, and certain to be suitable for Westmead Hospital week and Westmead Showcase in 2020.</p>		