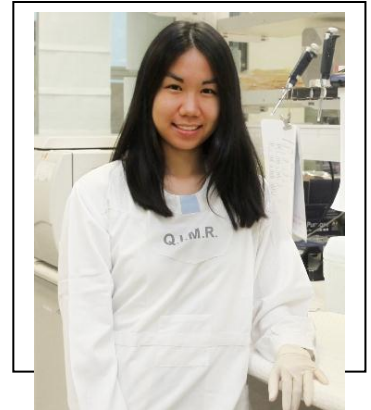




National Research Program PhD Scholarship

Researcher:	Miss Melody Cheong
Institute:	Queensland Institute of Medical Research (QIMR)
Project title:	Enhancing graft versus leukaemia effects post stem cell transplant
Disease focus:	Blood cancers (stem cell transplants)
Annual Funding:	\$40,000
Funding period:	2012-2014



Project summary

Queensland Institute of Medical Research PhD student, Miss Melody Cheong, is studying a new treatment option to improve stem cell transplants in blood cancer patients.

A donor stem cell transplant is a leading treatment option for many blood cancers. The donor stem cells repopulate the patient's bone marrow, producing healthy white blood cells to fight the blood cancer – a process known as the graft-versus-leukaemia (GVL) effect.

GVL is closely associated with graft-versus-host disease (GVHD). In GVHD, the donor white blood cells attack the patient, with a potentially fatal outcome.

Melody is investigating how the immune system clears away cancer cells to identify ways to help improve this process in transplant patients.

Her aim is to reduce GVHD and its associated immune-deficiency while promoting the immune system's clearance of leukaemia.

"The white blood cells that kill residual cancer cells post transplant are unfortunately the same cells that can also cause graft-versus-host-disease so it's critical to understand how these cells contribute to both processes," said Melody.

"In particular, I'm looking at the role dendritic cells play," she said.

"These specialised white blood cells can instigate and control the immune response.

"From preliminary research conducted by my supervisor, Professor Geoff Hill and from data I generated in my Honours year, it appears that transferring donor dendritic cells can help promote GVL and reverse GVHD."

Professor Hill is a previous recipient of a Leukaemia Foundation research grant.