



LEUKAEMIA FOUNDATION OF QUEENSLAND

Annual Research Report Form for 2009

Name of PhD recipient: Renee Robb

Institution: Queensland Institute of Medical Research

Research Project Title: Targeted modulation of immune responses in graft versus host disease

Brief lay summary of findings to date:

Bone Marrow Transplantation (BMT) involves replacing leukaemic cells with normal blood cells from a genetically similar individual. A complication arising from BMT is graft versus host disease (GVHD). This occurs when transplanted cells attack the recipient. We are investigating multiple different aspects of immune modulation with the aim of reducing deleterious GVHD effects. We have identified a signalling pathway in the immune system which results in a significant decrease in GVHD related mortality in a murine model. Further investigations are underway to determine specific effects of this signalling which are resulting in this reduced mortality. We are also investigating a particular cell subset called a regulatory T cell, which controls over-reactive immune responses. This regulatory T cell is only present post-BMT, suggesting that it is playing an important role in regulation of immune responses in this setting.