

2015 ADS Diabetes Australia Research Grant

Generation of islets in adipose tissue by *Id3* ablation



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Islet transplantation is a promising strategy to restore normal glucose levels in type 1 diabetic patients, but there are major drawbacks such as the shortage of donors and the rejection of the cells by the immune system. The use of stem cells to grow islets is promising, but so far only single insulin containing cells have been produced and they do not release insulin normally. This project

is based on the remarkable and unprecedented discovery that deletion of the gene *Id3* leads to the formation of whole islets in fat. This is the first time that formation of whole islets outside the pancreas has been observed. The proposed studies aim to characterise the islets in adipose tissue of *Id3* knockout mice, determine their origin, and evaluate their potential use to restore insulin production in type 1 diabetes.