



## 2 new research grants could find a cure for diabetes and prevent complications from developing

**The Diabetes Research Foundation of WA has just awarded 2 new research projects that have the potential to change the lives of millions of people who live with diabetes every day.**

### ***Understanding the role of the protein SLIRP in diabetes***

Professor Peter J Leedman

Western Australian Institute for Medical Research

Despite the introduction of several new therapeutic agents for diabetes in the past few years, new treatments that target different pathways is still a major goal. We have discovered a protein called SLIRP, which is a regulator of glucose metabolism. In preliminary studies, mice lacking SLIRP show abnormal regulation of some key genes responsible for maintaining glucose levels. This project aims to evaluate the functional role of this protein with emphasis on how it regulates insulin action and its effect on diabetic complications, such as diabetic kidney disease.

We envisage these studies will show SLIRP is an important regulator of glucose metabolism and insulin action, and may regulate genes involved in the development of specific diabetic complications. This may lay the foundation for developing strategies to silence SLIRP as an effective treatment and prevent complications.

### ***Generating insulin producing cells***

Prof Grant Morahan

The Centre for Diabetes Research

Type 1 diabetes mellitus (T1D) is a chronic autoimmune disease caused by the destruction of insulin-secreting  $\beta$  cells, resulting in insulin deficiency. The prevalence of T1D in Australia is amongst the highest in the world and rates are increasing by 2-3% per year. At present, the only routinely available treatment for T1D is insulin given as either multiple daily injections or by a pump. The ultimate goal of T1D research is to cure diabetes by supplying a renewable source of transplantable human  $\beta$  cells.

This project aims to establish how human fetal pancreatic tissues effectively separate into Insulin producing cells and investigate whether these could reverse diabetes after transplantation. Identification of an effective source of insulin secreting cells for a therapy would expand our knowledge of the best way to develop  $\beta$  cells and would certainly mark a milestone towards a cure of type 1 and some forms of type 2 diabetes.

*The DRF would like to congratulate Professor Leedman and Professor Morahan, this was a tough choice as the applicants were all of a high standard. We look forward to hearing progress in this research as it comes to hand.*