

November 13, 2009

Media Statement

WA TO PLAY KEY ROLE IN BREAKTHROUGH DIABETES RESEARCH

With the head of the Asia Pacific arm of the world's largest genetic study into type 1 diabetes based in Perth, Western Australia is poised to play a major role in the next step towards understanding the genetic causes of the chronic disease.

Professor Grant Morahan from the Western Australian Institute for Medical Research (WAIMR) is leading an international team of scientists which has just been awarded US\$6.6 million by the National Institutes of Health (NIH) in the US to further their investigations into type 1 diabetes.

In May this year, the group's work that identified more than 40 genes, including 25 entirely new discoveries, that increase the risk of developing type 1 diabetes, was published in Nature Genetics.

Professor Morahan said the next phase of the research would look at precisely how the genes worked to increase a person's risk of being affected by the condition.

"This very important step in the quest to find out how to prevent or better treat type 1 diabetes involves discovering how these genes function and how they be linked to triggering the disease," he said.

"Understanding how variants in these genes can change their expression, or affect any other genes, could greatly expand the toolkit we have to tackle the disease which is affecting a growing number of people globally."

The first study involved screening blood samples from the International Type 1 Diabetes Genetics Consortium which contains samples provided by more than 12,000 people with type 1 diabetes across the world and more than 11,000 people without the condition – including 4,000 families in which two children have type 1 diabetes and more than 1,000 Australian families, who took part via the Australian Childhood Diabetes DNA Repository.

Professor Morahan said the research would not only be of benefit to understanding type 1 diabetes, but would also help develop the exciting new area of systems genetics – a term coined by Professor Morahan that describes the science of "the genetics of gene expression."

"Systems genetics is the next frontier in genetic research – it's work we have pioneered and this recognition by the NIH will allow us to apply this exciting technology to human studies," he said.

WAIMR Director Professor Peter Klinken said he was extremely pleased WA was continuing to play a part in this breakthrough research.

The Australian Childhood Diabetes DNA Repository has been funded by the National Health and Medical Research Council, with additional support from WAIMR, the Diabetes Research Foundation, Diabetes WA and The University of Western Australia.

World Diabetes Day takes place on Saturday November 14, 2009.

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