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Media Statement

WA TEAM LEADS NEW STEP FORWARD IN UNDERSTANDING TYPE 1 DIABETES

WA scientists have gained a deeper understanding of how type 1 diabetes disrupts the body's immune system – a finding that could help focus the search for a cure for the condition.

The discovery, by the team at WA's Centre for Diabetes Research in Nedlands, has been published in a recent edition of the international Journal of Immunology, and was selected amongst the best papers printed by the publication.

Professor Grant Morahan, who led the team, explained that the work revealed that, unlike many other genetic diseases, the genes that caused type 1 diabetes did so by regulating the expression levels of other genes, rather than by making changes in proteins.

"This is not what most people would have expected and is a new insight into the mechanisms causing type 1 diabetes," he said.

"This discovery required international collaboration and sophisticated computer science and was in a field I named 'systems genetics'."

"Our finding suggests the cure for this condition will most likely lie in treatments that regulate the whole of the immune response, not just particular parts of it."

Professor Morahan said the finding also shed new light on other complex genetic diseases.

"This is a medical research game changer in that it alters our understanding not only of how type 1 diabetes impacts the body but likely also other complex genetic diseases such as cancer, type 2 diabetes and heart disease," he explained.

Sherl Westlund, executive director of Diabetes Research WA, which helped fund the discovery, said any research that helped scientists hone in on the best avenue for a cure would be welcomed by those affected by diabetes.

Diabetes Research WA helps fund globally-significant locally-based research projects into all forms of diabetes. Based at Royal Perth Hospital, is the state's longest running diabetes research funding group – and this year celebrates its 40th anniversary. Diabetes Research WA has now distributed more than \$4.7 million dollars for WA-based research into diabetes.

For information, please visit www.diabetesresearchwa.com.au or call (08) 9224 1006.

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