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Media Statement

## **WA RESEARCHERS REVEAL DIABETES BREAKTHROUGHS**

As part of National Diabetes Week (July 12-18), WA researchers have revealed they are making significant inroads into a next generation therapy that could cure type 1 diabetes and are also driving an innovative new technique that could give rise to better treatments for type 2 diabetes.

Scientists at WA's Centre for Diabetes Research, directed by Professor Grant Morahan, have identified how to produce pancreatic insulin-secreting beta cells from precursor cells in mice and have shown the same methods can work in humans.

"This breakthrough is paving the way for the creation of a new type of cell replacement therapy and, in doing so, deliver either more permanent treatments or a cure for type 1 diabetes which is caused by the destruction of insulin-producing pancreatic beta cells," said research leader Dr Fang-Xu Jiang.

"Current islet cell replacement therapy is limited by a shortage of pancreas donors but this fresh approach does away with the need for donors."

"From here, if we can secure funding, we'll be able to partner with an Australian company to make enough insulin-secreting cells to treat people with type 1 diabetes and then progress to human clinical trials.

"The research team is also working on a method that will rejuvenate burnt out beta cells in type 2 diabetes.

"A person who has had type 2 diabetes for many years may still have beta cells but they are unable to produce enough insulin to control blood sugar levels," said Dr Jiang.

"We're using an entirely different strategy to demystify for the first time exactly why these cells aren't functioning.

"In our experimental system, we can now rejuvenate 'burnt out' beta cells so they begin making enough insulin again.

"We now need investment to turn this method into a more effective, targeted treatment for type 2 diabetes."

Professor Morahan said: "These are exciting projects that, with enough financial support, could be real game-changers in treating or curing diabetes."

Sherl Westlund, executive director of Diabetes Research WA, which has helped fund the Centre, said it was critical these projects were taken to the next level.

"It would be a tragedy for these breakthroughs to stay in the scientific domain; we're working hard to raise the funds to ensure these advances have the best possible chance of improving the lives of those with diabetes," she said.

Worldwide, 387 million people are living with diabetes and, in Australia, about 280 people develop diabetes every day.

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