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Media Statement

WA RESEARCHERS FIND NEW WAY TO DEFEND AGAINST TYPE 2 DIABETES

A team from WA's Centre for Diabetes Research has identified a substance that protects cells from triggering type 2 diabetes.

Type 2 diabetes affects 1.4 million Australians and is caused when insulin-producing cells stop functioning properly.

Researcher Associate Professor Fang-Xu Jiang said it had been established that low levels of vitamin D3 played a role in the development of type 2 diabetes.

"We've known for several decades that low vitamin D3 levels are associated with increased risk for type 2 diabetes, however the underlying mechanism that leads to type 2 diabetes has never been clear," Associate Professor Jiang said.

Numerous international clinical trials have tested the benefits of supplementing vitamin D3 in pre-diabetic patients without success.

"Our research team began searching for potential drugs that could signal through the vitamin D3 pathway and restore the function of failing insulin producing cells," Associate Professor Jiang said.

Fellow researcher Abraham Neelankal John said the study ultimately discovered a substance that protected insulin-producing cells from shutting down and leading to diabetes.

"Our investigation uncovered a compound that appears to prevent the onset and delay the progression of pre-diabetes and early diabetes," Mr John said.

"The effect was confirmed in pre-clinical models and we were able to show that the vitamin D3 family prevents insulin producing cells from loss of function.

"More research is needed but if proven in clinical trials, it would certainly become a drug for people at risk of developing type 2 diabetes and/or in the early stages of type 2 diabetes. Our ultimate aim is to regenerate the health of people who suffer from type 2 diabetes."

The study was published in the journal *Diabetes and Metabolism*.

Sherl Westlund, executive director of charity Diabetes Research WA, which helps fund the Centre for Diabetes Research's work, said the breakthrough was extremely exciting.

"It's vital that research such as this is supported over the long term because it has huge potential to change the lives of so many people at risk of or affected by type 2 diabetes," said Ms Westlund.

The Centre is based at the Harry Perkins Institute of Medical Research in Perth.

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