

# First human trial of potentially game-changing diabetes treatment set to commence

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The product is a natural extract derived from the dahlia plant. Credit: University of Otago

University of Otago researchers are ready to take a significant step in the development of a new natural product that could potentially prevent diabetes.

The product is a natural extract derived from the dahlia plant. Principal Investigator, Dr Alexander Tups of the University of Otago Centre for Neuroendocrinology, says it shows promise for people with prediabetes.

"If taken early before [diabetes](#) develops it may stop the progression to diabetes. It might be prescribed together with lifestyle interventions but possibly it may even stop the progression to diabetes if taken on its

own. It targets specific symptoms which contribute to the development of diabetes and intake may only be required for a certain amount of time to reverse the disease," Dr Tups says.

University of Otago researchers in partnership with Plant and Food Research have been investigating this potential game-changer - taken as a supplement in a capsule - since 2015. Research on mice has shown the extract to considerably reduce [blood-glucose](#) levels.

The next step is a preliminary clinical study, with at least 20 participants required from the Wellington area where testing will take place.

Candidates need to be male, between 18 and 65 years old, and have prediabetes.

University of Otago, Wellington, Endocrinologist, Associate Professor Dr Jeremy Krebs says the product shows huge potential to positively impact millions of people worldwide.

"Prediabetes is the state where [blood glucose levels](#) are higher than normal but not high enough to meet criteria for diabetes. About 25% of adult population have prediabetes, and 70% of people with prediabetes will go on to develop diabetes at some time if they don't do anything about it. So it is a time when there is a chance to reverse the process," Dr Krebs says.

The product, derived from an extract of a specific variety of dahlia, is able to lower the spikes observed in blood glucose after a meal, in an animal model for prediabetes, without any observed side effects. Dahlias are recognised as safe by the Australian Therapeutic Administration, and Dr Tups says candidates considering taking part in the human trial can do so with peace of mind.

"In large scale animal studies we have not observed any side effects at high doses or prolonged intake. It is a natural extract from an edible plant so we anticipate it to be very safe," he says.

Though still in development, the product has already sparked interest from New Zealand companies and overseas pharmaceutical companies. The University of Otago has filed a provisional patent application, with a view to filing an international patent application as development continues.

"We want to demonstrate that the product lowers spikes in blood glucose during a so called glucose tolerance test. This is the gold standard to detect diabetes in humans," Dr Tups adds.

Due to Intellectual Property and commercial sensitivity constraints, full details of the product cannot be released publicly at this point. However if positive progress continues it could be available within 24 months.

Those taking part in the preliminary clinical study – being conducted in the Endocrine, Diabetes and Research Centre at Wellington Hospital - would need to attend on four occasions to have blood samples taken after taking a capsule of the dahlia extract followed by a glucose drink. The study is ready to commence as soon as participants are found. If a man is interested but doesn't know if he has prediabetes, he could check out his risk by completing the risk test on [doihaveprediabetes.org](http://doihaveprediabetes.org).

Men keen to take part should contact the research centre, by email on [diabetesresearch@ccdhb.org.nz](mailto:diabetesresearch@ccdhb.org.nz) or phone +64 4 806 2458. Participants will receive a small payment in recognition of their time.

Provided by University of Otago

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