

New therapy offers hope for halting the progression of diabetic kidney disease

August 31 2015



Monash University and Monash Health researchers have identified a possible new therapy for diabetic kidney disease, the major cause of chronic kidney failure in Australia and many other countries.

Researchers Dr Greg Tesch and Associate Professor David Nikolic-Paterson from the Chronic Kidney Disease and Transplantation Group at the Monash Centre for Inflammatory Diseases have shown that a [novel drug](#) inhibiting ASK-1 can halt the progression of [diabetic kidney disease](#).

The world-first study was published last month in the prestigious journal *Diabetes*.

"We tested a selective inhibitor of apoptosis signal-regulating kinase-1 (ASK1) in mice with pre-existing diabetic kidney disease and discovered it completely halted the progression of the disease," said Dr Tesch.

"And in some cases the disease actually improved."

Significantly, studies by our group and others have shown that ASK-1 drives multiple mechanisms of [kidney injury](#) including inflammation, cell injury and fibrosis, which are all important factors in the progression of diabetic kidney disease.

"Unlike current therapies that target hypertension and glycemic control and generally slow down the progression of disease, blockade of ASK-1 appears to stop the progression of diabetic kidney disease," said Dr Tesch.

"Interestingly, ASK-1 blockade does not target hypertension so it's possible that combining this novel drug with hypertension drugs may lead to even better outcomes for patients."

Diabetes is the single biggest cause of end-stage renal failure in most countries—and over a million Australians have some level of [chronic kidney disease](#).

"If we can halt the progression of diabetic kidney disease, we may avert millions of people from requiring dialysis or [kidney transplantation](#) to survive," said Dr Tesch.

Based on Dr Tesch's findings, a phase 2 clinical trial has now been established to examine the safety and efficacy of an ASK-1 inhibitor in

patients with diabetic kidney disease.

Provided by Monash University

Citation: New therapy offers hope for halting the progression of diabetic kidney disease (2015, August 31) retrieved 3 May 2024 from <https://medicalxpress.com/news/2015-08-therapy-halting-diabetic-kidney-disease.html>

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