

Allergy drug may be effective in kidney disease

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Dr Poh-Yi Gan & Ms Kim OSullivan

A current treatment for asthma may benefit patients with kidney disease, according to latest research at Monash University.

Published in the prestigious *Journal of the American Society of Nephrology*, Dr Poh-Yi Gan and Kim O'Sullivan from the Centre for

Inflammatory Diseases showed in animal models that allergy drug disodium cromoglycate can be used as an effective treatment for vasculitis.

Vasculitis, or inflammation of the blood vessels, is an autoimmune disease that can lead to serious organ damage, especially in the kidneys.

"For the first time, our research has uncovered a new role for mast cells and their effect in non-allergic inflammatory [kidney disease](#)," said lead study author Dr Gan.

"Mast cells are [immune cells](#) that are traditionally thought to be responsible for allergic diseases such as asthma, hay fever, and food allergy including anaphylaxis."

While mast cells are important in suppressing autoimmunity, they can also make autoimmune diseases such as vasculitis worse.

"Using disodium cromoglycate in a mouse model of vasculitis stabilises the harmful effects of mast cells and leaves their immune modifying effect intact," said lead co-author Ms O'Sullivan.

"I also studied kidney biopsies from patients with vasculitis and found that activated [mast cells](#) were prominent, suggesting they play an injurious role in the human disease."

Disodium cromoglycate, commonly used in Europe for allergic conditions including asthma, is relatively cheap and has very few side effects.

"This research shows we may be able to repurpose an existing drug for different forms of inflammation," said Head of the Centre for Inflammatory Diseases, Professor Richard Kitching.

"Current treatments for vasculitis suppress the immune system and have many nasty side-effects, however, disodium cromoglycate is a non-toxic medication that may dampen acute flares of vasculitis."

Importantly, this breakthrough research may lead to a treatment for [vasculitis](#) that effectively manages inflammation and symptoms while not suppressing the immune system.

More information: T. Yoshida et al. Endothelial Kruppel-Like Factor 4 Mediates the Protective Effect of Statins against Ischemic AKI, *Journal of the American Society of Nephrology* (2015). [DOI: 10.1681/ASN.2015040460](#)

Provided by Monash University

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