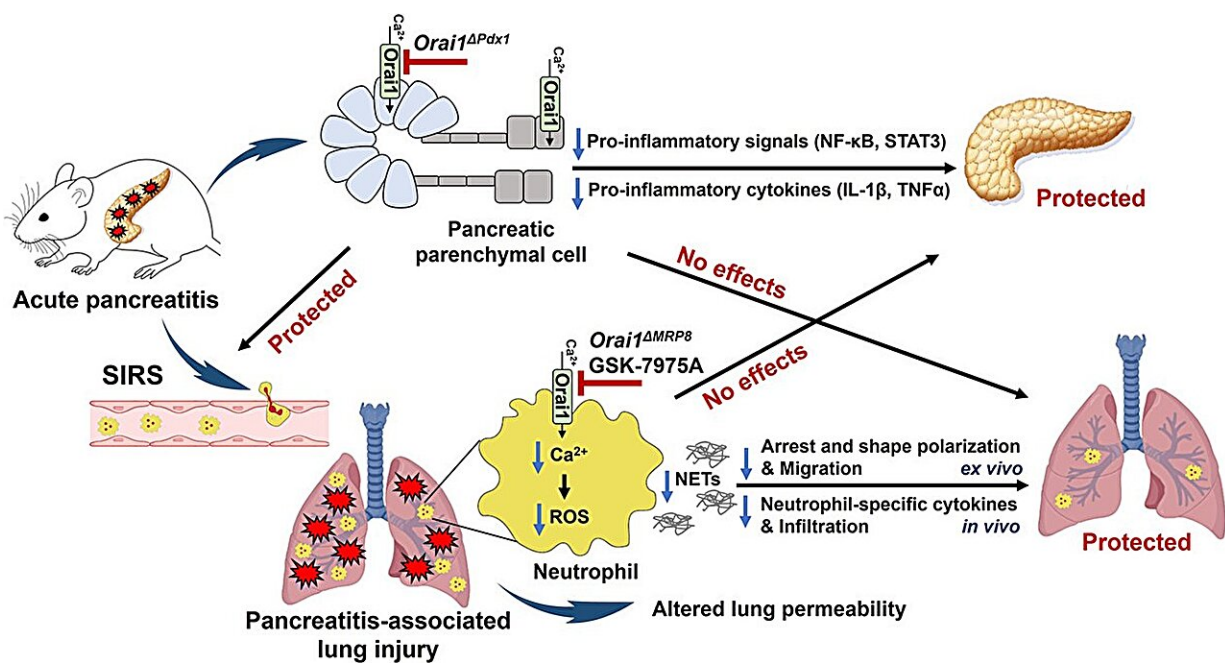


Altering key ion channel found to protect against pancreatitis-associated acute lung injury

January 11 2024



Credit: *Function* (2023). DOI: 10.1093/function/zqad061

A group of Chinese researchers has conducted a mouse study to determine the role of Orai1, a membrane calcium-selective ion channel protein, in pancreatitis-associated acute lung injury.

Their findings, [published](#) in the journal *Function*, reveal that Orai1 in

pancreatic parenchymal cells (cells responsible for detoxification in the liver and filtering toxins in the kidneys) mediates pancreatic acute lung injury in [acute pancreatitis](#).

Mice without Orai1 lose protection against localized pancreatic injury during acute pancreatitis. However, the protein does protect against pancreatitis-associated [acute lung injury](#) by blocking white blood cell-intrinsic functions.

"This study provided invaluable preclinical evidence for the feasibility of targeting ORAI1 in two distinct cellular sources," said Li Wen, MD, Ph.D., a professor and principal investigator at Peking Union Medical College Hospital in China, and lead author of the study. "This further emphasizes that systemic administration of Orai1 inhibitors is a promising therapeutic strategy as an early treatment of acute pancreatitis. We believe this will also help accelerate the clinical development of Orai1 inhibitors."

More information: Mengya Niu et al, Neutrophil-specific ORAI1 Calcium Channel Inhibition Reduces Pancreatitis-associated Acute Lung Injury, *Function* (2023). [DOI: 10.1093/function/zqad061](https://doi.org/10.1093/function/zqad061)

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