“The TRPA1 channel, “wasabi receptor”, plays a role in hypertensive kidney injury”

Hypertension is the second most common cause of chronic kidney disease. Inflammation participates in the development of hypertensive kidney injury. The TRPA1 channel, also known as “wasabi receptor”, expresses in sensory nerves and detects tissue damage stimuli, leading to the release of immune-regulating neuropeptides. Therefore, TRPA1 could be involved in the neuro-immune interaction that regulates renal inflammatory injury in hypertension.

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Dr. Ma is an Assistant Professor in the Department of Medicine. He has been working on transient receptor potential (TRP) channels for nearly ten years. He identified the blood pressure lowering function of TRPV1, “capsaicin receptor” (Cell Metabolism, 2010), and the anti-obesity effects of TRPM8, “menthol receptor” (J Mol Cell Biol, 2012; Hypertension, 2014). Currently, Dr. Ma is working on the role of TRPA1, “wasabi receptor”, in hypertensive renal injury. Dr. Ma has published more than 40 scientific papers in high impact journals such as Cell Metabolism, Hypertension, and JAHA, with more than 1200 citations. He was awarded the Outstanding Young Investigator Award by Academy of Cardiovascular Research Excellence.