Study identifies important regulator of chronic, low-level inflammation

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A new study by a team of Rosalind Franklin University researchers headed by Carl White, PhD, assistant professor of physiology and biophysics, has discovered that the degree of chronic inflammation caused by obesity is highly dependent on levels of the signaling molecule, hydrogen sulfide, which alters the activity of a calcium channel, Orai3. These findings establish the possibility of targeting Orai3 as a novel treatment for the treatment of obesity-related inflammation, which has the added benefits of reducing insulin resistance and the likelihood of of developing type 2 diabetes.

Featured as the December 15, 2015 cover of the journal *Science Signaling*, the paper is co-authored by investigators from the Department of Physiology and Biophysics, including lead authors Gopal V. Velmurugan, PhD, and Huiya Huang, PhD, and members of RFU's Department of Microbiology and Immunology and researchers at Northwestern University.

Carl White, PhD, principle investigator and senior author on the study, comments on the findings in the journal's weekly podcast.

More information: G. V. Velmurugan et al. Depletion of H2S during obesity enhances store-operated Ca2+ entry in adipose tissue macrophages to increase cytokine production, *Science Signaling* (2015). DOI: 10.1126/scisignal.aac7135