Nrf2 Signaling Pathway in Cardiovascular Health and Disease

Message from the Guest Editor

Dear Colleagues,

Nrf2, a transcription factor, has been extensively studied since it was cloned in 1994. It controls the basal and induced expression of over 1000 genes in cells that can be clustered into several functional categories ranging from redox homeostasis and detoxification to metabolism and protein quality control. The historical view of Nrf2-mediated cellular defense has been challenged by the emerging evidence of Nrf2-mediated cell death, revealing Nrf2-mediated dichotomy in a context-dependent manner in various tissues and organs, including the cardiovascular system.

This Special Issue will examine Nrf2-mediated cardiovascular protection and damage as well as the underlying molecular mechanisms, therapeutic potential of targeting Nrf2 in treating cardiovascular disease, and current gaps and future directions for Nrf2 signaling research in the cardiovascular system.

Keywords: Nrf2; Keap1; redox signaling; proteasomal degradation; autophagy; metabolism; cell death; vascular disease; heart disease; drug target