

Special Issue

Role of Mitochondria in the Pathophysiology of Cardiovascular Diseases

Message from the Guest Editors

Mitochondrial dysfunction has been recognized as pivotal in the pathogenesis and progression of CVDs, such as atherosclerosis, cardiac hypertrophy, myocardial infarction, ischemia–reperfusion injury and heart failure. This dysfunction encompasses defects in mitochondrial respiratory chain function, metabolic substrate utilization, mitochondrial network organization and dynamics, mitophagy, biogenesis and redox signaling. Moreover, impaired mitochondrial ROS handling alters cellular ion homeostasis, critical for cardiac electrophysiology, thereby increasing the propensity for cardiac arrhythmias. A deeper understanding of mitochondria and their role in the molecular mechanisms underlying CVDs is imperative for the development of therapeutic strategies.

This Special Issue will focus on the role of mitochondrial dysfunction in the development and progression of CVDs.

Guest Editors

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