

Special Issue

Spotlight on Cardiovascular Physiology and Related Diseases: Impact of Sex Differences

Message from the Guest Editor

Cardiovascular diseases remain the leading cause of morbidity and mortality worldwide. A central pathophysiological driver of CVD is impaired vascular function, characterized by endothelial dysfunction and inflammation associated with increased oxidative stress and metabolic disturbances. In this context, innovative signal-processing algorithms offer promising tools for identifying subtle vascular alterations that precede overt disease. Nevertheless, the search for reliable biomarkers of cardiovascular system dysfunction remains challenging, and significant knowledge gaps persist despite major advances in our understanding of cardiovascular physiology. Sex and age are well-established determinants of cardiovascular health, yet the precise mechanisms underlying sex-specific differences remain incompletely defined. Against this background, this Special Issue aims to bring together a collection of studies highlighting current knowledge and ongoing challenges associated with CVD physiology with emphasis on sex differences in cardiovascular physiology and related disorders.

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