Special Issue

The Role of Oxidative Stress in Cardiovascular Diseases

Message from the Guest Editors

Cardiovascular diseases (CVD) are the leading cause of morbidity and mortality worldwide. The production of reactive oxygen species (ROS) in the heart and blood vessels plays an essential role in maintaining the homeostasis of the cardiovascular system. However, ROS production is a double-edged sword. Transient and low-level ROS production within the cardiovascular system triggers cell signaling pathways that lead to hormetic adaptation. In contrast, the continuous production or accumulation of high levels of ROS results in pathological injury in the cardiomyocytes and vascular cells. Oxidative stress occurs when the overproduction of ROS overwhelms the elimination ability of antioxidants. Accumulating evidence has shown that oxidative stress plays a critical role in the development and progression of CVD. This Special Issue of *Cells* aims to address the complexity of ROS signaling in CVD, to update our knowledge on the regulation of oxidative stress in cardiovascular disorders, and to identify potential clinical therapeutical targets. We welcome original research and review articles on state-of-the-art technologies and the latest findings in the field.

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Deadline for manuscript submissions

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About the Journal

Message from the Editorial Board

Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 16 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).