Special Issue

Redox Resilience in Mitochondrial Health and Disease: New Advances in Cellular Defense Mechanisms

Message from the Guest Editors

This topic aims to explore the molecular mechanisms underlying mitochondrial redox resilience, focusing on how mitochondria manage oxidative damage, facilitate metabolic reprogramming, and coordinate protective pathways. Investigating mitochondrial redox-sensitive pathways and the interplay between mitochondrial dynamics and cellular stress responses will open new avenues for therapeutic interventions. Additionally, understanding how mitochondrial redox resilience can be harnessed or compromised in disease states offers promising strategies for drug development and precision medicine. We invite contributions from diverse fields, including molecular biology, biochemistry, systems biology, and clinical research, to advance the understanding of mitochondrial redox resilience as a cornerstone of cellular health. This journal will serve as a platform for cutting-edge discussions, fostering novel insights into how mitochondria balance redox homeostasis to preserve cellular physiology and mitigate disease.

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About the Journal

Message from the Editor-in-Chief

It has been recognized in medical sciences that in order to prevent adverse effects of "oxidative stress" a balance exists between prooxidants and antioxidants in living systems. Imbalances are found in a variety of diseases and chronic health situations. Our journal *Antioxidants* serves as an authoritative source of information on current topics of research in the area of oxidative stress and antioxidant defense systems. The future is bright for antioxidant research and since 2012, *Antioxidants* has become a key forum for researchers to bring their findings to the forefront.

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