Special Issue

Reactive Oxygen Species (ROS): Key Components in Infection Control, Wound Healing, and Cancer Therapy

Message from the Guest Editor

Reactive oxygen species (ROS) are central to numerous physiological and pathological processes, with dual roles in cellular signaling and oxidative stress. In recent years, ROS have gained increasing attention as critical mediators in therapeutic strategies for infection control, tissue repair, and oncology.

This Special Issue focuses on:
Infection control: including bactericidal mechanisms, immune defense modulation, and strategies against antibiotic-resistant pathogens and biofilms.
Wound healing: particularly the redox-regulated phases of inflammation, proliferation, and remodeling in acute and chronic wounds.
Cancer therapy: where ROS contribute to apoptosis induction, redox imbalance, immune activation, and improved response to chemotherapeutic and radiotherapeutic agents.

We welcome contributions addressing ROS-related mechanisms, antioxidant defense systems, and redox-sensitive signaling pathways. Special attention will be given to innovative therapeutic strategies that harness or modulate ROS—including drug delivery systems, biomaterials, and novel technologies such as cold atmospheric plasma (CAP) and plasma-activated media (PAM).

Guest Editor

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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.

Editor-in-Chief

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