

Special Issue on Using Reactive Oxygen and Nitrogen Species in Cancer Treatment

CALL FOR PAPERS

In the past few years, the field of free radical chemistry has received a great deal of attention. Free radical reactive oxygen species (ROS) and reactive nitrogen species (RNS) are generated by our body through various endogenous systems, exposure to different physiochemical conditions, or pathological states. Reactive oxygen nitrogen species (RONS) are also produced as metabolic byproducts in numerous diseases. Generation of RONS within living cells is due to the mitochondrial electron transport system, NADH oxidase, and cytochrome P450, which all play a role in various crucial developmental processes, such as cell differentiation and cell signaling pathways. Recently, RONS have gained enormous attention due to their widespread application in the diverse fields of biology and medicine including cancer treatment, wound healing, sterilization of surfaces, blood coagulation, and dental as well as skin treatment. Oxidative stress, arising as a result of an imbalance between free radical production and antioxidant defenses, is associated with damage to a wide range of molecular species including lipids, proteins, and nucleic acids. In biological sciences free radicals or reactive species have the potential to revolutionize the treatment of diseases such as cancer.

The main aim of this special issue is to assemble the latest research on the potential biological application of RONS in cancer treatment. This includes research on RONS induced oxidative stress within biological systems and applications to help treat various cancers and improve metabolic activities and immune functions, leading to cellular survival and cellular longevity. We also welcome articles highlighting antioxidants that act as free radical scavengers in the intracellular and extracellular environment to lower ROS levels and relieve oxidative stress.

We invite authors to contribute original research articles as well as review articles exploring the role of RONS in cancer regulation.

Potential topics include but are not limited to the following:

- ▶ The use of reactive oxygen species (ROS) and reactive nitrogen species (RNS) in cancer treatment
- ▶ Cancer biology and treatment by using antioxidants
- ▶ Oxidative stress and cancer
- ▶ Cell survival and proliferation
- ▶ Cancer biology and treatment
- ▶ Dietary antioxidants and cancer prognosis
- ▶ Immunomodulation and autophagy
- ▶ Immunogenic cell death (ICD) and damage associated molecular patterns (DAMPs)
- ▶ Redox status and metabolic circuits in cancer

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/omcl/piron/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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