Special Issue

New Insights into Oxidative Stress and Free Radical Biology

Message from the Guest Editor

The tumor microenvironment (TME) plays a crucial role in defining the progression of different cancers. Reactive oxygen species (ROS) produced by tumor cells and tumor-infiltrated immune cells are essential in shaping the TME. Oxidative stress is defined as an imbalance between production of ROS and their elimination by protective antioxidants. OS can cause DNA mutations and/or genomic instability. This leads to the initiation and progression of cancer. However, when discussing the role of OS in cancers, ROS act as a double-edged sword. Although low levels of ROS can induce a proliferative effect and induce signaling pathways, high levels of ROS can cause damage to cancer tissues and cell death. Antioxidants can spare and protect normal tissues. However, existing data indicate that antioxidants may also protect tumor cells from oxidative damage induced by some chemotherapeutic agents. In this issue, we discuss recent findings relating oxidative stress and ROS to the TME in cancer, and responses to chemo- and radiotherapy. In addition, we discuss how different studies may identify new targets that will help the development of drugs for cancer therapy.

Guest Editor

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Biomedicines (ISSN 2227-9059) is an open access journal devoted to all aspects of research on human health and disease, the discovery and characterization of new therapeutic targets, therapeutic strategies, and research of naturally driven biomedicines, pharmaceuticals, and biopharmaceutical products. Topics include pathogenesis mechanisms of diseases, translational medical research, biomaterial in biomedical research, natural bioactive molecules, biologics, vaccines, gene therapies, cell-based therapies, targeted specific antibodies, recombinant therapeutic proteins, nanobiotechnology driven products, targeted therapy, bioimaging, biosensors, biomarkers, and biosimilars. The journal is open for publication of studies conducted at the basic science and preclinical research levels. We invite you to consider submitting your work to Biomedicines, be it original research, review articles, or developing Special Issues of current key topics.

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