

Special Issue

Oxidative Stress and Disease: Basic and Biochemical Approaches

Message from the Guest Editor

Pollution, smoking, excessive alcohol consumption, and stress (external factors), in addition to metabolic processes in cells, such as respiration and digestion, produce many reactive oxygen species (ROS) and nitrogen species every day. These unstable molecules cause oxidative stress, an imbalance between ROS and nitrogen species in the cell, and affect its ability to neutralize them.

Moreover, oxidative stress is implicated in the development of diseases, including cancer, and many studies have investigated the use of antioxidants for the prevention and treatment of cardiovascular diseases and neurodegenerative disorders.

The determination of lipid peroxidation (MDA) and enzymes, such as catalase (CAT), superoxide dismutase (SOD), myeloperoxidase (MPO), and butyrylcholinesterase (BuChe), can provide information on the degree of oxidative stress. Furthermore, cytokines' and prostaglandins' monitoring provides a measure of the inflammatory state.

This Special Issue encourages manuscript submissions on oxidative stress, its biochemical pathways, and potential interventions to mitigate its harmful effects.

Guest Editor

Dr. Giuseppe Bruschetta

Department of Veterinary Sciences, University of Messina, Via Palatucci Annunziata, 98168 Messina, Italy

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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Editor-in-Chief

Prof. Dr. Maurizio Battino

Department of Odontostomatologic and Specialized Clinical Sciences,
Sez-Biochimica, Faculty of Medicine, Università Politecnica delle
Marche, Via Ranieri 65, 60100 Ancona, Italy

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