

Special Issue on **Oxidative Stress and Cardiovascular Dysfunction: From Basic Science to Applied Investigations**

CALL FOR PAPERS

Excessive production of reactive species and consequent oxidative damage are involved in the pathogenesis of a large number of pathological states, while, on the other hand, certain reactive species at low concentrations participate in signal transduction pathways. Great attention is continuously devoted to the research of factors that affect the increase in the production of reactive species, with which we are in daily contact, as well as the mechanisms of potential protection. Due to that fact there are increasing data regarding the investigations of different food ingredients and environmental factors that can change redox balance, and act prooxidatively or antioxidatively, and different mechanisms that mediate the effects of various reactive species and their potential molecular targets, as well as consequences of these reactions, there is a constant need for summarization of new knowledge and information.

Oxidative stress has an important role in pathogenesis of multifactorial disorders, such as asthma, diabetes mellitus, autoimmune disorders, cancers, Alzheimer's disease, and rheumatoid arthritis, but, above all, it has an important role in the pathogenesis of cardiovascular diseases, which make up the largest share of pathological conditions in the world and consequently have an incomprehensible sociomedical significance. Epidemiological evidence suggests that antioxidant supplementation could be one of the useful tools for decreasing the risk of morbidity as well as reducing the progression and alleviating complications of cardiovascular diseases. It is also important to know the mechanisms of deleterious action of different reactive species within the cardiovascular system in order to develop the most efficient approaches for prevention and treatment of each disorder individually. There are many uncertainties and doubts, as well as controversial results, regarding the role of certain free radicals, the efficiency of endogenous antioxidant systems, and the role of exogenous antioxidants in development and treatment of cardiovascular disorders which create the need for more detailed investigations using new methodological approaches and combining the most diverse research methods.

The aim of this special issue is to collect the latest results from various parts of the world concerning the role of oxidative stress in development of various cardiovascular disorders and the role of reactive species in the physiological regulation of homeostatic processes within cardiovascular system. We invite researchers to participate in this issue by submitting original research articles dealing with the problems of oxidative stress in pathogenesis and treatment of cardiovascular disorders.

Potential topics include but are not limited to the following:

- ▶ Role of oxidative stress in pathogenesis of various pathological conditions of the cardiovascular system
- ▶ Different maneuvers of antioxidative protection in cardiovascular diseases
- ▶ Increasing endogenous antioxidative capacity in cardiovascular diseases
- ▶ Specific interaction between reactive species and molecular targets in different cells and tissues in cardiovascular disorders
- ▶ Role of reactive species in cell signaling in cardiovascular (patho)physiology

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

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

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