



Oxidative Stress in Vascular Pathophysiology

Guest Editor:

Prof. Dr. Guillermo Zalba

Department of Biochemistry and
Genetics, University of Navarra,
31008 Pamplona, Spain

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Message from the Guest Editor

Low concentration of reactive oxygen species (ROS), especially superoxide anion and hydrogen peroxide, is essential for physiological cellular processes by modulating several signaling pathways. In contrast, oxidative stress resulting from an imbalance due to overproduction of ROS and/or the deterioration of endogenous antioxidant defenses is implicated in vascular disease, including hypertension and atherosclerosis, the main risk factors for stroke, myocardial infarction, and heart failure. Vascular oxidant-generating enzymes include NADPH oxidases, xanthine oxidases, lipoxygenases, mitochondrial oxidases, and nitric oxide synthases. Unravelling these underlying causes is essential to improve disease therapy.

This Special Issue will focus on novel mechanisms of oxidative stress, its impact on vascular inflammation and dysfunction, the identification of principal ROS-generating enzymes, with special focus on NADPH oxidase family and mitochondria, and the potential benefit of targeting these specific sources of oxidative stress to improve vascular function. We invite you to submit your latest research findings or a review article to this Special Issue.





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Editor-in-Chief

Prof. Dr. Alessandra Napolitano

Department of Chemical
Sciences, University of Naples
"Federico II", Via Cintia 4, I-80126
Naples, Italy

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.

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Antioxidants Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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