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# **Oxidative Stress, Pregnancy and Pregnancy-Related Diseases**

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### Message from the Guest Editors

Pregnancy is a physiological process that is associated with increased oxidative stress. A supraphysiological increase in oxidative stress is present in several tissues during pregnancy, but it is particularly focused on the human placenta, which results in vascular dysfunction and leads to disturbances in the supply of nutrients to the growing fetus. Furthermore, oxidative stress is a condition that alters crucial cell signalling mechanisms involved in the development of pregnancy and gestational diseases, including the regulation of vascular tone. Oxidative stress leads to modifications in the structure and function of biomembranes, cytoskeleton, proteins, and DNA, with a determinant impact on mitochondrial biogenesis and oxidative phosphorylation. Therefore, balanced generation of prooxidant/antioxidant species is required for a healthy pregnancy. This Special Issue aims to summarize the role of oxidative stress in the etiology and development of normal pregnancy and diseases of pregnancy and the defence mechanisms involved in these processes.









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# **Editor-in-Chief**

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### 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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