Special Issue

Oxidative Stress in Hemoglobin and Red Blood Cells

Message from the Guest Editor

Oxidative stress has a multitude of effects on the physiology of hemoglobin and red blood cells (RBCs). Hemoglobin, the protein responsible for oxygen transport in the blood, is highly susceptible to oxidative damage due to its constant exposure to oxygen and reactive oxygen species. Exposure to oxidative stress can induce various molecular and structural alterations in RBCs, thereby compromising their function. This oxidative damage not only impairs the oxygen-carrying capacity of RBCs, but also triggers a cascade of cellular responses. Understanding the mechanisms underlying oxidative stress in hemoglobin and RBCs is crucial for developing targeted interventions that mitigate its harmful effects and improve overall health outcomes. This Special Issue is focused on the effects of oxidative stress on RBCs and hemoglobin. We will consider in vitro, translational and clinical studies from all (bio)medical fields. Through this collection of studies, our aim is to promote a deeper understanding of the complex mechanisms underlying oxidative stress in hemoglobin and RBCs, providing insights that may pave the way for future therapeutic interventions and medical advances.

Guest Editor

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About the Journal

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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