

Special Issue on **Strategies for Modulating Oxidative Stress under Diverse Physiological and Pathological Conditions**

CALL FOR PAPERS

Oxidative stress occurs under numerous physiological and pathological conditions. The excess of reactive oxygen and nitrogen species, as well as the weakened antioxidant defense, is thought to play a significant role in the etiology of cancer, cardiovascular, neurodegenerative, and immune diseases, diabetes mellitus, obesity, aging, and others. Proantioxidant imbalance leads to the oxidative damage of several macromolecules, including DNA, proteins, and lipids that support the progress of many pathologies, including mutagen formation, cell dysfunction, and inflammatory state. Many efforts have been invested to understand the role of oxidative stress in the pathogenesis of chronic diseases. However, the effects of different strategies modifying oxidative stress on the development and prevention of these conditions are still not well understood and established. These strategies include not only supplementation with the substances that provide the antioxidant activity, but also different procedures, including physical activity, exercise, or therapeutic hypothermia and hyperthermia. It is extremely important to understand the mechanisms of operation of those strategies as to how they influence the antioxidant processes and in particular as to how they protect cells and organs against the deleterious action of the free radicals. Modern populations are affected by obesity, chronic diseases, and age related disorders such as dementia and Parkinson's disease. That is why the expanding of the knowledge in the field of possible therapies and enhancing antioxidant defense seems to be crucial for the world healthcare.

We invite investigators to submit their original research, clinical studies, and review articles, describing the current findings on therapies modifying pro/antioxidant balance in health and in disease progression. We are particularly interested in articles that might contribute to better understanding of the biochemical and molecular mechanisms involved in the therapeutic strategies that may decrease oxidative stress and in consequence may influence the inflammatory state.

Potential topics include but are not limited to the following:

- ▶ Potential topics include but are not limited to the following:
- ▶ Identification of new therapies with working on antioxidant alteration processes in animal and human cell models
- ▶ Impact of physical activity, exercise, hypothermia, and hyperthermia on the oxidative stress in slim and obese subjects/experimental animals
- ▶ Effects of antioxidant supplementation on physiological and pathological conditions in human
- ▶ Influence of oxidative stress on immune system functions under health and disease condition

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

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

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