

Special Issue on

The Impact of Dietetics Approaches on Age-Related Oxidative Stress and Degenerative Diseases

CALL FOR PAPERS

The imbalance between reactive oxygen species (ROS) production and antioxidant defenses determines the condition called oxidative stress. When ROS production increases or antioxidant defenses decrease; this systemic antioxidant/prooxidant imbalance can lead to the accumulation of oxidative damage, which, in turn, may lead to modifications of cellular proteins, lipids, and/or DNA, reducing functional capacity and increasing the risk of disease.

In recent decades, the role of oxidative stress in pathophysiological processes related to human diseases has been intensively investigated. Oxidative stress is linked to a plethora of changes induced during aging as well as in specific diseases such as cancer, diabetes, cardiovascular disease, stroke, neurodegenerative disease, obesity, trauma, hypoxia, pain, chronic fatigue, fibromyalgia, pulmonary disease, hepatic disease, renal disease, gastrointestinal disease, osteoporosis, endocrine disorders, skin disease, and alcoholism. In fact, more than 200 clinical disorders have been described in the literature in which either ROS are involved in the initial stages or their production is increased during the course of the disease.

The increase in life expectancy to date is an achievement of our society. Consequently, there is now an increased incidence of diseases associated with physiological alterations that occur during aging. Many of these changes are strongly related to the imbalanced production of reactive chemical species and their clearance by the antioxidant defense systems. These defenses are referred to as the first and second lines of defense and include the classic antioxidants, both enzymatic and nonenzymatic. In addition, new antioxidants like food have recently won prominence. Together with the classical antioxidants, these new antioxidants could defend the organism from disease and improve human health. These new promising antioxidant candidates are known as natural compounds.

This special issue aims to highlight and discuss the advancement of research on age-associated diseases and their underlying mechanisms, in particular, exploring the causal relational aspects of oxidative stress. We solicit high-quality, original research as well as review articles focused on the latest research about the impact of dietetics approaches on age-related oxidative stress and degenerative diseases.

Potential topics include but are not limited to the following:

- ▶ Alternative medicine
- ▶ Caloric restriction and aging
- ▶ Development of dietetics approaches to treat age-associated diseases
- ▶ Functional food and its application to prevent age-associated diseases
- ▶ New natural antioxidants and aging
- ▶ New methodologies in oxidative stress analysis applied to dietetics research

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

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

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Submission Deadline

Friday, 27 October 2017

Publication Date

March 2018