

Special Issue on Preventive and Curative Effect of Medicinal and Aromatic Plants on Diseases Related to Antioxidant Status

CALL FOR PAPERS

Oxidative stress is the result of an imbalance in prooxidant/antioxidant homeostasis that leads to the generation of toxic reactive oxygen species (ROS). Many of the recent landmarks in scientific research have shown that, in human beings, oxidative stress has been implicated in the progression of major health problems by inactivating the metabolic enzymes and damaging important cellular components, oxidizing the nucleic acids, leading to cardiovascular, neurological, liver, and pancreatic diseases, eye, joint, lung, and kidney disorders, atherosclerosis, cancer, and so on. The growing number of *in vitro* and *in vivo* models for evaluating the human pathologies is aiding scientists in deciphering the detailed mechanisms of the point of intersection of the oxidative stress with other cellular components or events in the growing roadmap leading to different human disorders.

Medicinal and Aromatic Plants (MAPs) are generally spontaneous species that are living in extreme environments by developing adaptive responses including the synthesis of bioactive molecules. Several MAPs have traditionally been used for medical and nutritional purposes. Currently, an increasing interest is granted to these species because of their high content in bioactive compounds such as polyunsaturated fatty acids, carotenoids, vitamins, sterols, essential oils, glycosides, alkaloids, and phenolics. These bioactive substances display potent antioxidant, antimicrobial, anti-inflammatory, and antitumoral activities and therefore represent key-compounds in preventing various diseases and may be potentially useful as new sources of functional compounds in dietary foods. The importance of functional foods, nutraceuticals, and other natural health products has been well recognized in connection with health promotion, disease risk reduction, and diminution in health care costs. The World Health Organization endorses the evaluation of the potential benefits of MAPs as a source of effective therapeutic agents, especially in areas where there is a lack of safe modern drugs. The pharmacological activity of MAPs is due to their biologically active ingredients that affect physiological processes of living organisms, including human beings. Focused studies on plant compound effects on oxidative stress will lead to new plant derived molecules and open new avenues for preventing and treating diseases related to oxidative stress.

We invite authors to contribute with original research articles and reviews focusing on the preventive and curative effect of MAPs on disease related to antioxidant status. This special issue will stimulate further efforts to discover and understand MAPs benefits with the hope of finding new powerful antioxidant compounds stronger than many synthetic antioxidants, to prevent and treat diseases related to oxidative stress.

Potential topics include but are not limited to the following:

- ▶ Natural products against neurodegenerative diseases targeting oxidative stress and inflammation
- ▶ Phytochemicals from MAPs as alternative medications to attenuate oxidative stress and inflammation associated with degenerative diseases
- ▶ *In vitro*, *in vivo*, and clinical trials
- ▶ Oxidative stress and pathogenesis of chronic disease
- ▶ Natural antioxidants as biomarkers in pathogenesis, prevention, and therapeutics of chronic diseases

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

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First Round of Reviews

Friday, 21 July 2017

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