



Oxidative Medicine and Cellular Longevity

Special Issue on

Plant-derived Antioxidants in Disease Prevention

CALL FOR PAPERS

Oxidative stress is generated by an imbalance between reactive oxygen species (ROS) and antioxidants. An excess of ROS leads to the degradation of lipids, proteins, and DNA and thus may lead to oxidative damage to cells and, in consequence, to the overexpression of oncogenes, mutagen formation, the induction of atherogenic activity, or inflammation. Oxidative stress is thought to play a major role in the pathogenesis of cardiovascular diseases, neurodegeneration, cancer, immune disorders, diabetes, aging, and others. Plants, especially dietary fruits and vegetables, are a rich source of antioxidants. It is postulated that antioxidants produce health benefits through the direct reduction of oxidative stress. In the body, the antioxidant network works in concert through several different mechanisms: ROS scavenging, lipid peroxidation, and the inhibition or chelation of metals. However, our understanding of the specific role and mechanisms of the action of certain antioxidants is still in infancy. Many *in vitro* and *in vivo* studies indicate that a single antioxidant (i.e., β -carotene and vitamin C or E) or diets rich in plant food provide protection against a set of diseases. However, several clinical trials on antioxidant action have produced contrasting results, with some showing a positive effect and others showing no evident results or even an increase in mortality.

We invite authors to submit original research as well as review articles that seek to understand the strategies and mechanisms of plant-derived antioxidants action in disease prevention. We are interested in articles that explore aspects of natural antioxidant action in humans and also in animal models. We are particularly interested in articles describing novel antioxidants, original approaches, and clinical studies on plant antioxidant involvement in disease prevention and treatment.

Potential topics include, but are not limited to:

- ▶ Recent developments in plant-derived antioxidant research
- ▶ Isolation and testing of novel and effective natural antioxidants
- ▶ Role of plant-derived antioxidants in disease prevention
- ▶ Identification of new, possible therapeutic mechanisms of antioxidant action
- ▶ Latest strategies for clinical evaluation and measuring
- ▶ Meta-analysis of randomized clinical trials to assess the beneficial or harmful effects of antioxidant supplements for disease prevention

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

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