

Special Issue on **Oxidative Stress in Cardiovascular and Respiratory Diseases: From Childhood to Elderly Years**

CALL FOR PAPERS

Cardiovascular diseases such as myocardial infarction and stroke and respiratory illnesses such as asthma, chronic obstructive pulmonary disease, sleep disordered breathing, and occupational lung are major causes of morbidity and mortality. They also represent a major economic burden to the high rehospitalization rate of these patients. From a pathophysiological standpoint, the pathogenesis of these diseases is multifactorial and quite complex. However, a common denominator of cardiac and respiratory illnesses is oxidative stress and inflammation.

In particular, oxidative stress is believed to play a crucial role in the early stages of initiation and progression of atherosclerosis and respiratory diseases. Oxidative stress occurs in presence on an imbalance between the production of reactive oxygen (or nitrogen) species (ROS and RNS, resp.) and the extent and functionality of enzymatic and nonenzymatic antioxidant defenses. This imbalance leads to an altered redox status that contributes to the onset and/or progression of cardiovascular and respiratory disorders. Several ROS-generating enzymes, such as xanthine oxidase, myeloperoxidase, monoamine oxidases, and nicotinamide adenine dinucleotide phosphate (NADPH) oxidase, may be responsible for increased oxidative stress, implying endothelial dysfunction and greater risk of atherosclerosis. In particular, NADPH oxidase is implicated in several processes including many respiratory chronic diseases such as sleep disordered breathing (SDB), asthma, and chronic obstructive pulmonary disease (COPD). These phenomena begin in childhood and continue until an elderly age, determining a higher risk to develop cardiovascular and respiratory complications.

We invite authors to submit original research articles (*in vitro*, animal, and/or clinical studies), as well as review articles, that address the issue of the role of oxidative stress in cardiovascular and respiratory diseases.

Potential topics include but are not limited to the following:

- ▶ Endothelial dysfunction in cardiovascular and respiratory disease
- ▶ NADPH oxidase and other sources of ROS/RNS in cardiovascular and respiratory diseases in childhood and in the elderly
- ▶ Oxidative stress (nitrosative and other markers) and inflammation in cardiovascular and respiratory diseases in childhood and in the elderly
- ▶ Diet and nutraceutical approach to cardiovascular diseases
- ▶ Interventional studies in childhood and in the elderly people with or at risk of cardiovascular diseases
- ▶ Interventional studies on respiratory diseases in childhood and in the elderly

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

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

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