

Special Issue on MicroRNA Regulation of Oxidative Stress 2018

CALL FOR PAPERS

Reactive oxygen species (ROS) such as peroxides, superoxide, hydroxyl radicals, and singlet oxygen species and reactive nitrogen species (RNS) such as nitroxyl anion, nitrosonium cation, higher oxides of nitrogen, S-nitrosothiols, and dinitrosyl iron complexes at physiological levels are important signaling molecules maintaining cellular homeostasis. Redox imbalance is characteristic in the pathogenesis and pathophysiology of many diseases. Excessive ROS/RNS is either a cause or an important mediator of a number of pathologies. It results in oxidative damage to various biological macromolecules including DNA, lipids, and proteins, thereby altering several signaling pathways that ultimately promote cellular damage and death. Recent advances in the field suggest that a number of pathophysiological changes result from changes in the gene expression.

MicroRNAs, discovered in early 1990s, are a family of small noncoding RNA molecules which regulate gene expression. Over the last decade, microRNAs have been implicated in a broad spectrum of human diseases. It is therefore critical to advance the knowledge of this relationship between oxidative damage and microRNA regulation in diseases to better understand the molecular mechanisms and develop novel therapies.

We invite researchers to contribute original research articles as well as review articles that will enhance the ongoing efforts to understand the molecular mechanisms that regulate oxidative stress and DNA damage in disease pathophysiology via regulation of gene expression by microRNAs.

Potential topics include but are not limited to the following:

- ▶ MicroRNAs as biomarkers of diseases
- ▶ MicroRNA mediated regulation of cell signaling and function with special reference to oxidative stress at cellular or subcellular levels
- ▶ Involvement of microRNA in oxidative stress induced DNA damage
- ▶ MicroRNAs regulating mitochondrial bioenergetics
- ▶ Dietary supplements/nutraceuticals mediated regulation of microRNAs for reducing oxidative and DNA damage
- ▶ Diagnostic and therapeutic application of microRNA mimics, inhibitors, and target-site blockers in mitigating disease pathology

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/omcl/mros18/>.

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

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