

Special Issue on

## Novel Regulators of Oxidative Stress in Aging and Age-Related Diseases: Role of Noncoding RNAs

# CALL FOR PAPERS

Aging and different age-related diseases, such as cardiovascular disease, cancer, rheumatic diseases, and degenerative disorders, are all characterized by a common feature: an oxidative stress increase.

The imbalance between reactive oxygen species (ROS) production, reactive nitrogen species (RNS), and antioxidants causes oxidative stress increase, leading to modifications of proteins, lipids, and DNA.

Epigenetic mechanisms can cause heritable changes in gene expression without changing the DNA sequence, mainly due to DNA methylation, histone modifications, and noncoding RNAs. In particular, microRNAs are short noncoding RNA sequences that act as negative modulators of the expression levels of single genes or molecular pathways. microRNAs, as well as long non-coding RNAs, have been shown to be critical regulators of development, physiology, and pathology and could be exploited as possible therapeutic targets.

We invite investigators to contribute original research articles, as well as review articles that address the molecular mechanisms and the current standing and progress in the area of the epigenetic role of oxidative stress in aging and age-related diseases, such as cardiovascular diseases, cancer, rheumatic diseases, and degenerative disorders. We are interested in articles that explore the mechanism insight and development of novel oxidative stress biomarkers, the development of strategies to treat these pathologies, and the evaluation of outcome. We hope this special issue will serve as a resource for biomedical investigators engaged in basic research, as well as those involved in clinical practice, in order to provide new insights in aging mechanism and age-related disease treatment.

Potential topics include but are not limited to the following:

- ▶ MicroRNAs and long non coding RNA biology and their role in age-related pathophysiology and therapy
- ▶ Redox signalling in the development of aging and age-related diseases
- ▶ Advances in epigenetics of aging and age-related diseases
- ▶ Epigenetic processes in inflammatory rheumatic disorders
- ▶ Novel risk factors in age-related diseases and latest advances in clinical evaluation
- ▶ Identification of new aging biomarkers
- ▶ Elucidating the role of oxidative stress in stem cell impairment and in age-related inflammation
- ▶ New molecules and biochemical pathways for the development of age-related diseases therapies

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

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### Manuscript Due

Friday, 25 August 2017

### First Round of Reviews

Friday, 17 November 2017

### Publication Date

Friday, 12 January 2018