

## Special Issue on **Mechanisms and Disease Pathogenesis Underlying Metal-Induced Oxidative Stress**

# CALL FOR PAPERS

With the thriving of modern industry, people are exposed to various metals in the environment. Many metals (trace metals such as copper, iron, manganese, and zinc) are essential for cellular activities; however, excessive exposure to such metals can lead to toxicity and eventually cell death. Increasing environmental exposure and fortification of food sources with various metallic compounds are causing growing concerns that imbalances in metal content may contribute to the etiology of various human diseases, including cancer, hepatic diseases, and especially neurodegenerative diseases, such as Alzheimer's disease, Parkinson's disease, and Huntington's disease. Redox-active metals, such as iron, copper, and other transition metals, can undergo redox cycling reactions resulting in the production of reactive oxygen/nitrogen species (RONS) and mitochondrial dysfunction. Disruption of intracellular redox state and energy production leads to oxidative stress, protein unfolding/misfolding, DNA damage, endoplasmic reticulum (ER) stress, autophagosome dysfunction, and apoptosis, cellular responses observed in the development of diseases, such as cancer, diabetes, and neurodegenerative diseases.

Despite recent advances in biomedical sciences, the mechanisms underlying the toxicity of metals are in many cases not fully established. Here, we invite researchers to submit original research articles and reviews relevant to this special issue.

Potential topics include but are not limited to the following:

- ▶ Potential topics include but are not limited to the following:
- ▶ Metal-induced oxidative stress
- ▶ DNA damage in metal toxicity
- ▶ Role of protein folding and ER stress in metal toxicity
- ▶ Inflammation and metal toxicity
- ▶ Metal-induced apoptosis, necrosis, and necroptosis
- ▶ Metal exposure and cellular longevity
- ▶ Natural products, synthetic compounds, endogenous molecules, and genetic strategies to counteract metal toxicity

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

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

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### **Submission Deadline**

Friday, 27 April 2018

### **Publication Date**

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