



Oxidative Medicine and Cellular Longevity

Special Issue on  
**Redox Imbalance and Stroke**

# CALL FOR PAPERS

Stroke includes cerebral infarction (ischemic stroke), intracerebral hemorrhage, and subarachnoid hemorrhage. According to the World Health Organization, annually 15 million people suffer first-ever stroke worldwide, causing a total of 5.7 million deaths. Redox imbalance is a hallmark event in the pathogenesis, pathophysiology, and prognosis of stroke. Excessive reactive oxygen species (ROS) can cause oxidative damage to various biological macromolecules including DNA, lipids, and proteins, thereby altering several signaling pathways that ultimately promote cellular damage and death. Recently, it has become increasingly clear that ROS at physiological levels are important signaling molecules maintaining cell homeostasis. Redox status is correlated with mitochondrial function, lipid raft turnover, and cross-talk between cells in neurovascular coupling. Transient ROS elevation promotes prosurvival signaling and functions as putative essential trigger in preconditioning-induced neuroprotection.

Thus, it is critical to address the relationship between redox status and stroke and to translate the accumulated mechanistic knowledge from animal models to clinical settings. We invite investigators to contribute original researches in animal models or humans and review articles that drive a better understanding of how redox imbalance modulates signaling pathways and how this can be harnessed as a therapeutic target in the stroke treatment.

Potential topics include, but are not limited to:

- ▶ Role of redox imbalance in the pathophysiology of stroke
- ▶ Role of redox imbalance and inflammation in the progression of cerebral atherosclerosis
- ▶ The relationship of hemodynamics and endothelial redox imbalance
- ▶ Role of redox imbalance in the cross-talk between cells in neurovascular coupling
- ▶ Role of redox stress in the preconditioning and postconditioning
- ▶ Therapies targeting redox imbalance for stroke in animal models or patients
- ▶ Clinical redox status and oxidative stress-based biomarkers predicting the outcomes after stroke
- ▶ Clinical trials and mechanism investigations of approved drugs with antioxidative properties in stroke prevention and treatment

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

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