

Special Issue on **Insights into the Molecular Mechanisms Underlying Cerebrovascular Diseases: The Role of Oxidative Stress**

CALL FOR PAPERS

Cerebrovascular diseases represent one of the main causes of mortality or permanent disability worldwide and the management of subjects affected by cerebrovascular diseases requires a large amount of effort. In addition, the molecular basis underlying the pathogenesis and progression of cerebrovascular disorders is not completely understood.

Compelling evidence suggests that oxidative stress acts as a main contributor to cerebrovascular disease development. Cerebrovascular damage is often associated with an increase in reactive oxygen species (ROS), which in turn contributes to exacerbate the preexisting pathological condition. Furthermore, defects in the regulation of redox balance strictly concur to cerebrovascular abnormalities.

Of note, ROS are also emerging as intracellular second messengers in cerebrovascular physiology. In particular, an altered redox status leads to the accumulation of proinflammatory signals, promoting neuroinflammation which contributes to progressive tissue damage. Identification of new players involved in the modulation of oxidative stress is receiving lots of attention. However the characterization of synthetic and natural substances able to boost the antioxidant defense is one of the main challenges in the management of patients at high risk of developing cerebrovascular diseases.

We invite researchers to submit original research and review articles regarding recent preclinical and clinical evidence addressing the role of oxidative stress in the pathogenesis of cerebrovascular diseases, with particular emphasis on those underlying redox signaling as a potential therapeutic target.

Potential topics include but are not limited to the following:

- ▶ Characterization of molecular mechanisms underlying the role of in vascular damage related to cerebrovascular diseases: evidence obtained in experimental models that mimic the human condition (stroke, cerebral aneurysm, thrombosis, etc.)
- ▶ Neuroinflammation in the pathogenesis of cerebrovascular diseases
- ▶ Human studies underscoring the genetic predisposition to cerebrovascular disorders involving oxidative stress
- ▶ Clinical studies regarding the management of cerebrovascular diseases: oxidative stress in diagnosis and therapy
- ▶ Novel strategies able to counteract oxidative stress in cerebrovascular disorders: pharmaceuticals and nutraceuticals

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

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

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Submission Deadline

Friday, 16 August 2019

Publication Date

January 2020