

Special Issue on **Neonatal Brain Injury: An Inside Look Focusing on Inflammatory Mediators and Oxidative Stress**

CALL FOR PAPERS

Neonatal brain hypoxic-ischemic injury represents a serious health care and socioeconomic problem since it is one of the most common causes of mortality and morbidity of newborns. It has been reported that approximately 30–40% of infants with brain injury will die and 20–40% of survivors will develop significant neurological disorders and lifelong chronic disability. Hypoxic-ischemic injury develops as a consequence of transient or permanent restriction of blood supply to the brain; however several different subsequent mechanisms are critical for developing hypoxic-ischemic encephalopathy. The etiopathogenesis of neonatal brain hypoxic-ischemic injury is complex and cellular and molecular mechanisms that need to be further investigated are involved. Inflammation and excitotoxicity and autophagy are activated when the neonatal brain is exposed to hypoxia ischemia. Oxidative and nitrosative stress interplay in the complex pathway that underlies the neuronal cell death associated with neonatal hypoxic damage.

The complex nature of neonatal brain hypoxic-ischemic injury needs to be elucidated further to understand the cascade of neurotoxic events triggered by perinatal asphyxia. Their understanding is however necessary for elaborating effective management for newborns that underwent cerebral hypoxic-ischemic insult and thus are at risk of a negative outcome.

With this call, we invite researchers to contribute original research articles as well as review articles that address mechanisms, in neonatal brain hypoxic-ischemic injury.

Potential topics include but are not limited to the following:

- ▶ Oxidative and nitrosative stress
- ▶ Inflammatory response and cytokines
- ▶ Genetic and pharmacologic manipulation of oxidative stress after neonatal hypoxia and epigenetic mechanisms in fetal hypoxia-induced brain injury
- ▶ Potential biomarkers in neonatal brain damage

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/mi/nbil/>.

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First Round of Reviews

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