

Special Issue on **Interplay of Inflammatory Cytokines and Oxidative Stress in Neurodegenerative Diseases**

CALL FOR PAPERS

The number of clinical cases of neurodegenerative diseases has increased substantially in recent years and that growth is projected to accelerate in the coming decades. A major contributor to the development of neurodegenerative diseases is chronic inflammation, a pathological condition characterized by continuous active inflammation response and tissue destruction. Upon injury or disease, peripheral immune cells including neutrophils, macrophages, and lymphocytes infiltrate the site of injury and together with microglia contribute to the pathology of chronic inflammation, for example, by production of inflammatory cytokines. Multiple processes underlie the inflammatory response but oxidative stress is undoubtedly involved in the pathogenesis, development, and maintenance of a sustained inflammatory state. In recent decades, chronic inflammation and oxidative stress have emerged as crucial contributors to the pathogenesis of chronic neurodegenerative conditions such as Alzheimer's and Parkinson's disease, neurotropic viral infections, stroke, spinal cord injury, traumatic brain injury, and multiple sclerosis. Therefore, mediators of inflammation and oxidative stress have become an attractive translational target for novel therapeutic interventions to treat neurodegenerative diseases.

This special issue will focus on the interplay between inflammatory cytokines and oxidative stress in the pathophysiology of chronic neurodegenerative diseases. Contributions are welcome in the form of original research and review articles describing *in vitro* (biochemical or cellular) and/or *in vivo* studies that help to better understand how cytokines and oxidative stress contribute to the development and maintenance of neurodegenerative diseases.

Potential topics include but are not limited to the following:

- Influence of oxidative stress on secretion of inflammatory cytokines
- Identification of proinflammatory mechanisms influencing oxidative stress-induced damage responses and/or neuropathology
- Contribution of cytokines to oxidative DNA damage responses in the nervous system
- Interplay between mechanisms of inflammation, oxidative stress, and neurodegeneration
- Description of new cellular and animal models that improve our understanding of the role of inflammation and/or oxidative stress-induced neuronal injury and disease
- Novel therapeutic strategies to dampen inflammation and/or oxidative stress-induced tissue damage
- Impact of diet on neuroinflammation, oxidative stress, and neurodegenerative diseases

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

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

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