



Mediators of Inflammation

Special Issue on

Cytokines in Neurodegenerative Diseases

CALL FOR PAPERS

Recent advances in our understanding of cell communication led to the discovery of many novel cytokines with immunoregulatory and inflammatory activity. These findings changed the old paradigm of the immune response regulation, where activation of Th1 or Th2 lymphocytes was believed to control the immune reactivity. Discovery of the Th17 lymphocytes improved our knowledge of the mechanisms regulating the immune cell communication and introduced a group of novel cytokines as playing the major role in this process. Advances in understanding of cell growth and differentiation open new horizons in wound healing, damaged tissue restoration and treatment of degenerative disease.

With advances made in our understanding of cytokine and growth factor network and its role in disease pathogenesis, more studies are conducted to investigate their potentials as diagnostic and therapeutic targets. Indeed, serum cytokines are shown to be valuable biomarkers of neurodegenerative diseases such as Alzheimer, Multiple Sclerosis, and Parkinson's disease. Our advances in understanding the disease pathogenesis suggest that cytokines have high potentials to become future diagnostics and therapeutics for treatment of the neurodegenerative diseases.

Despite of extensive research, many aspects of cytokine and growth factor activities remain unknown including mechanisms of activation, binding receptors, regulation of apoptosis, and promotion of cell growth and division. We invite authors to contribute original manuscripts as well as reviews focused on the role of cytokines and growth factors in pathogenesis of neurodegenerative diseases with the main emphasis on identification of novel biomarkers or potential targets for the development of innovative therapeutic strategies.

Potential topics include, but are not limited to:

- ▶ Discoveries in cytokine and growth factors activation in neurodegenerative diseases caused by viral and bacterial pathogens
- ▶ Advances in our understanding of the cytokine and growth factors activation in neurodegenerative diseases (Alzheimer's, Parkinson's, Multiple Sclerosis, neuromalignancy, neurotrauma, etc.)
- ▶ *In vitro* and *in vivo* studies on cytokine and growth factors as regulators of pathways essential for pathogenesis of neurodegenerative disease
- ▶ Transcriptome and proteome analysis of cytokine and growth factors activation *in vivo* and *in vitro* with the main emphasis on understanding of neurodegenerative disease pathogenesis
- ▶ Bioinformatics approaches to characterize the cytokine and growth factors network in neurodegenerative diseases
- ▶ Therapeutic use of cytokines and growth factors for treatment of neurodegenerative diseases

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

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First Round of Reviews

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