Mediators of Inflammation

Hindawi

Special Issue on

The Role of Central Nervous System Resident Cells in Tissue Homeostasis and Neuroinflammation

CALL FOR PAPERS

Central nervous system resident glial cells, whose role was long described solely as both metabolic and structural supporters for neuronal function, have lately gained more and more attention from immunologists. In fact, besides their well-known importance in tissue homeostasis, astrocytes, microglial cells, and oligodendrocytes have also been described as important players during neuroinflammation. This is due to the capacity to secrete many important inflammatory mediators, as cytokines, chemokines, metaloproteinases, and many others, as well as through the capacity to directly interact with infiltrating inflammatory cells, as observed during antigen presentation to T lymphocytes. For instance, it is known that both astrocytes and microglial cells constitutively express the receptors for IFN- and IL-17, rendering them target for infiltrating Th1 and Th17 cells, respectively. Thus, the importance of resident glial cells in the establishment and maintenance of the neuroinflammatory milieu has become unquestionable. However, there are still many gaps in the understanding of the interplay between resident glial cells and inflammatory leukocytes. In this context, researches in multiple sclerosis and its model, experimental autoimmune encephalomyelitis (EAE), had greatly contributed to a better view of the mechanisms involved. Thus, we invite researchers interested in spreading their findings in neuroimmunology and the role of glial cells in central nervous system inflammation to submit research as well as review articles for publication in this special issue of mediators of inflammation.

Potential topics include, but are not limited to:

- Function and profile of cytokine secretion by glial cells
- Role of pattern recognition receptors and inflammasome-related molecules in tissue inflammation
- miRNA and glial cells
- The dichotomy of M1/M2 microglia
- Inflammatory signalling pathways on glial cells
- Cell-to-cell interaction of glial cells with central nervous system infiltrating leukocytes
- Modulatory effect of glial-derived molecules
- Cellular and molecular mechanisms of antigen presentation by glial cells to infiltrating lymphocytes
- Role of glial cells on tissue repair

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

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