Special Issue

Molecular and Cellular Mechanisms of Neuroinflammation

Message from the Guest Editor

Neuroinflammation is the reaction of the central nervous system (CNS) to insults, such as trauma or infection. Microglia and astrocytes instigate inflammatory responses to these stimuli in an effort to eliminate pathogens, cell debris or dying cells and preserve tissue homeostasis. Based on the existing knowledge, the inflammatory reactions of microglia in otherwise very different neurodegenerative pathologies are remarkably similar. If unchecked, aberrant microglial innate immune responses can lead to the development of chronic neuroinflammation, which can be particularly detrimental for tissue integrity and function, especially in combination with the fact that the neuronal tissue has limited intrinsic regenerative capacity. Hence, microglia-mediated neuroinflammation plays a central role in the pathophysiology of neurodegenerative diseases. Astrocytes are the most abundant glial cell type in the CNS and among many different functions they also have immune properties. Innate immune responses perpetuate blood-brain-barrier dysfunction leading to recruitment of peripheral immune cells, which critically contributes to neurodegeneration.

Guest Editor

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Biomolecules is a multidisciplinary open-access journal that reports on all aspects of research related to biogenic substances, from small molecules to complex polymers. We invite manuscripts of high scientific quality that pertain to the diverse aspects relevant to organic molecules, irrespective of the biological question or methodology. We aim for a competent, fair peer review and rapid publication. Please look at some of the exciting work that has been published in *Biomolecules* so far. We would be delighted to welcome you as one of our authors.

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