Special Issue

Neuroglia at the Crossroads: Emerging Insights into Neurological Disease Mechanisms

Message from the Guest Editor

Glial cells, once regarded as passive support cells in the nervous system, are now recognized as dynamic regulators of brain homeostasis, immunity, synaptic plasticity, and neurovascular integrity. Recent discoveries have highlighted their central role in the pathophysiology of a wide range of neurological diseases, from neurodevelopmental disorders and epilepsy to neurodegeneration, stroke, and neuroinflammation. We invite contributions that dissect glial signaling pathways, glia–neuron and glia–vascular interactions, and metabolic and immune functions of glia, as well as studies leveraging omics, imaging, and novel in vitro/in vivo models. Of particular interest are investigations revealing context-dependent glial plasticity, cell-type-specific vulnerabilities, or the therapeutic potential of glia-targeted interventions. Both original research and in-depth reviews will be considered.

Keywords: neuroglia; astrocytes; microglia; oligodendrocytes; neuroinflammation; glia–neuron interactions; neurodegeneration; blood–brain barrier; glial plasticity

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Neuroglia covers the critically important functions of the diverse range of cells within the nervous system that are collectively called glia. Our journal focuses on the development, function, and pathology of glia in the central and peripheral nervous systems, as well as how these cells can be used therapeutically to repair injuries and diseases of the nervous system. The journal welcomes research using the latest in vitro and in vivo animal and human research, with a view to its translation into potential human therapies.

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