

Special Issue

Molecular Mechanisms and Pathophysiology of Acute Stroke

Message from the Guest Editors

Stroke remains a leading cause of death and disability and has a complex pathophysiology. Increasing evidence suggests that the brain is exquisitely sensitive to even short-duration ischemia, and that multiple mechanisms are involved in the tissue damage that results from cerebral ischemia. Ischemic stroke initiates a cascade of events including ATP depletion, ionic dysregulation, increased release of glutamate, excess production of free radicals, as well as edema and inflammation; all these events eventually contribute to cell death. The goal of this Special Issue is to provide a critical overview of the underlying factors involved in stroke-related brain injury, especially the role of cell signaling in excitotoxicity, inflammation, apoptosis, and the newly described types of cell death such as ferroptosis. Gene and protein expression profiles after stroke and neurogenesis, angiogenesis, and neuroplasticity are other important features in stroke, and should lead to a better understanding of the pathophysiology of acute stroke. We warmly welcome submissions, including original articles and reviews, on these hot topics.

Guest Editors

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Deadline for manuscript submissions

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The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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