



Paradigm Shift in Central Nervous System Trauma: Molecular Targets and New Therapeutic Strategies

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Message from the Guest Editor

Dear Colleagues,

The mortality and high morbidity of traumatic CNS injury are associated with acute primary damage, chronically expanding into adjacent tissues as a result of a secondary cascade of pathological, neuroinflammatory, and immune-response events that inhibit CNS regeneration.

The result is neuronal and glial loss, reactive astrogliosis, local B-cell and microglial activation, and the synthesis of pathogenic autoantibodies. Research in this field has primarily looked for ways of targeting molecular mechanisms to prevent cell death, oxidative stress, and inflammation, but the focus has recently shifted to the CNS cells themselves as potential targets for CNS repair.

This Special Issue will provide a comprehensive overview of the molecular mechanisms and therapeutic approaches that aim not only to eliminate the inhibitory environment after traumatic CNS injury, but also to explore regenerative solutions, including via stem cells, gene therapy, autoimmune antibodies, and intermediate neural networks, to promote neural regeneration and neural circuit reconstruction.





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Message from the Editor-in-Chief

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