



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

Guest Editor:

**Dr. Antonella Mangraviti**

Department of Neuroscience,  
Mental Health and Sense Organs  
(NESMOS), Sapienza University of  
Rome, 00189 Rome, Italy

Deadline for manuscript  
submissions:

**30 September 2024**

### 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.





an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Maurizio Battino

Department of  
Odontostomatologic and  
Specialized Clinical Sciences,  
Sez-Biochimica, Faculty of  
Medicine, Università Politecnica  
delle Marche, Via Ranieri 65,  
60100 Ancona, Italy

## Message from the Editor-in-Chief

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.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), PubMed, PMC, MEDLINE, Embase, CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Inorganic Chemistry)

## Contact Us

---

*International Journal of Molecular  
Sciences* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
www.mdpi.com

mdpi.com/journal/ijms  
ijms@mdpi.com  
X@IJMS\_MDPI