

## Special Issue

# Cellular and Molecular Mechanisms in Neurodevelopmental Disorders and Brain Tumors

### Message from the Guest Editors

The correct morphofunctional shaping and function of the central nervous system (CNS) requires a continuous interaction between intrinsic (genes/molecules expressed within the tissue) and extrinsic (e.g., neural activity) factors at all developmental stages including the adulthoods. Any significant deviation from the normal CNS functions due to social deprivation, environmental factors, genetic and metabolic diseases, immune disorders, infectious diseases or nutritional factors results in abnormal neuronal architecture or connectivity. In this scenario, stem cell self-renewal and differentiation play an important role not only in normal neurodevelopment, but also in brain tumours' establishment. In this Research Topic, we aim at providing a collection of high-impact papers dissecting which cellular and molecular mechanisms are involved into the onset of brain tumour and neurodevelopmental disorders. Accordingly, Original Research or Review articles describing which signalling or specific treatment influence physiologic functions such as neuronal development and CNS tumours will be considered.

### Guest Editors

Dr. Mario Costa

Institute of Neuroscience, Italian National Research Council (IN-CNR), 56124 Pisa, Italy

Dr. Eleonora Vannini

1. Neuroscience Institute, National Research Council (CNR), 56124 Pisa, Italy  
2. Centro Pisano Ricerca e Implementazione Clinica Flash Radiotherapy "CPFR@CISUP", "S. Chiara" Hospital, 56126 Pisa, Italy

### Deadline for manuscript submissions

closed (31 January 2023)



## International Journal of Molecular Sciences

an Open Access Journal  
by MDPI

Impact Factor 4.9  
CiteScore 9.0  
Indexed in PubMed



[mdpi.com/si/60941](https://mdpi.com/si/60941)

*International Journal of  
Molecular Sciences*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[ijms@mdpi.com](mailto:ijms@mdpi.com)

[mdpi.com/journal/  
ijms](https://mdpi.com/journal/ijms)





# International Journal of Molecular Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.9  
CiteScore 9.0  
Indexed in PubMed



[mdpi.com/journal/  
ijms](https://mdpi.com/journal/ijms)



## About the Journal

### 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.

---

### 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

---

### 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 (Organic Chemistry)