

Special Issue

Role and Dynamics of Extracellular Vesicles in Central Nervous System Diseases

Message from the Guest Editors

A collection of manuscripts will encompass a range of topics with the common denominator of extracellular vesicles in the context of biomarkers, basic biology, and cell–cell communication as well as therapeutics. EVs are found in a wide range of biofluids, including cerebrospinal fluid, plasma, serum, and urine. They reflect the cargo of the parental cells and can inform about the tumor status in a noninvasive, real-time fashion. The bioactive molecules carried within EVs have also been shown to modulate the behavior of recipient cells in many ways. Specifically, EVs can shuttle between neurons and glia cells, likely influencing synaptic activity, morphological plasticity, and neurovasculature. In the presence of injury, EVs have been suggested to play a role in neuroprotection, while in neurodegeneration, EVs have been implicated in the spreading and clearance of toxic aggregates. Finally, several studies have proposed using EVs as a delivery tool for small molecule drugs, protein, and nucleic acid to the CNS. Characteristics of EVs such as biocompatibility, low immunogenicity, and low toxicity profiles, are make them highly valuable for therapeutic purposes.

Guest Editors

Dr. Leonora Balaj

Department of Neurosurgery, Massachusetts General Hospital and Harvard Medical School, Boston, MA 02115, USA

Dr. Annalisa Tassone

Neurophysiology and Plasticity Unit, IRCCS-Fondazione Santa Lucia, 00143 Rome, Italy

Deadline for manuscript submissions

closed (31 January 2021)



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



mdpi.com/si/40591

*International Journal of
Molecular Sciences*
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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)