

Special Issue

Embracing the Diversity of Perinatal Brain Injury: Molecular Mechanisms and Novel Therapeutics 2022

Message from the Guest Editors

Perinatal brain injury (PBI) includes, but is not limited to, hypoxic-ischemic encephalopathy (HIE), intraventricular hemorrhage, periventricular leukomalacia, and encephalopathy of prematurity. It affects both preterm and term neonates and is a reflection of diverse and complex etiologies as well as initiating insults. The pathophysiology of CNS injury following PBI reflects a combination of multiple insults, including (1) inflammation from prenatal infection and/or hypoxia-ischemia (HI); (2) individualized risk from genetic/congenital disorders; (3) acquired prenatal exposures to drugs and toxins; (4) gut microbiota and nutritional status; and (5) postnatal stresses such as sepsis and surgery. The cumulative effect of PBI results from a cascading impact on neurodevelopment and presents unique challenges to repair that are distinct from the mature CNS. Notably, response to injury within the context of the constantly evolving, incompletely formed platform of the developing CNS demands individualized and precision medicine approaches coupled with rigorous molecular and cellular mechanistic evaluation of the unique pathophysiology and mechanisms of disease.

Guest Editors

Dr. Lauren L. Jantzie

Division of Neonatal-Perinatal Medicine, Department of Pediatrics and Department of Neurology, Johns Hopkins University School of Medicine, Baltimore, MD 21287, USA

Dr. Raul Chavez-Valdez

Johns Hopkins School of Medicine, Department of Pediatrics, Division of Neonatal-Perinatal Medicine, Baltimore, MD 21205, USA

Deadline for manuscript submissions

closed (31 December 2022)



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



mdpi.com/si/128166

*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)