

Special Issue

Uncovering Placental Inflammatory Pathways Affecting the Developing Brain

Message from the Guest Editors

The developing brain is highly vulnerable to both inflammatory and ischemic insults, which often converge during critical prenatal and perinatal windows to shape neurodevelopmental outcomes. Increasing evidence positions the placenta as a key immunological interface whose dysregulation can trigger inflammatory cascades and predispose the fetal brain to injury. In particular, prenatal exposure to infectious or inflammatory stimuli can induce systemic inflammation and circulatory disturbances, increasing susceptibility to brain lesions (including hypoxic-ischemic encephalopathy, neonatal stroke, white matter injuries of premature babies, and other more subtle injuries of the perinatal brain) and associated long-term neurodevelopmental impairments such as cerebral palsy, autism spectrum disorder, attention deficit and hyperactivity disorder, intellectual deficiency, and learning disabilities.

We encourage studies that dissect the mechanisms by which immune activation and hypoxia-ischemia lead to cerebral injuries, and how such mechanisms contribute to the developmental origins of neurobehavioral disorders arising either at birth or later in life.

Guest Editors

Prof. Dr. Guillaume Sébire

Department of Pediatrics, Division of Neurology, Faculty of Medicine, McGill University, Montreal, QC, Canada

Dr. Math Chevin

Department of Pediatrics, Division of Neurology, Faculty of Medicine, Research Institute of the McGill University Health Center (RI-MUHC), Montreal, QC, Canada

Deadline for manuscript submissions

26 March 2027



Cells

an Open Access Journal
by MDPI

Impact Factor 6.0
CiteScore 11.4
Indexed in PubMed



mdpi.com/si/267243

Cells
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
cells@mdpi.com

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





Cells

an Open Access Journal
by MDPI

Impact Factor 6.0
CiteScore 11.4
Indexed in PubMed



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



About the Journal

Message from the Editor-in-Chief

Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

Editors-in-Chief

Dr. Alexander E. Kalyuzhny

Department of Neuroscience, University of Minnesota, UMN Twin Cities, 6-145 Jackson Hall, 321 Church St SE, Minneapolis, MN 55455, USA

Prof. Dr. Cord Brakebusch

Biotech Research & Innovation Centre, The University of Copenhagen, Copenhagen, Denmark

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, CAPIus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Cell Biology) / CiteScore - Q1 (General Biochemistry, Genetics and Molecular Biology)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.9 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the first half of 2026).