Special Issue

From Inflammaging to Dementia: Cellular and Molecular Drivers of Cognitive Decline

Message from the Guest Editors

A growing body of evidence implicates neuroinflammation as a central mechanism linking aging, vulnerability to neurodegeneration, and cognitive dysfunction, operating across neurons, glia, vascular cells, and peripheral immune systems. Inflammaging, characterized by chronic, low-grade activation of inflammatory pathways that accompanies aging, acts as a critical upstream driver of sustained neuroinflammatory states in the aging brain. This process reshapes neuro-immune communication at both the cellular and molecular levels, influencing synaptic function, neuronal resilience, and cerebrovascular integrity. Elucidating these mechanisms is essential for identifying the early drivers of cognitive decline and translating biological insight into effective therapeutic strategies. The scope of this Special Issue includes **normal aging**, **prodromal cognitive impairment**, **dementia**, and **neurodegenerative diseases**, while emphasizing **cell-type specificity**, **temporal dynamics**, and **translational relevance**.

Guest Editors

Prof. Dr. Michael P. McDonald

1. Department of Neurology, College of Medicine, University of Tennessee Health Science Center, Memphis, TN 38163, USA
2. Neuroscience Institute, University of Tennessee Health Science Center, Memphis, TN, USA
3. Department of Anatomy & Neurobiology, College of Medicine, University of Tennessee Health Science Center, Memphis, TN 38163, USA

Dr. Mohammad Moshahid Khan

1. Department of Neurology, College of Medicine, University of Tennessee Health Science Center, Memphis, TN 38163, USA
2. Center for Muscle, Metabolism and Neuropathology, Division of Regenerative and Rehabilitation Sciences and Department of Physical Therapy, College of Health Professions, University of Tennessee Health Science Center, Memphis, TN 38163, USA
3. Neuroscience Institute, University of Tennessee Health Science Center, Memphis, TN 38163, USA

Deadline for manuscript submissions

31 August 2026

Cells

an Open Access Journal by MDPI

Impact Factor 5.2
CiteScore 11.4
Indexed in PubMed

mdpi.com/si/271949

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

mdpi.com/journal/cells

Cells

an Open Access Journal by MDPI

Impact Factor 5.2
CiteScore 11.4
Indexed in PubMed

mdpi.com/journal/cells

About the Journal

Message from the Editorial Board

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
Neuroscience, 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, CAPlus / 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 15.5 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the second half of 2025).