Special Issue

Mechanosensation and Mechanotransduction in Brain Cells

Message from the Guest Editor

Mechanosensation and mechanotransduction are traditionally studied in specialized cell types, such as sensory axonal terminals in the peripheral nervous system, cochlear hair cells in the auditory system, and epithelial cells in the kidney. Recent studies suggest that most, if not all, types of cells possess the ability to convert mechanical stress to electrical or chemical signals, but their underlying mechanisms remain poorly understood. For instance, since the vertebrate brain is well-protected by the skull, its structure and function in the context of mechanics have not been extensively investigated. The brain is the most complex organ in the body, consisting of neuronal and glial cells, as well as endothelial, epithelial, and even immune cells. A better understanding of how these cells sense and respond to mechanical stress could inform new rational therapies for mild traumatic brain injury and related neurodegenerative disorders. For this Special Issue, we welcome original submissions exploring novel phenomena, methodologies, mechanisms, related disorders or animal models of mechanosensation, and mechanotransduction of various cell types in the brain and other organs.

Guest Editor

Dr. Chen Gu

Department of Biological Chemistry and Pharmacology, The Ohio State University, Columbus, OH 43210, USA

Deadline for manuscript submissions

closed (15 May 2023)

Cells

an Open Access Journal by MDPI

Impact Factor 5.2
CiteScore 10.5
Indexed in PubMed

mdpi.com/si/127667

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 10.5
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).