Special Issue

Cellular and Molecular Basis of Epilepsy

Message from the Guest Editors

Epilepsy is a heterogeneous group of neurological disorders characterized by recurrent unprovoked seizures, caused by abnormal electrical activity of the whole brain or one of its structures. The etiology of epilepsy is complex and includes structural and metabolic abnormalities, genetic factors, and unknown causes. The mechanism of epileptogenesis, i.e., the process of structural and functional changes transforming the normal brain to one that can generate abnormal neuronal activity, is also multifactorial and unclear. Treatment of epilepsy is still a challenging issue. Pharmacotherapy continues to be the mainstay of epilepsy treatment but about 1/3 of patients remain resistant to the treatment. Moreover, the currently available antiseizure drugs possess only symptomatic activity and they do not suppress epileptogenesis. This Special Issue will collect original research articles and reviews on the cellular and molecular mechanisms underlying the pathophysiology of seizure, epilepsy and epileptogenesis. Papers on the development of new antiseizure drugs and treatment strategies will be also considered.

Guest Editors

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Deadline for manuscript submissions

closed (31 January 2024)

Cells

an Open Access Journal by MDPI

Impact Factor 5.2
CiteScore 10.5
Indexed in PubMed

mdpi.com/si/116953

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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.

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 16 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).