Special Issue

Synaptic Changes in Epilepsy

Message from the Guest Editor

Research on the pathophysiology of epilepsy has focused on persistent intrinsic changes in excitability using various models of experimental epilepsy and also on human tissue from epilepsy surgery. In these studies, the altered transcription of Na+, Ca2+, or K+ channels was described in epileptic tissue and these were referred to as acquired channelopathies. In recent years, more attention has been drawn to neuronal networks affected by disease in tissues such as the hippocampus. It is well established that pathological axon sprouting gives rise to new synapses with uncommon properties in epileptic tissues. However, we now know that also glutamate and GABA receptors may persistently be altered and further transmitter receptors are increasingly being studied. Thus, elucidating epileptic synaptopathy adds significantly to our pathophysiological understanding of seizure initiation and disease progression during epileptogenesis. This Special Issue is dedicated to synaptic changes in epilepsy. Studies on interventions to interfere with epilepsy-associated synaptic changes and thus disease-modifying effects are also welcome.

Guest Editor

Prof. Dr. Timo Kirschstein

Institute of Physiology and Department of Neurology, University Medicine Rostock, Germany

Deadline for manuscript submissions

closed (25 March 2020)

Brain Sciences

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.6
Indexed in PubMed

mdpi.com/si/32323

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

mdpi.com/journal/brainsci

Brain Sciences

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.6
Indexed in PubMed

mdpi.com/journal/brainsci

MDPI

About the Journal

Message from the Editor-in-Chief

You are invited to contribute a research article or a comprehensive review for consideration and publication in *Brain Sciences* (ISSN 2076-3425). *Brain Sciences* is an open access, peer-reviewed scientific journal that publishes original articles, critical reviews, research notes, and short communications on neuroscience. The scientific community and the general public can access the content free of charge as soon as it is published.

Editor-in-Chief

Prof. Dr. Stephen D. Meriney
Department of Neuroscience, University of Pittsburgh, Pittsburgh, PA 15260, USA

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Embase, PSYNDEX, PsycInfo, CAPlus / SciFinder, and other databases.

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.2 days after submission; acceptance to publication is undertaken in 1.9 days (median values for papers published in this journal in the first half of 2025).

Recognition of Reviewers:

reviewers who provide timely, thorough peer-review reports receive vouchers entitling them to a discount on the APC of their next publication in any MDPI journal, in appreciation of the work done.