Special Issue

Advances in the Diversity of GABAergic Neurons

Message from the Guest Editors

A heterogeneously diverse population of GABAergic presynaptic neurons release GABA (γ-aminobutyric acid) as a primary inhibitory neurotransmitter on postsynaptic inhibitory/excitatory neurons in the central nervous system (CNS). The signaling pathways of GABAA/GABAB receptors prevent the neuronal action potentials (APs) firing, modulate the AP frequency, and modify synaptic plasticity. GABAergic interneurons contribute to the management of synchronized network activity in the cortical areas. GABAergic synaptic inhibition is also suggested to produce a rebound excitation to encode and process inhibitory signals. This Special Issue of *Brain Sciences* aims to illustrate how recent advances in the field have revealed the critical role of GABAergic projection neurons in network activity patterns unidirectionally or bidirectionally. Authors are invited to submit original research and reviews that address a broad range of topics related to the morphological and neurochemical diversity of GABAergic networks and the variable signaling mechanism of GABA receptors in CNS function and disorders.

Guest Editors

Prof. Dr. Ameneh Rezayof

Department of Animal Biology, School of Biology, College of Science, University of Tehran, Tehran 1417466191, Iran

Dr. Maryam Sardari

Department of Animal Biology, School of Biology, College of Science, University of Tehran, Tehran 1417466191, Iran

Deadline for manuscript submissions

closed (5 January 2024)

Brain Sciences

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.6
Indexed in PubMed

mdpi.com/si/147548

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.