

Special Issue

Metabolic Hormones and Regulation of Synaptic Function: Implications for Health and CNS Disease

Message from the Guest Editor

The peripheral actions of metabolic hormones, such as insulin, leptin, and ghrelin, are well established. However, increasing evidence indicates that the actions of these hormones is not restricted to peripheral tissues, as numerous studies have revealed that these hormones can readily access the CNS and modulate the functioning of synapses. The hippocampus is a brain region that is pivotally involved in learning and memory processes, such that activity-dependent changes in the strength of hippocampal excitatory synapses underlie formation of spatial and episodic learning and memory. However, the hippocampus is also an extremely vulnerable area of the brain, with a high susceptibility to seizure generation, and it is an early site for degeneration in age-related neurodegenerative disorders. Recent evidence indicates that the hippocampus, and specifically hippocampal excitatory synapses are markedly influenced by hormonal systems, with many metabolic hormones linked to pro-cognitive actions. In this Special Issue, the ability of metabolic hormones to regulate hippocampal synaptic function and the consequences for brain health and CNS-driven disease will be explored.

Guest Editor

Dr. Jenni Harvey

Systems Medicine, Ninewells Hospital and Medical School, University of Dundee, Dundee DD1 9SY, UK

Deadline for manuscript submissions

closed (15 May 2022)



Biomedicines

an Open Access Journal
by MDPI

Impact Factor 4.5
CiteScore 7.8
Indexed in PubMed



mdpi.com/si/79588

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

[mdpi.com/journal/
biomedicines](https://mdpi.com/journal/biomedicines)





Biomedicines

an Open Access Journal
by MDPI

Impact Factor 4.5
CiteScore 7.8
Indexed in PubMed



[mdpi.com/journal/
biomedicines](https://mdpi.com/journal/biomedicines)



About the Journal

Message from the Editor-in-Chief

Biomedicines (ISSN 2227-9059) is an open access journal devoted to all aspects of research on human health and disease, the discovery and characterization of new therapeutic targets, therapeutic strategies, and research of naturally driven biomedicines, pharmaceuticals, and biopharmaceutical products. Topics include pathogenesis mechanisms of diseases, translational medical research, biomaterial in biomedical research, natural bioactive molecules, biologics, vaccines, gene therapies, cell-based therapies, targeted specific antibodies, recombinant therapeutic proteins, nanobiotechnology driven products, targeted therapy, bioimaging, biosensors, biomarkers, and biosimilars. The journal is open for publication of studies conducted at the basic science and preclinical research levels. We invite you to consider submitting your work to *Biomedicines*, be it original research, review articles, or developing Special Issues of current key topics.

Editor-in-Chief

Prof. Dr. Felipe Fregni

1. Neuromodulation Center and Center for Clinical Research Learning, Spaulding Rehabilitation Hospital and Massachusetts General Hospital, Harvard Medical School, Boston, MA 02114, USA

2. Department of Epidemiology, Harvard T.H. Chan School of Public Health, Boston, MA 02115, USA

Author Benefits

High Visibility:

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

Journal Rank:

JCR - Q2 (Pharmacology and Pharmacy) / CiteScore - Q1 (Medicine (miscellaneous))

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 21 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).