Special Issue

Molecular Synapse: Diversity, Function and Signaling

Message from the Guest Editor

Synaptic signaling is the process by which neurons communicate at synapses, transmitting signals via chemical messengers called neurotransmitters. It underpins information processing in the brain and is governed by complex molecular dynamics that control the speed, precision and, critically, plasticity of neuronal communication. This involves the ultrafast choreography of presynaptic proteins to release neurotransmitters, as well as the rapid, regulated movement of receptors and scaffolds in the postsynaptic membrane. More recently, it has become clear that synapses are highly diverse in their protein composition, both across and within cell types. New approaches are needed to visualize, dissect and understand the complex machinery of synaptic signaling. This Special Issue will be of interest to basic and clinical researchers studying the molecular and dynamic aspects of synaptic signaling and its disruptions under disease conditions, including theoretical (computational modeling) applications.

Guest Editor

Dr. Oksana Sorokina School of Informatics, The University of Edinburgh, Edinburgh, UK

Deadline for manuscript submissions

31 March 2026



International Journal of Molecular Sciences

an Open Access Journal by MDPI

Impact Factor 4.9 CiteScore 9.0 Indexed in PubMed



mdpi.com/si/255849

International Journal of Molecular Sciences Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 ijms@mdpi.com

mdpi.com/journal/ ijms





International Journal of Molecular Sciences

an Open Access Journal by MDPI

Impact Factor 4.9 CiteScore 9.0 Indexed in PubMed





Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

Editor-in-Chief

Prof. Dr. Maurizio Battino

Department of Odontostomatologic and Specialized Clinical Sciences, Sez-Biochimica, Faculty of Medicine, Università Politecnica delle Marche, Via Ranieri 65, 60100 Ancona, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

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

Journal Rank:

JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Organic Chemistry)

