

Special Issue

Glycome and Nervous System

Message from the Guest Editors

More than 70% of proteins are modified with glycans as N-linked glycosylation of Asn residues or O-linked glycosylation of Ser or Thr residues. In the brain, several adhesion molecules and receptor proteins are modified with specific glycans, and these glycans play important roles in high-order brain function. α -2,8-Linked polysialic acid (polySia) is found in the N-linked glycans of the neural cell adhesion molecule, N-CAM, and is involved in cell–cell interaction during neural development and plasticity. The HNK-1 epitope is predominantly expressed in the brains, modifies the N-linked glycans of several neural proteins, and has a critical role in synaptic plasticity, spatial learning, and memory. Brain-specific b1,6-GlcNAc-branched O-mannosyl glycans decorate protein tyrosine phosphatase Z (PTPRZ), which is expressed in astrocytes and oligodendrocyte precursor cells. In this Special Issue, we would explore how Nerve-specific glycans carry out their roles in neural development as well as interaction of nervous system and tumor environment.

Guest Editors

Prof. Dr. Naoyuki Taniguchi

Department of Glyco-Oncology and Medical Biochemistry, Osaka International Cancer Institute, 3-1-69 Otemae, Chuo-ku, Osaka 541-8567, Japan

Prof. Dr. Shinobu Kitazume

Department of Clinical Laboratory Sciences, School of Health Sciences, Fukushima Medical University, Fukushima 960-8516, Japan

Deadline for manuscript submissions

closed (31 August 2022)



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



mdpi.com/si/62876

*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](https://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



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



About the Journal

Message from the Editor-in-Chief

The *International Journal of Molecular Sciences (IJMS)* 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, and molecular biophysics. *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. José L. Quiles
Department of Physiology, Institute of Nutrition and Food Technology
"Jose Mataix", Biomedical Research Center, University of Granada,
Avda. Conocimiento s/n, 18100 Armilla, Granada, Spain

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, CAPus / SciFinder, and other databases.

Journal Rank:

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