



Glycome and Nervous System

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

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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.





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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

Message from the Editor-in-Chief

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*International Journal of Molecular
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MDPI, St. Alban-Anlage 66
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