

Special Issue

Molecular Insights into Gangliosides

Message from the Guest Editors

Gangliosides play a fundamental role in the organization of plasma membranes, particularly neuronal membranes, where, thanks to their structural properties, they act as triggers for the formation of rigid membrane portions known as lipid rafts. Inserted into lipid rafts, gangliosides regulate the functions of enzymes and receptors necessary for cell signaling and the proper biological functions of cells. The ganglioside membrane composition is strictly regulated by a group of specific enzymes that determine its biosynthesis, catabolism and intracellular trafficking. Genetic errors can codify incorrect enzymes, resulting in an incorrect plasma membrane ganglioside composition and potentially inducing the development of neurological diseases and, in some cases, cancer. The main aim of this Special Issue is to provide new information on the role of gangliosides in health and diseases, hoping to garner the interest of both young and senior scientists involved in gangliosience.

Guest Editors

Prof. Sandro Sonnino

Department of Medical Biotechnology and Translational Medicine, Università degli Studi di Milano, LITA Segrate, Via Fratelli Cervi, 93, 20054 Segrate, Italy

Dr. Massimo Aureli

Department of Medical Biotechnology and Translational Medicine, Università degli Studi di Milano, LITA Segrate, Via Fratelli Cervi, 93, 20054 Segrate, Italy

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MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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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

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