Special Issue

Glycobiology-Based Drug Development

Message from the Guest Editor

The target molecules of almost all currently used drugs are proteins, which are always glycosylated if they are synthesized in human cells and transported to cell surfaces and/or secreted. The patterns of glycosylation depend on the lineage and the stage of differentiation of the producing cells and they modulate proteins' molecular function, stability, interactions and trafficking. When a druggable protein plays a crucial role in a pathogenic process, glycosylation is potentially useful as a drug target. The glycosylation of proteins should also be useful in cell-type-specific targeting based on epitopes formed by glycan–peptide complexes. Many protein drugs, including antibodies and growth factors, are glycosylated, and proper glycosylation is an indispensable element to obtain the optimal effects of these protein drugs. Finally, deficiency or malfunction of enzymes involved in biosynthesis or degradation results in severe diseases, which can be treated based on glycobiology. This Special Issue covers basic, translational, and preclinical research involving glycans towards the development of new drugs.

Guest Editor

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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.

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