



## New Insights into Protein Glycosylation

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Deadline for manuscript  
submissions:

**closed (10 May 2022)**

### Message from the Guest Editor

To understand life in an integrated manner, it is essential to understand protein glycosylation: a growing and high-impact field exploring the structure and function of the carbohydrates that clothe most living cells. In this Special Issue, we hope to take an interdisciplinary approach, particularly highlighting work in chemistry and biology, to summarize the current status and discuss the future development and prospects of protein glycosylation in terms of its functions and analytical methods. Protein glycosylation in extracellular or membrane proteins includes *N*-linked glycosylation and mucin-type *O*-linked glycosylation starting with GalNAc in addition to *O*-Fuc, *O*-Gal, *O*-Glc, *O*-GlcNAc, *O*-Man and *O*-Xyl, and *C*-Man. There are also a variety of nucleocytoplasmic proteins modified with *O*-GlcNAc by OGT. Their functions are involved in diverse biological processes such as cellular signaling, immunity, neural function, pathological conditions such as cancer, and viral infections, including COVID-19.





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## Message from the Editor-in-Chief

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