

Special Issue

The Glycobiology of Viral Infections

Message from the Guest Editors

All mammalian cells are covered in a layer of glycoconjugates—glycoproteins and glycolipids—known as the glycocalyx. Its glycans orchestrate diverse biological processes, including cell–cell recognition, cell growth and differentiation, neoplastic transformation and cell death. The glycocalyx also serves as a barrier against viruses and other intracellular pathogens, but is often utilized by such pathogens for attachment and entry (and is sometimes enzymatically processed during the release of progeny virus). Many viruses make use of glycans as entry receptors (e.g., sialic acids, histo blood group antigens and glycosamino-glycans; caliciviruses, influenza viruses, polyomaviruses, and papillomaviruses) play critical roles in cell attachment and determining host range and tropism. The goal of this Special Issue is to highlight recent advances in the definition of parameters that guide virus- glycan binding and the impact on virus infection, and their use in the development of novel compounds with inhibitory and thus antiviral activities.

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