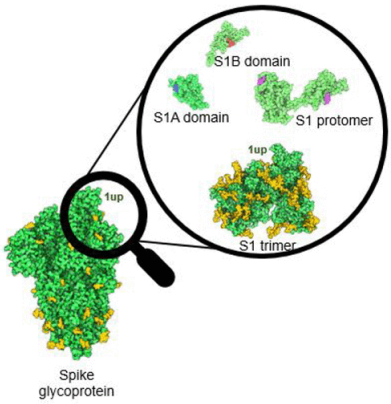
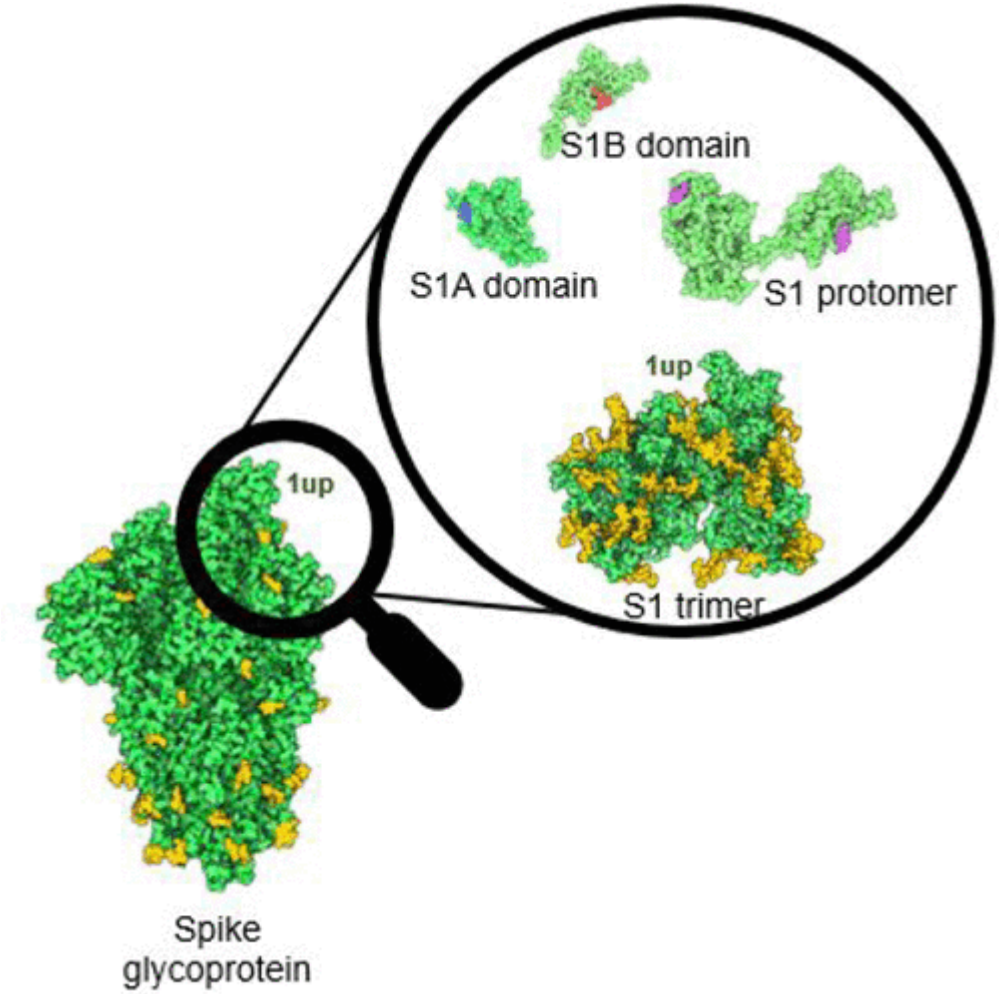


Spike Protein and the Various Cell-Surface Carbohydrates: An Interaction Study

Description

The SARS-CoV-2 virus enters the host cell through the spike protein that binds to the host ACE2 cell surface protein. However, the role of the putative sugar-binding sites in the spike protein has remained unclear. The authors provide a comprehensive in silico outlook into the infection initiation wherein the virus recognizes the sialosides on the cell via its S1A domain of the spike protein as it surfs over the cell surface.



This feature facilitates the subsequent interaction with the cellular glycosaminoglycans through the S1B domain of the spike protein as it binds to the ACE2 receptor. The unique coadaptation to recognize the host protein and the cell-surface carbohydrate receptors provides an additional coupling mechanism for efficient viral attachment and infection.

Category

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