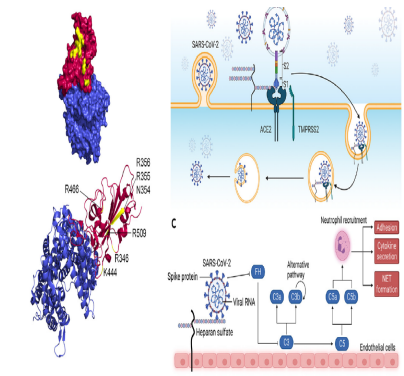
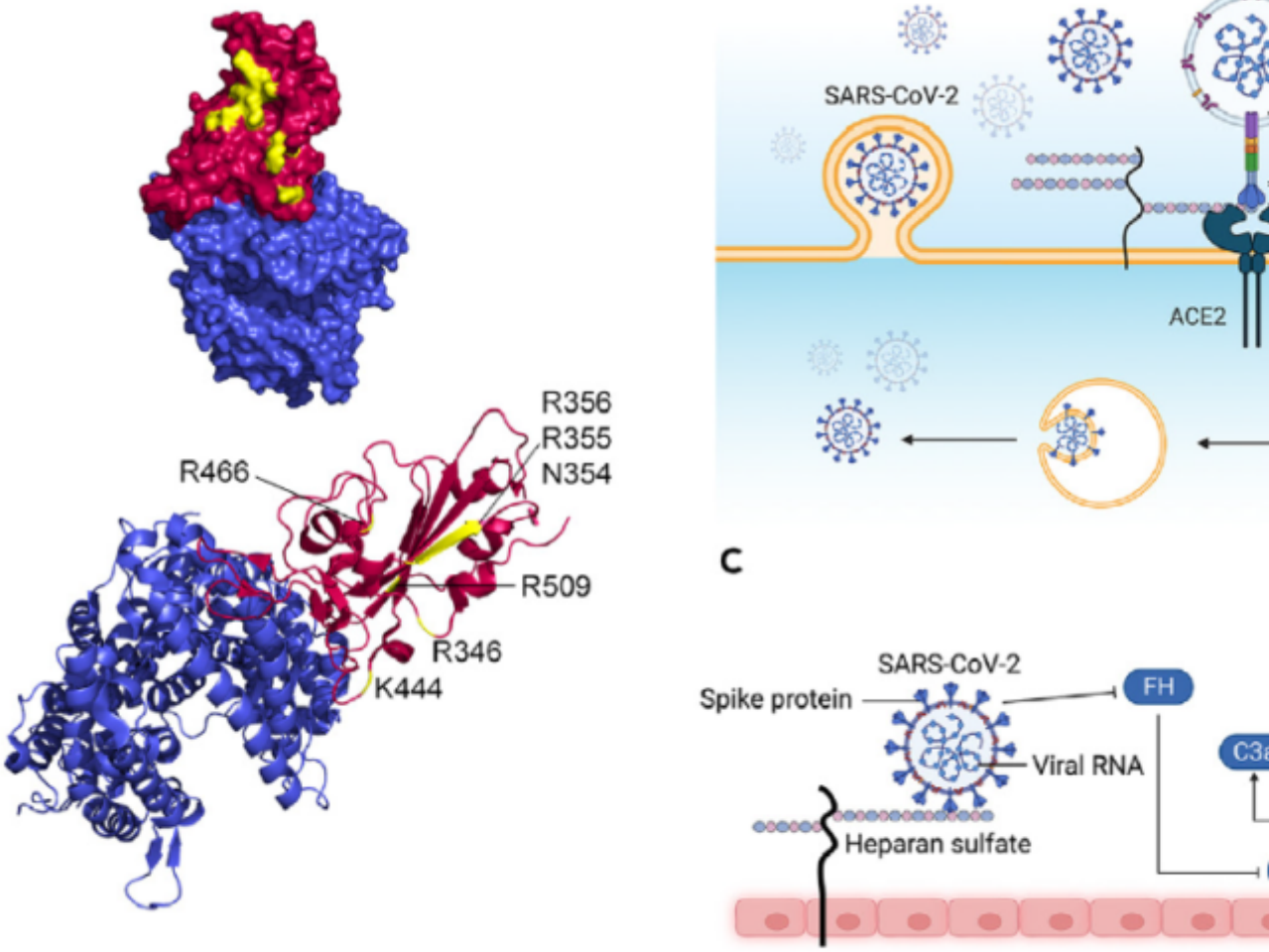


. SARS-CoV-2 binding to ACE2 is enhanced with heparan sulfate acting as an adhesion receptor

Global Impact of Proteoglycan Science on Human Diseases

Description

The authors provide a comprehensive review that analyses the impact of research on proteoglycans. They focus on recent developments in their synthesis, degradation and interactions while critically assessing their involvement in various biological processes. The SARS-Cov-2 pandemic drew attention to the role of proteoglycans in global infections and their emerging functions in regenerative medicine and biomaterials science, all of which influence our current view of proteoglycans and related compounds.



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Also emerging as a constructive and potentially beneficial therapeutic strategy is the role of proteoglycans in cancer biology and their potential use as a next-generation protein-based adjuvant therapy to combat cancer. The authors discuss the role of proteoglycans in selected and emerging areas of proteoglycan science, such as neurodegenerative diseases, autophagy, angiogenesis, cancer, and infections and their impact on mammalian diseases. The authors conclude with a series of unanswered questions and future challenges to be addressed.

Category

1. News