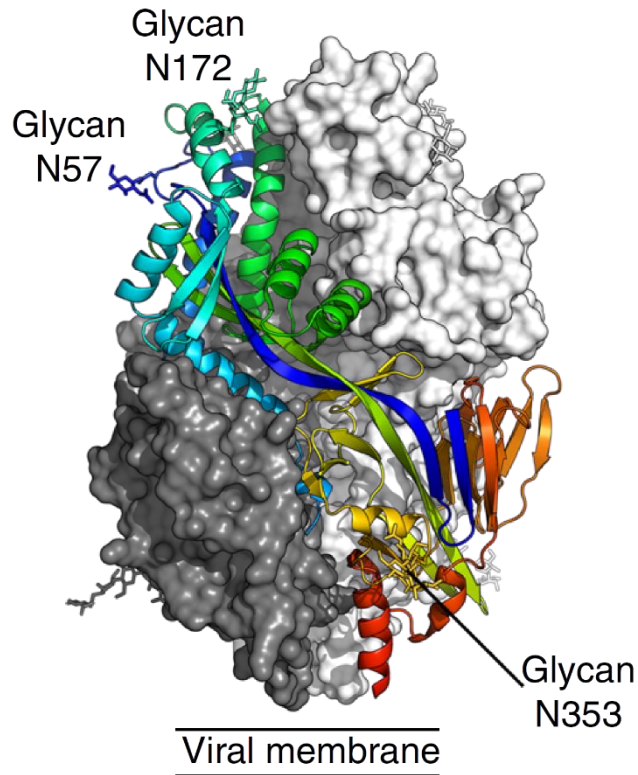


# 3D Protein Structure Helps in the Search for a Vaccine



*The structure of the pre-fusion hMPV F trimer is shown as ribbons and colored from blue to red, while other molecular surfaces are colored in white and dark gray.*

M. Battles, V. Más, E. Olmedillas, O. Cano, M. Vázquez, L. Rodríguez, J. Melero, & J. McLellan. *Nat Commun* 8, 1528 (2017).

*Work was performed at Brookhaven National Laboratory*

## Scientific Achievement

Scientists revealed the 3D structure of the human metapneumovirus (hMPV) F glycoprotein, which mediates membrane fusion and viral entry.

## Significance and Impact

hMPV can be a cause for bronchitis in young children; a glycan shield at the apex of the F protein was revealed and could help in the search for a vaccine.

## Research Details

- X-ray crystallography was used to elucidate the 3D pre-fusion structure of the protein to 2.6 Å-resolution
- It shows that the protein possesses a dense glycan shield, which helps the virus to resist recognition by antibodies.



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