

Seminar

The Power of One: A Single Residue Steering SARS-CoV-2 Spike Trafficking

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The SARS-CoV-2 spike is the viral protein that allows the virus to enter cells and is the main target of vaccines. It is critical for driving infection, and formation of infectious virus. In this talk, I'll share the story of how just one residue at the spike protein tail acts as a molecular traffic controller which determines how spike moves inside the cell and whether, (i) it gets packaged into new viral particles and (ii) is expressed at the cell surface. We'll take a tour from atomic structures to cell biology, revealing how SARS-CoV-2 hijacks our cellular protein transportation system, why this residue is highly conserved, and what these insights mean for the design of future vaccines and therapies. This intersection of virology, structural biology, and protein trafficking will highlight both fundamental science and translational impact.

Tuesday, Sep 9th 2025

16:00 Hrs (Tea / Coffee 15:45 Hrs)

Auditorium, TIFRH