



THE CHINESE UNIVERSITY OF HONG KONG
Department of Physics
COLLOQUIUM

Virus-Membrane Interactions: Simulations, Experiments, and Experiment-Driven Simulations

by

Professor Peter KASSON
Departments of Molecular Physiology and Biological Physics
and of Biomedical Engineering
University of Virginia, USA
and
Department of Cell and Molecular Biology
Uppsala University, Sweden

Date: November 11, 2022 (Friday)

Time: 10:00 - 11:00 a.m.

Join ZOOM Meeting: <https://cuhk.zoom.us/j/97204757178>



ALL INTERESTED ARE WELCOME

Abstract

Enveloped viruses bind to receptors on the cell surface and are then activated for entry by a process of membrane fusion that can take place either on the cell surface or in endosomal compartments. We study the viral conformational dynamics and protein-membrane interactions that control this process using a combination of computational modeling and single-event optical microscopy. Using these methods, we can dissect the roles that cellular receptors play in activating viruses for entry, the nature of downstream triggers for fusion, and the physical forces controlling viral membrane fusion. Finally, integrating computational and spectroscopic methods further permits refinement of conformational equilibria and dynamics controlling the activation of viral glycoproteins and their neutralization by antibodies.

Enquiries: 3943 6303