



Department of Biological Sciences
Seminar Announcement

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Functional implications of RNA virus capsid dynamics

Animal virus particles display a variety of dynamic behavior in their life cycles. Quasi-equivalent capsids require that the one type of capsid subunit occupy different structural environments. This results from molecular switches encoded in the assembly process. Nodaviruses are T=3 insect viruses that have been investigated in our laboratory and we have identified the molecular switches that control subunit interactions. Dynamic behavior is also required for the virus particles to interact with receptors and deliver RNA across membranes. We have investigated these fluctuations and identified regions of the virus subunit that are reversibly exposed and have characterized how these regions facilitate RNA translocation across membranes. We have also examined large scale capsid maturation effects in tetra viruses and have proposed a mechanism for the transition based on a helix-coil transition that is effectively a molecular motor.

Date: 1 Oct 2003, Wed
Time: 4 pm
Venue: LT 20
Host: Prof Hew Choy Leong



All are welcome