NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

School of Biological Sciences
College of Science

Seminar Announcement

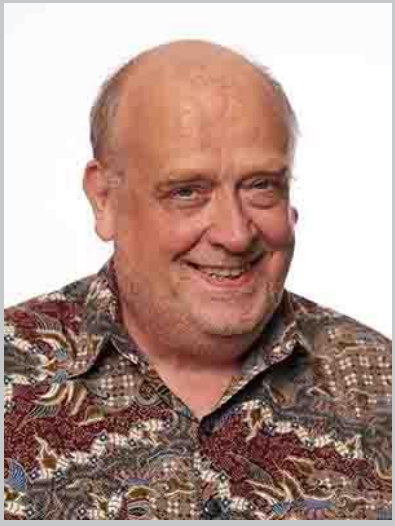
Identifying virus host-cell interactions; looking for the needle in a haystack

Date: **5 February 2021, Friday**

Time: **4pm**

Venue: **Classroom 1, SBS**

It has long been questioned if viruses are true-life forms or if they are merely autonomous self-replicating molecular machines. A typical virus genome has a small coding capacity, and consequently when compared with the proteome of eukaryotic microorganisms, viruses express a relatively small number of key virus proteins. Hence, viruses must utilize a variety of other specific host cell factors in order to efficiently replicate in a host cell. They therefore require a living host cell to replicate, and in this context, they are considered to be intracellular parasites. This intimate interaction between the invading virus and its host cell gives rise to a variety of virus-associated macroscopic phenomena e.g. virus fitness, host range and virus pathogenicity. However, given the complexity of the eukaryotic host cell, defining meaningful interactions between the virus and its host cell is challenging. Nevertheless, it is anticipated that if effort is made to understand these specific interactions, this information could accelerate the search for future antiviral drugs and treatments (e.g. via drug repurposing), and aid in the development of virus vaccines. Our work centers around understanding virus-host cell interactions, and in this seminar, I will describe some of the approaches that we take to address this issue.



Speaker:

Richard Sugrue
Associate Professor
School of Biological Sciences
Nanyang Technological University