

# HONG KONG RNA CLUB

## Seminar

香港城市大學  
City University of Hong Kong

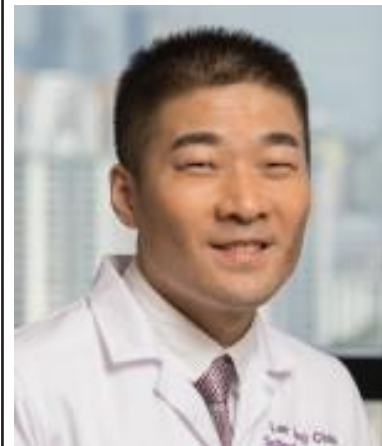


30 Aug 2019 (Fri) / 10:00-11:00am  
1B-G04, To Yuen Building (TYB)  
City University of Hong Kong

**CANCELLED**

### Guest Speaker:

Prof. Luo Dahai  
Nanyang Assistant Professor  
Lee Kong Chian School of Medicine  
Nanyang Technological University



*Target the virus replication process  
for specific antivirals against  
Dengue and Zika viruses?*

**CANCELLED**

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# Target the virus replication process for specific antivirals against Dengue and Zika viruses?

## Prof. Luo Dahai

Nanyang Assistant Professor, Lee Kong Chian School of Medicine,  
Nanyang Technological University



### Abstract

Many members of the mosquito-borne flavivirus are well-known human pathogens such as dengue virus (DENV), Japanese encephalitis virus (JEV), West Nile virus (WNV), and yellow fever virus (YFV) and Zika virus (ZIKV). For these positive-sense single-stranded RNA viruses, the RNA replication occurs within a replication complex (RC) that assembles on ER membranes and comprises both non-structural (NS) viral proteins and host cofactors. Several non-structural proteins including NS2b-NS3 protease, NS3 helicase, NS5 methyltransferase, and NS5 RNA dependent RNA polymerase, constitute promising drug targets because of their essential functions during viral replication. Recent success of anti-HCV drugs – direct acting antivirals which target viral NS proteins, NS3, NS5a, and NS5b, is both exciting and encouraging. We continue our long-standing adventure in studying the molecular mechanisms of virus replication. Here I update some structural and functional studies on these viral components of the RC to better understand the interplay between the molecular constituents and the molecular basis of viral RNA replication. The knowledge will hopefully help the development of specific antivirals drugs and better vaccines against the infectious flaviviruses.

### Biography

Nanyang Assistant Professor Luo Dahai received his BSc in 2006 and his Ph.D. in 2010 from the School of Biological Sciences, Nanyang Technological University, Singapore. He studied at Yale University as a postdoctoral research associate (2010-2013) before joining Lee Kong Chian School of Medicine (LKCMedicine) in Sept 2013. He recently won the EMBO Young Investigator Award (2017-2021).