

## SEMINAR ANNOUNCEMENT

We would like to invite you to attend this seminar hosted by Prof Song Haiwei:

Date: Tuesday, 21 January 2020  
Time: 11:00AM – 12:00NN  
Venue: Level 3, IMCB Seminar Room 3-46, Proteos, Biopolis

### Morbillivirus entry mechanism



**Prof Katsumi Maenaka**

*Professor (Laboratory of  
Biomolecular Science),  
Director (Center for Research and  
Education for Drug Discovery),  
Director (Center for Life  
Innovation),  
Faculty of Pharmaceutical  
Sciences, Hokkaido University*

#### Abstract

Measles virus (MV) and canine distemper virus (CDV) are highly contagious and deadly, forming part of the morbillivirus genus. Two major glycoproteins on viral surface, receptor binding hemagglutinin (H) and fusion protein (F), are important for cell entry event. The receptor recognition by morbillivirus H protein is important for determining tissue tropism and host range, while F protein exhibits large structural changes to achieve membrane fusion. We have been working on structural and functional characterization of H and F function on viral entry. In this talk, I will focus on crystal structures of MV-H and CDV-H proteins as well as atomic force microscopic study for CDV-H and electron microscope of CDV-F. These results provide insight on dynamical features of cell entry mechanism of morbilliviruses.

#### Biography

Katsumi Maenaka graduated from University of Tokyo and then worked in x-ray crystallography in University of Oxford as a HFSP fellow. He moved to Institute of National Genetics, Kyushu University and became a full professor at Hokkaido University in 2010. He has been working on structural studies of immune checkpoint receptors and viral proteins, especially immune checkpoint receptors, LILR and KIR, and hemagglutinin of measles and canine distemper viruses. He is now the director of Center for Research and Education for Drug Discovery, Hokkaido University, handling a chemical library screening base.

**ALL ARE WELCOME** (No registration required)

We appreciate if you could disseminate this email to your staff.

For upcoming seminars in IMCB, please visit our website at <https://www.a-star.edu.sg/imcb>

Thank you.