

City University of Hong Kong  
Department of Biomedical Sciences  
presents a seminar



## “SARS PATHOGENESIS STUDY USING CHINESE RHESUS MACAQUE AS A MODEL”

*by*

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**Time: 3.00pm to 4.30pm**

**Venue: Meeting room 2-130, 1/F, Block 2, To Yuen Building, CityU**

### **Abstract**

Innate immune responses have a critical role in the control of early virus replication and dissemination as well as promoting the activation of adaptive responses. It remains unknown, however, how severe acute respiratory syndrome coronavirus (SARS-CoV) evades respiratory innate immunity to establish a systemic infection, and role of adaptive immune response in lung pathogenesis has remained controversial. The recent outbreak and high mortality rate of the Middle East Respiratory Syndrome coronavirus (CoV) emphasizes the importance of studies on CoV-associated pathogenesis. Using Chinese rhesus macaques, we provided a comprehensive overview of the spatiotemporal interactions of SARS-CoV, monocytes/macrophages, and the DC network in mucosal tissues and highlights the fact that, while these innate cells contribute to viral clearance, they probably also serve as shelters and vehicles to provide a mechanism for the virus to escape host mucosal innate immunity and disseminate systemically. Further study revealed that SARS-CoV-specific antibodies triggered lung injury likely via unbalancing monocytes/macrophages polarization, although SARS vaccine conferred protection against virus replication. These findings are critical to understand SARS pathogenesis and to identify key steps and strategies for the future prevention and therapy.

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**All are welcome**