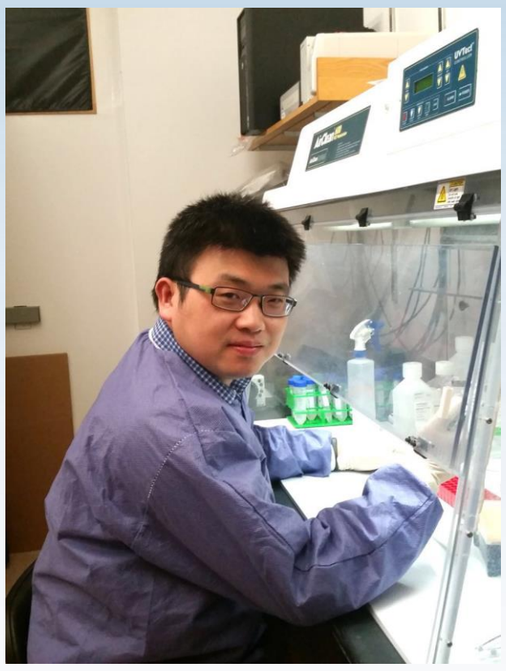
中国科学院上海巴斯德研究所
INSTITUT PASTEUR OF SHANGHAI
CHINESE ACADEMY OF SCIENCES

Seminar

Dissecting mechanisms regulating the hepatitis E virus life cycle by complementing viral protein functions in trans



[Speaker] Dr. Qiang Ding

[Time] 15:00-16:30 PM , October 26, 2017

[Host] Prof. Jin Zhong

[Venue] A0201, Life Science Research Building

[Speaker introduction]

2007-2013,Ph.D. Student, Institut Pasteur of Shanghai, China.
2007-2013, Research Assistant, Institut Pasteur of Shanghai, China.
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[Abstract]

Hepatitis E virus (HEV) is an emerging pathogen in developed and developing countries where it can lead to liver failure, chronic infection, and cirrhosis in immunocompromised patients and death in pregnant women. Gaps in our understanding of the HEV molecular virology continue to hamper the development of direct-acting antiviral therapeutics. To uncouple different aspects of HEV's complex life-cycle we have attempted to complement the functions of the different HEV gene products, ORF1, 2 and 3 *in trans*. Using these platforms we determined that ORF3 functions as an ion channel to mediate virus egress, and mapped residues within ORF3 are required for ion channel activity and virus egress. Furthermore, we identified a *cis*-acting element as a highly-conserved promoter to drive the synthesis of HEV subgenomic RNA, which is essential for producing infectious viral particles. Collectively, these *trans*-complementation systems enable the systematic analysis of different crucial aspects of the HEV life-cycle.