

Research Theme: Structural biology, Drug discovery

MSc Research Project Title:

Visualizing host-virus fusion dynamics using multiplexed fusion assay

Principal Investigator/Supervisor: Xiao Tianshu Ph.D

Co-supervisor/ Collaborator(s) (if any): Yan Chuan Ph.D. (IMCB A*STAR)

Project Description

a) Background: The host-viral membrane fusion step is critical for initiating entry and infection, therefore an attractive target for therapeutic discovery. This project focuses on understanding flavivirus E protein-mediated fusion dynamics in vitro, which is critical for future therapy discovery studies.

b) Proposed work: This project centers on developing an improved, cell based fusion assay. Host cells expressing either human or viral receptors will be engineered to express various fluorescence reporters to understand host-viral fusion mechanisms in real time. Further studies will probe downstream molecular mechanisms mediating this fusion process.

c) Preferred skills: Protein science and related biochemistry experiences would be preferred, but not a requirement.

Supervisor contact:

If you have questions regarding this project, please email the Principal Investigator:

SBS contact and how to apply:

Associate Chair-Biological Sciences (Graduate Studies) : AC-SBS-GS@ntu.edu.sg

Please apply at the following:

Application portal:

<https://venus.wis.ntu.edu.sg/GOAL/OnlineApplicationModule/frmOnlineApplication.ASPX>