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| **Research Theme: Animal modelling; Drug discovery** |
| **PhD Research Project Title: Preclinical zebrafish models of viral infection** |
| **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 zebrafish is an ideal animal model for high throughput therapy discovery studies and high-resolution imaging. However, to date, there is no reported zebrafish preclinical viral infectious model. Establishing a transgenic zebrafish model that allows infection by human viruses will provide a valuable tool for preclinical antiviral inhibitor discovery studies.  **b) Proposed work:** This project centers on using CRISPR/Cas9 approaches to generate transgenic immune deficient zebrafish mutants lacking antiviral immunity. These animals will be used as host to test infectious activity of various human viruses, prioritizing flaviviruses including dengue and zika. Further work will validate results from new zebrafish mutant animals in preclinical gold standard immunodeficient mice models  **c) Preferred skills:** Preclinical animal modelling experiences is 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](mailto:AC-SBS-GS@ntu.edu.sg)  Please apply at the following:  **Application portal:** <https://venus.wis.ntu.edu.sg/GOAL/OnlineApplicationModule/frmOnlineApplication.ASPX> |