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| **Research Theme: Immunology** |
| **PhD Research Project Title:**  Investigating trained immunity during early life |
| **Scholarship category (Please indicate the source of funding for this project):**  **SBS Research Student Scholarship (for SBS faculty only)** |
| **Principal Investigator/Supervisor:** LOH Jia Tong (Asst Prof) |
| **Co-supervisor/ Collaborator(s) (if any): -** |
| **Project Description**  After initial exposure to a pathogenic stimulus, innate immune cells can be epigenetically and metabolically reprogrammed to acquire immunological memory, resulting in heightened responsiveness towards subsequent non-related challenges. This phenomenon, known as trained immunity, provides broad and enhanced protection against a wide range of pathogens, and can be harnessed for vaccine design and immunotherapy. However, most studies on trained immunity are conducted in adults, and it remains unclear whether this process is fully functional or alternatively programmed during early life. As such, this project aims to investigate trained immunity during early life using mouse models and state-of-the-art technologies including high-dimensional flow cytometry and single-cell sequencing.  **Preferred skills:** experience with flow cytometry and bioinformatics (eg. R) would be a big plus, but not indispensable |
| **Supervisor contact:**  **If you have questions regarding this project, please email the Principal Investigator:**  **Jiatong.loh@ntu.edu.sg** |
| **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> |