NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE
School of Biological Sciences
College of Science

Reg. No. 200604393R

Research Theme: **Plant Biology / Cell Biology / Bioinformatics**

MSc Research Project Title: **Primed defense in plants**

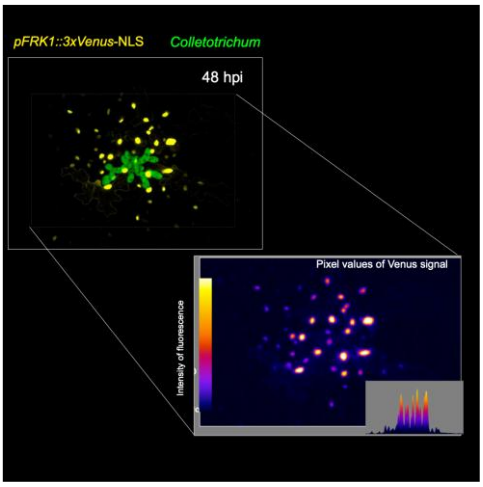
Principal Investigator/Supervisor: **Dr. Tang Bozeng**

Co-supervisor/ Collaborator(s) (if any):

Project Description

a) Background: Plant defense priming is a process by which plants enhance their ability to mount faster and stronger defense responses to future stress, often triggered by an initial stimulus such as a pathogen or herbivore attack. This “memory” allows plants to be better prepared for subsequent threats, leading to increased resistance and stress tolerance. However, how primed defense operates remains unknown.

b) Proposed work: In this program, we will apply data science alongside live-cell imaging to investigate primed defense responses in plant cells. we will gather and reanalyze published datasets on primed defense and generate fluorescent reporter lines. Then we will examine the induction of priming-related defense genes as fluorescent singals upon pathogen attack. This work will establish a solid foundation for further characterization of primed defense as a PhD project, and pave the way for exploring its heterogeneity among individual plant cells.



c) Preferred skills: some background or interests of data science.

A strong interest to learn about molecular biology and bioinformatics;

Experience of bioinformatics is a plus, but not compulsory

Supervisor contact:

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

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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