Reg. No. 200604393R

Research Theme: **Plant Biology / Functional Genomics**

PhD Research Project Title: **Investigating heterogeneity of plant-fungus interactions**

Scholarship category (Please indicate the source of funding for this project):

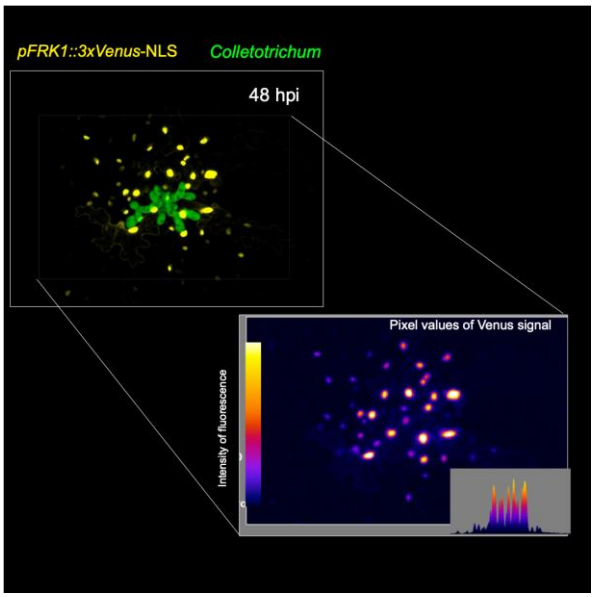
(a) SBS Research Student Scholarship (for SBS faculty only)

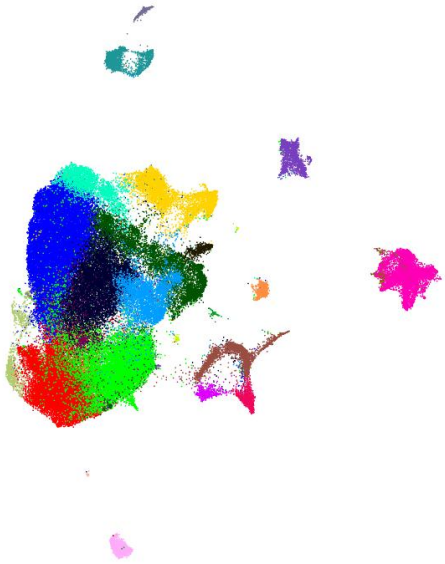
Principal Investigator/Supervisor: Dr. Tang Bozeng

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

Project Description

a) Background: Plants develop a robust immune system to defend against pathogen attack. To balance defense and growth, immune responses must be precisely controlled in both time and space—in individual cells, cell types, and organs—since overexpression of defense-related genes leads to abnormal growth or long-term fitness penalties. However, our understanding of plant immunity at the single-cell level remains limited.





b) Proposed work: This PhD program provides intensive training in plant pathology, cell biology, and bioinformatics to characterize cellular heterogeneity during pathogen infection at single-cell resolution. Students will investigate the regulatory circuits that control defense-related gene expression in individual cells. This work will advance our understanding about plant-microbe interaction to deploy crop cultivars with robust resilience to various stresses—without incurring growth penalties or fitness costs.

c) Preferred skills: Strong interests in plant pathology;

A strong curiosity about science;

Experience of bioinformatics is a plus, but not compulsory

Supervisor contact:

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

bozeng.tang@ntu.edu.sg

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