



Research Theme: Computational Biology; Functional Genomics
PhD Research Project Title: Singapore's seagrass meadows
Scholarship category (Please indicate the source of funding for this project): SBS Research Student Scholarship (for SBS faculty only)
Principal Investigator/Supervisor: A/Prof Rebecca CASE
Co-supervisor/ Collaborator(s) (if any):
<p style="text-align: center;">Project Description</p> <p>a) Background:</p> <p>Meadows are an important coastal habitat in Singapore as they protect our coastline from rising sea level and are a site for blue carbon storage. This graduate project focuses on the seagrass microbiome, and the microbial community that coats its above and below ground structures. Of particular interest are the roles of the microbiome in protecting seagrasses from disease, biogeochemical cycling and nutrient based symbiosis.</p> <p>b) Proposed work:</p> <ul style="list-style-type: none">• Field sampling of seagrasses• Manipulative aquarium experiments on seagrasses at St John Island National Marine Laboratory• Molecular community analysis of seagrass microbiome• metagenomics• PAM fluorometry (PSII function)• Various microscopy techniques to characterized the cell growth, differentiation and cell death processes <p>c) Preferred skills: computation work on data analysis would be a big plus, but not indispensable</p> <ul style="list-style-type: none">• confident swimmer (opportunity to learn SCUBA diving but not required)• Undergraduate degree in microbiology, plant science, biology, environmental sciences or marine science• Experience in one or more of the following: microbiology, plant science, marine science, cell biology, molecular biology, bioinformatics, -omics
<p style="text-align: center;">Supervisor contact:</p> <p>If you have questions regarding this project, please email the Principal Investigator: rj.case@ntu.edu.sg</p>



**NANYANG
TECHNOLOGICAL
UNIVERSITY**
SINGAPORE

School of Biological Sciences
College of Science

Reg. No. 200604393R

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>