



# Seminar Announcement

## A unicellular host-pathogen system in the ocean

**Date:** 29 January 2021, Friday

**Time:** 4pm

**Venue:** Classroom 1, SBS

Coccolithophores are the third most abundant group of phytoplankton in the world's oceans and play a critical role in the carbon, oxygen and sulphur biogeochemical cycles.

*Emiliania huxleyi* is the most abundant coccolithophore making it an excellent model species to study chemical ecology as it communicates with various trophic levels including birds, fish, grazers, bacteria and viruses. My research is focused on a group of marine pathogens, the roseobacters, that activate an apoptotic-like programmed cell death (AL-PCD) pathway in their unicellular host. I will present our work describing this AL-PCD mechanism in *E. huxleyi* and a candidate virulence factor in the pathogen, *Phaeobacter inhibens*, which activates AL-PCD in its host. I will discuss the significance of a mechanism that co-ordinates death through populations and how this impacts earth's biogeochemical cycles.



### **Speaker:**

**Rebecca Case**  
Associate Professor  
School of Biological Sciences  
Nanyang Technological University