



The University of Hong Kong  
School of Biological Sciences

Qualifying  
Seminar

# Molecular mechanisms underlying cleaning behaviour

**Date: Feb 9, 2023**

**Time: 4:00 pm**

**Venue: Zoom**



## About the speaker:

Daniele is a PhD Student supervised by Dr. Celia Schunter. The focus of his research is to define the molecular mechanisms behind the cleaning behaviour in coral reef ecosystem.



## Abstract:

The term “cleaning symbiosis” defines an interaction between two organisms, a cleaner and a client, where the first removes and consumes ectoparasites, bacteria, injured tissue or unwanted food particles from the latter. Cleaning behaviour plays an important role in maintaining biodiversity and the stability in coral reef ecosystems. Considering the species *Labroides dimidiatus*, in one day each individual inspects around 2297 clients, eating 1218 ectoparasites. Taking into account the wide distribution and the density only of this species, cleaner fishes exert an enormous impact on the ecosystem as regulator of parasites population that directly influence fish welfare and biodiversity.

Due to its complexity, cleaning behaviour of *Labroides dimidiatus* has been at the centre of behavioural studies. The ecological patterns behind as the cognitive skills of the cleaner fishes have been extensively studied, but the molecular aspect is clearly understudied. For this reason, the aim of this research is to shed light on the molecular mechanisms behind the cleaning behaviour in coral reef ecosystem.