

分子生物学科・環境科学研究センター・ SUPER FORUM 共催セミナーのご案内

**演題: INTEGRATING GENOMICS,
TRANSCRIPTOMICS, PROTEOMICS,
METABOLOMICS AND BIOINFORMATICS
TO REVEAL THE BIOLOGY OF PLANTS
AND MICROBES**

日時: 3月8日(火) 16:20~17:30 理学部2号館二階9番教室

**演者: Dr. Hoe-Han Goh (National University of Malaysia)
マレーシア国民大学 システムバイオロジー研究所
植物バイオテクノロジーセンター センター長**

問い合わせ先:

環境科学研究センター 高木 優

Pitcher plant



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Research interests:

Plant Functional Genomics

Abstract

The field of biology has moved to a big data era since the past decade with the advancement of omics approaches. High throughput techniques of next-generation sequencing and tandem mass spectrometry coupled with bioinformatic analysis allow us to study complex biological network at different molecular levels. Since the establishment of INBIOSIS in 2005, we champion systems biology approach in the study of tropical plants, namely, *Polygonum minus*, *Garcinia mangostana*, *Nepenthes spp.*, *Oryza sativa* and *Carica papaya*. We also adopted the model plant *Arabidopsis thaliana* as a molecular tool for gene functional characterisation. In this talk, I am going to share about how the different omics approaches were integrated for a holistic understanding on plant physiology and for the discovery of biomolecules and crop improvement. To illustrate that, our flagship project on *P. minus* will be used as a case study. Furthermore, a brief overview on the various on-going research projects by different researchers will also be provided.

Biography

Hoe-Han Goh, a plant molecular biologist, graduated from the Department of Animal and Plant Sciences, University of Sheffield, UK. He started his first academic position at the Institute of Systems Biology, Universiti Kebangsaan Malaysia (National University Malaysia) upon his graduation in Nov 2011. He has trained himself on the applications of NGS by attending courses and workshops on NGS data analysis held at BGI-Shenzhen and TGAC UK. Since then, he has established a plant functional genomics research group with a focus on crop improvement and molecular exploration of tropical plant species using NGS and functional genomic approaches. In Jun 2014, he was appointed as a head of plant biotechnology centre. His broad range of publication topics include plant development, physiology and environmental metabolomics. Currently, he is also working on discovery of biomolecules in pitcher plants, and deciphering the genomes and transcriptomes of mangosteen and Rafflesia flower.