

YONG KIAN LIM

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DETAILS

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LANGUAGES

English | Proficiency: Fluent
Malay | Proficiency: Fluent
Mandarin Chinese | Proficiency:
Fluent

EDUCATION

M.Phil Earth Sciences – Biotechnology, University of Malaya, Kuala Lumpur, Malaysia

February 2015 — November 2017

Dissertation title: "Emission of Short-Lived Halocarbons by Selected Tropical Marine Phytoplankton"

Biological Sciences, minor in Chemistry, University of Pittsburgh, Pennsylvania, USA

April 2011 — April 2014

B.Sc (cum laude), Biological Sciences, minor in chemistry

PUBLICATIONS

Yong-Kian Lim, Khan Cheung, Xin Dang, Steven Roberts, Xiaotong Wang, Vengatesen Thiyagarajan (2020). "DNA methylation changes in response to ocean acidification at the time of larval metamorphosis in the edible oyster, *C. hongkongensis*." *Marine Environmental Research* (accepted)

Yong-Kian Lim, William T. Sturges, Siew-Moi Phang, Gill Malin, Noorsaadah Abdul Rahman. (2019). "Effect of irradiance on the emission of short-lived halocarbons from three common tropical marine microalgae." *PeerJ*, 7:e6758. Doi: 10.7717/peerj.6758

Yong-Kian Lim, Siew-Moi Phang, William T. Sturges, Gill Malin, Noorsaadah Abdul Rahman (2018). "Emission of short-lived halocarbons by three common tropical marine microalgae during batch culture." *Journal of Applied Phycology*, 30(1):341-353.

Yong-Kian Lim, Siew-Moi Phang, Noorsaadah Binti Abdul Rahman, William T. Sturges, Gill Malin (2017) "Halocarbon emissions from marine phytoplankton and climate change." *International Journal of Environmental Science and Technology*, 14(6): 1355-1370.

Phang Siew-Moi, Keng Fiona Seh-Lin, Mithoo Singh Paramjeet Kaur, Lim Yong-Kian, Noorsaadah Abdul Rahman, Leedham Emma C., Robinson Andrew D., Harris Neil R.P., Pyle John A., Sturges William T. (2015) "Can seaweed farming in the tropics contribute to climate change through emission of short-lived halocarbons?" *Malaysian Journal of Science* 34(1): 8-19.

RESEARCH EXPERIENCES

University of Hong Kong, Hong Kong, SAR

November 2017 — **present**

Marine Larval Biology Laboratory

Research Trainee; Advisor: Assoc. Prof. Dr. V. Thiyagarajan

To investigate the effects of climate change events on the growth and response of molecular physiologies of oysters and other marine invertebrates.

Chinese Academy of Sciences, Guangzhou/Laizhou/Zhanjiang, China

January 2018; May - Sept 2019

South China Sea Institute of Oceanology/ Hatcheries

Key Laboratory of Tropical Marine Bio-resources and Ecology - Research Group of Marine Animal Genetics and Molecular Biology

Visiting Trainee; Advisor: Dr. Zhang Yang

- Acquired skills to run RT-qPCR for gene expression analysis of oysters.
- Acquired skills to dissect and extract different parts of oyster tissues.
- Shellfish aquaculture, large-scale controlled experiments on the effect of Ocean Acidification on selected important oysters in terms of physiology and molecular work

University of Malaya, Kuala Lumpur, Malaysia

June 2014 — October 2017

Algae Research Laboratory

Graduate Research Assistant; Advisor: Prof. Dr. Phang Siew Moi Seaweed, phytoplankton, coral samplings from field work at coastal regions e.g. Port Dickson Investigated the emission of volatile short-lived organohalogenes from biogenic sources e.g. seaweeds and phytoplankton

- Isolated and characterized marine microalgae; cyanobacteria and diatom – morphology, physiology and phylogenetic, maintained cultures
- Identified and quantified compounds emitted from the microalgae using GC-MS equipped Purge-&-Trap system
- Determined the growth and biomass of the microalgae through various approaches
- Correlated the effects of varying temperature, salinity, irradiance and growth phases on the emission of halocarbons
- Analyzed the relationship of photosynthetic efficiencies (Fv/Fm) and the emitted halogenated compounds to varying irradiance levels. Acquired skills to run surge, wave and tide simulations on SuWAT hydrodynamic modelling developed by Dr. Sooyoul Kim, Japan.

University of East Anglia, Norwich, United Kingdom

May 2015

School of Environmental Sciences

Visiting Research Assistant; Advisors: Prof. Dr. William Sturges & Dr Gill Malin

- Designed experimental approaches to detect the emission of short-lived halocarbons from marine phytoplankton
- Analyzed experimental data to quantify emitted halocarbons
- Acquired skills to run and troubleshoot GCMS Purge-&-Trap system for proper halocarbon quantification

University of Cambridge, Cambridge, United Kingdom

May 2015

Centre for Atmospheric Science, Department of Chemistry

Visiting Research Assistant; Advisor: Dr. Andrew Robinson

- Acquired skills to run and troubleshoot □-dirac Gas Chromatography for the measurement of atmospheric halocarbons stationed in University of Malaya

The National Centre for Atmospheric Science, Isle of Arran, United Kingdom

May 2015

Natural Environment Research Council

Participant; Advisor: Dr. Louise Whitehouse

- Measured, analyzed and assessed field data collected from deployed balloon and loggers on Goatfell mountain region and later reviewed results in the form of presentations.
- Interpreted and analyzed the characteristics of satellite-based weather forecasting in the Europe

University of Pittsburgh, Pennsylvania, USA

August 2012

Pymatuning Laboratory of Ecology

Participant; Advisor: Dr. Andy Turner

- Acquired hands-on skills in sampling aquatic communities and assessed water quality using quantitative methods. Aquatic regions explored include Allegheny river, French creek and lakes of Pennsylvania.
- Examined the physiological and behavioral ecology of aquatic organisms. e.g. freshwater fish, etc., including acquired techniques to identify various fish species.
- Presented a final class research project based on field data acquired – Summarized all observation and results on the effect of abiotic factors on the possible behavior of studied freshwater aquatic organisms, especially *Lepomis macrochirus* (bluegill sunfish).

TEACHING EXPERIENCES

University of Hong Kong, Hong Kong, SAR

September 2018 — Present

Kadoorie School of Biological Sciences

Demonstrator / Teaching assistant

- Involved in teaching theoretical and practical classes under the department of ecology and biodiversity for undergraduate students.

University of Malaya, Kuala Lumpur, Malaysia

2015 — 2017

Institute of Ocean and Earth Sciences

Teaching assistant; Advisor: Prof. Dr. Phang Siew Moi

- Tutored undergraduate Biotechnology practical class on outdoor culture growth of microalgae in photobioreactors.
- Taught the use of Water PAM and analysis of associated photosynthetic parameters. - Helped in answering students' questions and grading exam papers.
- Helped to proofread peers' dissertations and guided new postgraduate students on laboratory experimental designs and the use of lab equipment e.g. Purge-&-Trap.

COURSES

↓ Certificate of Teaching and Learning in Higher Education, University of Hong Kong
January 2019 — March 2019

GRANTS AND AWARDS

↓ Postgraduate Scholarship (PGS) , University of Hong Kong
2018 — 2022

↓ MVP (1st runner-up) of United Nation SDG International e-tournament, Hong Kong Baptist University
2020

↓ Best paper award (Oral presentation) , State Key Laboratory of Marine Pollution, Hong Kong
2019

↓ Postgraduate Research Grant, University of Malaya
2016 — 2017

↓ MyBrain15 Scholarship, Ministry of Higher Education, Malaysia
2015 — 2017

↓ Student Leader (Senior) Award, CCLD, University of Pittsburgh
2014

↓ Public Service Department Scholarship, Ministry of Higher Education, Malaysia
2009 — 2014

CONFERENCE PRESENTATIONS

Oral presentations:

- 1) The 11th UCAS Postgraduate Symposium, 24-29 Mar 2019, Kaohsiung, Taiwan.
- 2) The 1st Graduate Symposium on Marine Environmental Research (3rd prize), 12 Mar 2019, City University of Hong Kong, Hong Kong, SAR.
- 3) State Key Laboratory in Marine Pollution Annual Meeting, Mar 2018, City University of Hong Kong.
- 4) Asian Oceania Geosciences Society 13th Annual Meeting, Aug 2016, Beijing, China.
- 5) Asian Oceania Geosciences Society 12th Annual Meeting, Aug 2015, Singapore.

Poster presentations:

- 1) The 12th International Temperate Reefs Symposium, 6-11 Jan 2019, University of Hong Kong.
- 2) Asian Oceania Geosciences Society 14th Annual Meeting, Aug 2017, Singapore.
- 3) 3rd Croucher Summer program, Jun 2017, Hong Kong University of Science and Technology.

SKILLS AND TECHNIQUES

- Proficient in statistical analysis (Statistica 8.0 and SPSS); word processing (Word); spreadsheets (Excel); database (Access, Works); presentation software (PowerPoint), basic R - Isolation of microorganisms (microalgae and bacteria)
- Small- and large-scale maintenance of larval growth in aquaculture facilities RT-qPCR and gel electrophoresis
- Flow Cytometer
- Gas Chromatography-Mass Spectrometry equipped Purge-&-Trap system
- μ -Dirac Gas Chromatography
- Water Pulse Amplitude Modulation (PAM) Fluorometer
- UV Spectrophotometer
- Electro- and Seinfishing, Open Water Diving, Quadrat sampling

SEMINARS AND WORKSHOPS

- Hands-on training workshop – Understanding calcifiers using Electron Back Scatter Diffraction (EBSD)
January 2019
- International Workshop on Transgenerational Inheritance of Gene-Climate Interplay in Oysters
February 2018
- IOES – HICoE Seminar themed Air-Ocean-Land Interactions and processes
September 2017
- Workshop – SuWAT Modelling and Training
August 2017
- 3rd Croucher Summer Course – Climate Change and Marine Ecosystems, HKUST
July 2017
- Co-organized a science fair with the Airbus Group. Review: 4.1/5.0
May 2017
- Seminar - Introduction to Ocean Acidification & Oxygraph Training
October 2016
- Seminar - Co-organized, emceed "Climate Change and Renewable Energy"
March 2016
- The 3rd Korea-ASEAN International Workshop – Climate changes, Seaweed and CO₂ Sequestration: Ocean Acidification and Seaweed Adaptation
January 2016

Workshop - Techniques in culture characterization of microalgae

November 2015

Special dialogue with Sir David King on climate change and green technology

April 2015

Workshop - Pulp and bioethanol production from seaweed

October 2014

Workshop - Atmospheric chemistry and climate changes in Asia

July 2014



REFERENCES

Phang Siew Moi, Ph.D. from University of Malaya, Kuala Lumpur

phang@um.edu.my | (+60)19 354 6991

William T. Sturges, Ph.D. from University of East Anglia, Norwich UK

w.sturges@uea.ac.uk | +44 (0) 1603 592018

Gill Malin, Ph.D. from University of East Anglia, Norwich UK

g.malin@uea.ac.uk | +44 (0) 1603 592531