

KUAN YU CHEONG

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EDUCATION:

Ph.D. in Plant Biology	Rutgers, The State University of New Jersey (September 2016-Present)	Cumulative GPA: 4.0
B.S. double major in Plant Science and Biotechnology	Rutgers, The State University of New Jersey (September 2013-May 2016)	Cumulative GPA: 4.0 <i>summa cum laude</i>

RESEARCH INTEREST:

The role of fatty acid composition in modulating the ultrastructure and thermostability of thylakoid membranes in model eukaryotic algae, *Chlamydomonas reinhardtii* and *Phaeodactylum tricornutum*

PUBLICATION:

Graf, B. L., Kamat, S., Cheong, K. Y., Komarnytsky, S., Driscoll, M., & Di, R. (2017). Phytoecdysteroid-enriched quinoa seed leachate enhances healthspan and mitochondrial metabolism in *Caenorhabditis elegans*. *Journal of Functional Foods*, 37, 1-7.

RESEARCH/TEACHING EXPERIENCES:

- 2016 – Present *Doctoral Research*, Environmental Biophysics and Molecular Ecology, Rutgers University
- Research advisor: Dr. Paul G. Falkowski
 - Investigate the role of fatty acid composition and thylakoid membrane saturation in the kinetics of photosynthetic electron transport
 - Study the relationship between thylakoid membrane composition and thermotolerance in marine algae
 - Study the structure and macromolecular organization of thylakoid membranes using cryo electron tomography (CryoET) in the model diatom *Phaeodactylum tricornutum*
- 2015 – 2016 *Research Assistant*, Environmental Biophysics and Molecular Ecology, Rutgers University
- Research advisor: Dr. Orly Levitan
 - Facilitated the investigation of retrograde signal transduction processes in the model diatom *Phaeodactylum tricornutum* by knocking-down and -out the candidate genes using RNAi and CRISPR/Cas9 knock-out system
- 2015 – 2016 *G. H. Cook Scholar Research*, Department of Plant Biology, Rutgers University
- Research advisor: Dr. Rong Di
 - Designed and studied the anti-UV mechanisms of cucumber and white lily extracts in *Caenorhabditis elegans*
- 2013 – 2016 *Laboratory/Research Assistant*, Department of Plant Biology, Rutgers University
- Research advisor: Dr. Rong Di
 - Assisted in research to detect microorganisms in contaminated plants by various molecular techniques such as PCR and RT-qPCR
 - Identified the effects of citrus peel polymethoxyflavones in reducing fat deposition in *Caenorhabditis elegans*
 - Evaluated the anti-diabetic mechanisms of quinoa extracts in *Caenorhabditis elegans*
 - Managed the project in genetically-engineered Fusarium Head Blight (FHB) resistance barley cv. Colon
 - Trained newly-joined undergraduate research assistants and summer high-school research apprentices in basic plant tissue culture and molecular techniques
- 2015 *Student Grader of General Biochemistry 403*, Department of Biochemistry, Rutgers University
- Examined and evaluated structural biology lab reports of 200 students

HONORS/AWARDS:

- 2018 Eastern Regional Photosynthesis Conference (ERPC) 2018 Poster Award

2018 Rutgers TA/GA Professional Development Award
 2017 Horshaw Travel Award from Psychological Society of America
 2016 – 2017 Rutgers School of Environmental and Biological Sciences (SEBS) Transfer Excellence Fellowship
 2016 – 2017 Lausten Graduate Assistantship
 2016 Perdana Scholar Award from the office of Education Malaysia USA and the Embassy of Malaysia
 2016 Matthew Leydt Society (Top 1-2% of Rutgers University Class of 2016 graduates)
 2016 Rutgers SEBS Plant Science Academic Achievement Award
 2016 Rutgers SEBS Biotechnology Academic Achievement Award
 2014 – 2016 George H. Cook Scholars Program
 2014 – 2016 Alpha Zeta, a national honorary service professional agricultural fraternity
 2011 – 2016 Public Service Department of Malaysia Scholarship (0.08% of 18,844 applicants)
 2014 – 2015 Aresty Research Fellowship

ACTIVITIES/SERVICE:

2017 – 2018 Vice President of CROPS
 • Spearheaded the organization of the First Annual Plant Biology Student Symposium
 2014 – 2016 Active Member of Alpha Zeta, Rutgers University Chapter, New Brunswick
 • Volunteered in the maintenance of non-profit Rutgers Garden
 • Served in organizing committee of various community activities held by Rutgers Garden such as Easter Egg Hunt and Halloween event
 • Participated in various fundraising events for Rutgers Garden
 2015 Youth Empowerment Services (Y.E.S.), Grant Proposal Writer, New Brunswick
 • Developed a \$50,000 grant proposal to secure funding to initiate the community-based Student Arts for Life Transformation (SALT) program
 • Tutored and mentored underserved elementary school students on their school work, time and stress management skills

OTHERS:

Language Proficient in oral and written Malay and Chinese (Mandarin)
 Technical Skills PCR, RT-qPCR, Western Blotting, fluorescent microscopy, flow cytometry, Fluorescence Induction and Relaxation (FIRE) quantification, plant tissue culture techniques, *C. elegans* culture maintenance, diatom plastid and thylakoid membranes isolation, freeze-plunging CryoET sample preparation, Gas chromatography–mass spectrometry (GC-MS), Joliot-Type 10 Kinetic Spectrometer