

Professional Experience

Research Assistant in Breast cancer Glyco-oncology

National University of Singapore, Department of Anatomy

Oct 2016 - Feb 2019

- Reported to A/Prof. Yip Wai Cheong, George.
- Elucidated mechanism of an acetylglucosaminyltransferase responsible in promoting breast cancer cell migratory and invasive ability.
 - **Main techniques:** siRNA/shRNA targeted knockdown, immunohistochemistry, mice tail vein injection and immunofluorescence/confocal microscopy.
- Automated a statistical routine on immunohistochemistry data analysis using R.
- Guided and trained undergraduate students with Honours Year Project.
- Managed stock check and procurement of reagents and consumables from vendors.

Honours Year Project student

National University of Singapore, Department of Biological Science

Jul 2015 - Apr 2016

- Supervised by Prof. Greg Tucker-Kellogg.
- Attempted to modify CRISPR-dCas9 system to achieve transcriptional/epigenetic control.
 - **Main techniques:** Gibson Assembly.

Research attachment student

Karolinska Institute, Department of Laboratory Medicine

Mar 2015 - May 2015

- Supervised by Prof. Qiang Pan Hammarström.
- Characterised sequences of fusion transcripts from diffuse large B-cell lymphoma clinical samples.
 - **Main techniques:** Real-time polymerase chain reaction.

Undergraduate Research Opportunities Programme (UROP) student

National University of Singapore, Department of Paediatric

Jan 2014 - Dec 2014

- Supervised by A/Prof. Allen Yeoh Eng Juh.
- Assessing the efficacy of vincristine drug combination on drug-resistant acute lymphoblastic leukemia cells.
 - **Main techniques:** aseptic cell culture, western blot and flow cytometry.

Education

PhD in Genetics, Genomics & Bioinformatics

University of California, Riverside (UCR), College of Natural & Agricultural Sciences

Sep 2019 - Present

Master in Science by Research

National University of Singapore, Yong Loo Lin School of Medicine

Aug 2017 - Sep 2019

- Cumulative Average Point (CAP): 4.5/5 (Expected graduation on July 2019). Course taken:
 - Biological data analysis with R
 - Advanced Statistical Learning

Bachelor in Science (Honours), Major in Life Science

National University of Singapore, Faculty of Science

Aug 2012 - Jun 2016

- Cumulative Average Point (CAP): 3.72/5. Courses taken:
 - Introductory Bioinformatics
 - Immunology and Advanced Immunology
- Completed **University Scholars Programme**, a multidisciplinary academic programme that emphasizes intellectual depth and breadth. Courses taken:
 - Writing and Critical Thinking: Interpreting Consumerism
 - Computer Science and the I.T. Revolution
 - Participatory Social Development in Southeast Asia
- Participated **an exchange study in Karolinska Institute**. Courses taken:
 - Pharmacology and Toxicology (10ETCs)
 - Neuroscience (10ETCs)
- Participated **Elsinore Summer School** jointly hosted by Copenhagen University and National University of Singapore consisting a retreat with seminars and journal clubs.

Singapore-Cambridge GCE Ordinary & Advanced Level

Xinmin Secondary School and Anderson Junior College

- A recipient of Senior Middle School 1 (SM1) Scholarship.
- GCE O-Level L1R5: 4 points.
- GCE A-Level Ranking Points: 83.75/90.

Skills

Programming language and skills

- **R**: Proficient in R to handle routine data cleaning (`tidyverse`) and data visualisation (`ggplot2`).
 - statistical model (`stats`) and survival analysis (`survival` package).
 - microarray analysis workflow (`affy` and `limma`) and basic bioinformatics database query (`biomaRt`).
 - hosting blog using `blogdown`.
- **Emacs Org mode**: capable of producing *LaTeX* article and Beamer slides.

Natural language

English (full professional proficiency), **Mandarin Chinese** (native language).

Sports

Aquathlon: trained and competed as a member of NUS Aquathlon Varsity Team. Past competitions were MetaSprint Singapore Aquathlon 2018 (position 94/821) and 2019 (position 78/895).