

Wai Hoe, Chin

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Education

Monash University, Barr Lab, PhD [2018 – present]

Research project: Investigating phage-bacteria evolution and ecology within the life-like mucus layer of a gut-on-a-chip. P.I.s: Dr Jeremy J. Barr, Dr Mike McDonald and A/Prof Adrian Neild.

University of Edinburgh, Biomedical Sciences (Infectious Diseases) BSc (Hons) [2014 – 2017]

- Awarded **first class honours**.
 - Dissertation (**Grade: 78%, A3**): **Characterising the RstA-RstB two component system in *Klebsiella pneumoniae***. P.I.: Dr Thamarai Schneiders [Jan 2017 – April 2017].
- **Class representative** for Molecular Microbiology 3 [Sept 2015 – Dec 2015].

Tenby International School, Malaysia [2013 – 2014]

Cambridge International Examinations (CIE) A level

- Chemistry: 95 (A*)
- Biology: 92 (A*)
- Physics: 91 (A*)
- Mathematics: 91 (A*)

Research publications

- **Chin, W.** and Barr, J. J. (2019). Phage research in 'organ-on-chip' devices. *Microbiology Australia*.

Grants and awards

- **Early Career Research National Conference Support Award** [Sept 2019]
 - Additional travel grant awarded by Monash School of Biological Sciences worth AUD\$500.
- **Monash Conference Travel Grant** [Sept 2019]
 - Centrally-sponsored grant worth AUD\$3055 covering conference travel expenses.
- **Monash International Tuition Scholarship** [Oct 2017]
 - Awarded by Monash University to cover tuition fees and health insurance.
- **Research Training Program (RTP) Stipend** [Oct 2017]
 - Awarded by the Australian Government to cover daily living costs during PhD studies.
- **Ritchie Prize** [June 2017]
 - Awarded by The University of Edinburgh in recognition for top scholar achievement in Biomedical Sciences (Infectious Diseases) honours.
- **Biotechnology and Biological Sciences Research Council (BBSRC) UK summer studentship funding** [July 2016]
 - Awarded by to 16 of 500 applicants worldwide to conduct summer research at the John Innes Centre. Funding includes research fees, accommodation and a monthly stipend of £800.
- **Second-year direct entry to Biomedical Sciences** [Sept 2014]
 - Awarded by The University of Edinburgh in recognition for excellence in A level performance.

Conferences and talks

- Speaker at the Australasian Evolution Society Conference 2019, Sydney. [November 2019]
- Speaker at QIIME 2 symposium and workshop, Melbourne. [November 2018]

Laboratory and research experiences

Monash University [February 2018 – present]

PhD project: **Investigating phage-bacteria evolution and ecology within the life-like mucus layer of a gut-on-a-chip**. P.I.s: Dr Jeremy J. Barr, Dr Mike McDonald and A/Prof Adrian Neild.

Thesis chapters:

Chapter 1	Designing and fabricating a gut-on-a-chip to mimic a life-like mucus layer.
Chapter 2	Investigating phage adaptation to mucus layer via phage experimental evolution in the gut-on-a-chip.
Chapter 3	Investigating the prevalence of lytic and lysogenic life cycles of temperate phages in the gut mucus layer.

John Innes Centre International Summer School

[July 2016 – August 2016]

Eight-week summer project: **α -glucan biosynthesis and its impact on survival and pathogenicity of pseudomonads**. P.I.s: Dr Stephen Bornemann (biological chemistry) and Dr Jacob Malone (molecular microbiology).

- Investigating the role of *Pseudomonas syringae* GlgE α -glucan biosynthetic pathway in bacterial persistence and virulence in plants.

Laboratory skills

General microbiological and virological techniques, phage biology techniques, cell culture, microbial molecular biology, bioinformatics (Breseq), microfabrication, microfluidics (organ-on-chips) and mathematical modelling.

Teaching and mentoring experiences

Fundamental algebra and calculus tutor

[August 2019 – present]

Providing remedial and applied math classes for biologists with interest in math modelling.

Student supervision/mentoring

[2018 – present]

Master's student: Ciaren Kett (Monash Master's in Biotechnology, 2018 - present).

Graduate teaching associate (TA) for Biological and Biomedical Sciences

[2018 – present]

- Biological sciences: 2nd year "Foundation of genetics" and Masters in Biotechnology.
- Biomedical sciences: 1st year "Cells, tissues and organisms" and 3rd year "Molecular virology".

Cambridge International Examinations (CIE) A level Chemistry consolidator

[2013 – 2014]

Providing paid after-class sessions to peers with difficulties in AS-level physical and organic chemistry.

Primary and secondary school language tutor

[2012 – 2013]

Teaching English and Malay to non-English speaking students at primary and secondary school level.

Additional skills

IT skills: Advanced user of **Microsoft Office Package** and **Keynote** (Mac OSX), intermediate user of **Adobe Illustrator**, advanced beginner in **Command line**, **Python** and **R** (modelling and statistics).

Mathematical proficiency: Advanced in calculus and algebra, intermediate in linear algebra and beginner in probability theory.

Extracurricular Activities

Mathematical modelling book club

[2019 – present]

Exploring the potentials of math models in biology through Otto and Day's *A Biologist's Guide to Mathematical Modelling in Ecology and Evolution* and inspiring biologists to embrace mathematics.

10,000-step challenge campus winner (runner-up university-wide)

[2018]

Member of Edinburgh University's Young Scientists Research Association (EUYSRA) Biology Department.

[2015 – 2017]

Inspiring younger peers in scientific research through presentations and organised lab sessions.

1st Violinist in the Edinburgh University's Musical Medics Orchestra

[2014 – 2017]

Two concerts are performed annually (winter and spring concerts) to raise funds for local charities and non-profit organisations.

Edinburgh University Cricket Club Men's Teams 3 and 4

[2015 – 2017]

External Language Courses:

- French 2.2 (beginner to intermediate)
- French 2.4 (intermediate)

[January 2016 – March 2016]

[September 2016 – December 2016]

Additional Information

Languages:

Full working/professional proficiency in English, native/bilingual proficiency in Malay, limited working proficiency in French and Cantonese, and elementary proficiency in Mandarin.

Nationality: Malaysian