



Thursday 27 – Friday 28 July 2023

Workshop overview

- Interpreting phylogenetic trees
- Molecular evolution and evolutionary models
- Phylogenetic data
- Phylogenetic methods
- Molecular dating



Contributors

MOLECULAR ECOLOGY, EVOLUTION, & PHYLOGENETICS LABORATORY



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Programme – Day 1

09.40 – 10.30 **Lecture 1.1:** Introduction to molecular phylogenetics

10.30 – 11.00 **Practical 1.1a:** Sequence alignment in *MEGA*

– *Break* –

11.15 – 12.00 **Lecture 1.2:** Evolutionary models

12.00 – 12.30 **Lecture 1.3:** Phylogenetic data

– *Lunch break* –

13.15 – 14.00 **Lecture 1.4:** Phylogenetic methods

14.00 – 14.30 **Lecture 1.5:** Phylogenomics

14.30 – 17.00 **Practical 1.1b:** Model selection and phylogenetics in *MEGA*

Optional Practical 1.2: Phylogenomic analysis using *ASTRAL*

Programme – Day 2

- 09.30 – 10.30 **Lecture 2.1:** Phylogenetic analysis with *IQ-TREE*
- 10.30 – 11.00 **Practical 2.1: *IQ-TREE* workshop tutorial**
- *Break* –
- 11.15 – 12.30 **Practical 2.1:** *IQ-TREE* workshop tutorial (continued)
- *Lunch break* –
- 13.15 – 14.15 **Lecture 2.2:** Bayesian phylogenetics
- 14.20 – 15.00 **Lecture 2.3:** Molecular dating
- 15.00 – 17.00 **Practical 2.2:** Bayesian molecular dating using *BEAST*

Things to note

- Facilities
- Breaks
- Wifi
- Software
- Support
- Questions

Workshop materials
[github.com/simon-ho/
SydneyPhyloWorkshop](https://github.com/simon-ho/SydneyPhyloWorkshop)