

EMBL Australia
PhD Course
Melbourne 2022



We would like to acknowledge that this course is being held on the traditional lands of the Wurundjeri Woi Wurrung and Bunurong People. We pay our respects to their Elders past, present and emerging and extend this to all Aboriginal and Torres Strait Islander People.

EMBL Australia acknowledges the generous support of Monash University, and the National Collaborative Research Infrastructure Strategy.



Would like to thank our sponsor:

EMBL Australia would also like to thank the PhD Course Organising committee:



Senthil Aruguman
Michelle Halls
Mikaël Martino
Robert Weatheritt
Nadya Glebova
Ricki Mailloux

Additional thanks to:



Australian Government

Stay connected:

#EMBLAPhD
@EMBLAustralia



Welcome!

We are delighted to welcome you to the 7th annual EMBL Australia PhD Course and particularly excited to have you all here after two years of postponed courses.

The course you're about to take is based on a program from EMBL - the European Molecular Biology Laboratory. It is an immersive course that offers students an opportunity to connect and further enhance their PhD research. There's an emphasis on developing a curiosity for new ideas and a collaborative spirit, which I hope will leave you energised.

Over the next week, we'll give you a taste of the latest developments in life science, from structural biology and synthetic biology, to drug discovery and delivery, biomedical engineering and bioinformatics, all presented by a terrific faculty of Australian and international scientists.

The journey doesn't end here. EMBL Australia is committed to supporting young scientists like you through your training and into a research career.



Each year, we support up to 30 Australian students to visit EMBL labs across Europe for training, conference and collaboration.

With our partners in Australia and overseas, EMBL Australia supports various internships and training courses. And, as we set up new research groups across the country and our network grows, so too do the opportunities to network with Australia's brightest young research leaders.

We hope that you will form networks and friendships in the next few days that will carry you into your careers.

Welcome to EMBL Australia.
I look forward to meeting you.

A handwritten signature in black ink, appearing to read 'James Whisstock'. The signature is fluid and cursive.

James Whisstock
Scientific Head, EMBL Australia

Sunday, 10 July 2022

Venue: multiple locations

2:00 pm Student check-in
at Punthill Apartment Hotels, Oakleigh

6:30 pm Welcome dinner and registration
Vanilla Upstairs, Oakleigh

Monday, 11 July 2022

Venue: Woodside Building, Room 1.10, Monash, Clayton Campus

9:00 am Prof James Whisstock
Scientific Head, EMBL Australia
The new EMBL program - molecules to ecosystems

9:30 am Housekeeping and morning tea

10:00 am Prof Colin Jackson
Australian National University
Protein engineering as a tool for the biological sciences

11:30 am Lunch Break

12:30 pm A/Prof Francine Marques and Dr Rikeish Muralitharan
Monash University
Interactive Workshop: Social media and the life sciences

1:30 pm Afternoon Tea

2:00 pm Dr Senthil Arumugam
Monash University
Interactive Workshop: Anatomy of a fluorescence single
molecule microscope

Venue: Learning and Teaching Building G81, Monash, Clayton Campus

4:45 pm Group A to set up for presentations

5:00 pm Three Minute Thesis Presentations
Group A

Tuesday, 12 July 2022

Venue: Woodside Building, Room 1.10, Monash, Clayton Campus

9:00 am Dr Andrew Ellisdon
Monash University

Drug discovery using structural biology

10:00 am Dr Lauren May
Monash Institute of Pharmaceutical Sciences

Drug discovery using analytical pharmacology

11:00 am Morning Tea

11:30 am Prof Chris Langmead
Monash Institute of Pharmaceutical Sciences

Career pathway from industry to academia

12:30 pm Lunch Break

1:30 pm A/Prof Angus Johnston
Monash Institute of Pharmaceutical Sciences

Drug delivery using nanotechnology

2:30 pm Afternoon Tea

3:00 pm A/Prof Erica Sloan
Monash Institute of Pharmaceutical Sciences

Case Study: Repurposing beta-blockers for breast cancer

Prof Michelle McIntosh
Monash Institute of Pharmaceutical Sciences

Case Study: Development of inhaled oxytocin

**Venue: Learning and Teaching Building G81, Monash,
Clayton Campus**

4:45 pm *Group B to set up for presentations*

5:00 pm Three Minute Thesis Presentations
Group B

Wednesday, 13 July 2022

Venue: multiple locations

9:00 am Tour: The Australian Synchrotron
800 Blackburn Rd, Clayton

11:20 am Bus to Parkville & Lunch

1:00 pm Overview of Monash Institute of Pharmaceutical
Sciences (MIPS)
Prof Chris Porter, Director

1:30 pm Tour of MIPS. The tour will include visits to:
Helen Macpherson Smith Trust Analytical Laboratory
Australian Translational Medicinal Chemistry Facility
MIPS Imaging and FACS
Centre for Drug Candidate Optimisation
Monash Fragment Platform

4:00 pm Student-led Social Evening in the City

*Students will be responsible for travel back to
accommodation. Details and maps in Welcome Pack*

Thursday, 14 July 2022

Venue: Woodside Building, Room 1.10, Monash, Clayton Campus

9:00 am Prof Peter Currie
Australian Regenerative Medicine Institute (ARMI)
Monash University
*Understanding muscle growth and regeneration across
the vertebrate phylogeny*

10:00 am Dr Alex Combes
Monash Biodmedicine Discovery Institute
*Understanding the drivers of kidney development and
disease*

11:00 am Morning Tea

11:30 am Bo Yun, Alison Greenway, Maria Harrison-Smith
*Monash Innovations: Technology transfer
and commercialization and IP*

12:30 pm Lunch Break

1:30 pm Dr Jennifer Zenker
ARMI, Monash University
Stem cell pluripotency - a microtubule cytoskeleton regulated state?

2:30 pm Afternoon Tea

3:00 pm Prof David Vaux
Walter and Eliza Hall Institute of Medical Research
Ten rules for the presentation and interpretation of data in publications

Venue: Park Royal Monash, 872 Blackburn Rd

5:30 pm Student poster presentations and awards ceremony
Sponsored by MedChem Express
Dresscode: smart casual

Friday, 15 July 2022

Venue: Woodside Building, Room 1.10, Monash, Clayton Campus

9:00 am Prof Geoff Faulkner,
University of Queensland
Mobile and mosaic DNA in mammals

10:00 am A/Prof Cecile King
University of New South Wales
Retroelements in the immune system

11:00 am Morning Tea

11:30 am Diversity and Inclusion Panel
Hosted by A/Prof Edwina McGlinn
ARMI, Monash

1:00 pm Lunch Break

2:00 pm Interactive Workshop: Monash DeepNeuron
William MacLean and Jason Toskov

4:00 pm Farewell remarks and certificates

