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:

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.

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.

James Whisstock
Scientific Head, EMBL Australia
### Sunday, 10 July 2022

**Venue: multiple locations**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:00 pm</td>
<td>Student check-in at Punthill Apartment Hotels, Oakleigh</td>
</tr>
<tr>
<td>6:30 pm</td>
<td>Welcome dinner and registration at Vanilla Upstairs, Oakleigh</td>
</tr>
</tbody>
</table>

### Monday, 11 July 2022

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

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
</table>
| 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**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>4:45 pm</td>
<td>Group A to set up for presentations</td>
</tr>
</tbody>
</table>
| 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**

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**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