

# Kei-Lin M. Ooi

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## EDUCATION

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### University of Melbourne – 2021-present

*Doctor of Philosophy* in SCIENCE, School of BioSciences

### University of Melbourne – 2019-2020

*Bachelor of BIOMEDICINE* (H1 FIRST CLASS HONOURS), The Florey Institute of Neuroscience and Mental Health

### University of California, Berkeley – 2012-2016

*Bachelor of Science* in MOLECULAR ENVIRONMENTAL BIOLOGY, Department of Environmental Science, Policy, and Management  
*Minor* in MUSIC, College of Letters & Science

## PUBLICATIONS

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### Ooi, K. L. M., Vacy, K., & Boon, W. C. in *NEUROCHEMISTRY INTERNATIONAL* – October 2021

- *Fatty acids and beyond: Age and Alzheimer's disease related changes in lipids reveal the neuro-nutraceutical potential of lipids in cognition*

### Wilson, H., Hogg, B. N., Blaisdell, G. K., Andersen, J. C., Yazdani, A. S., Billings, A. C., ... & Daane, K. M. in *PHYTOFRONTIERS* – February 2022

- *Survey of Vineyard Insects and Plants to Identify Potential Insect Vectors and Non-crop Reservoirs of Grapevine Red Blotch Virus*

## EXPERIENCE

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### Doctor of Philosophy, University of Melbourne – June 2021-present

A MACROEVOLUTIONARY PERSPECTIVE ON APOSEMATISM, CONSPICUOUS COLOURATION, AND ANTIPREDATOR DEFENCES; *Principal investigators: Devi Stuart-Fox and Iliana Medina Guzmán*

- Quantification of conspicuous colour pattern metrics using digitized museum collections
- Calculation of diversification rates using molecular phylogenies
- Phylogenetic Generalised Least Squares models to determine relationship between conspicuousness and diversification rates

### Honours research project, The Florey Institute of Neuroscience and Mental Health – July 2019-June 2020

ALTERATIONS IN OLEIC ACID BIOSYNTHESIS IN AGING AND ALZHEIMER'S DISEASE; *Principal investigator: Wah Chin Boon*

- SDS-PAGE and Western blot analysis for protein quantification
- Cell culture and maintenance of SY5Y cells (neuroblastoma)
- Mouse dissection and culling

### Laboratory Technician, University of California, Berkeley – December 2016–June 2019

MULTIPLE PROJECTS INVESTIGATING GRAPEVINE RED BLOTCH VIRUS (GRBAV) AND ASSOCIATED INSECT VECTORS; *Principal investigator: Kent Daane*

- Optimization of molecular techniques
- Efficient DNA extraction from plant and insect tissue
- Diagnostic testing for GRBAV in plants and insects using PCR and qPCR

- Management and upkeep of lab equipment and supplies
- Biweekly sampling of the Three-cornered Alfalfa Treehopper in Napa and Sonoma County vineyards using sticky traps and sweep net methods
- Supervision and coordination of undergraduate students in molecular laboratory and mentorship of undergraduate students including teaching laboratory techniques

#### **Undergraduate Research Assistant, Museum of Vertebrate Zoology – 2014-2016**

COMPARATIVE POPULATION GENETICS STUDY OF *CYANOCITTA STELLERI*; *Principal Investigator: Carla Cicero*

- Extracted and sequenced DNA from frozen animal tissue, using Sanger sequencing methods
- Genotyped microsatellite DNA markers with analysis using GeneMapper

#### **Undergraduate Student Instructor, University of California, Berkeley – 2016**

NATURAL HISTORY OF THE VERTEBRATES & FIELD LAB

- Facilitated laboratory sessions and helped students with coursework
- Assisted undergraduate students with field sections to ensure proper animal handling and trapping

#### **Preparation Lab Assistant, Museum of Vertebrate Zoology – 2014-2019**

- Prepared museum skin and skeleton specimens with analysis of various vertebrate anatomy structures including amphibians, reptiles, birds, and mammals

#### **Laboratory Assistant, Energy Biosciences Institute – 2014-2015**

- Prepared solutions, reagents, and buffers necessary for research, restocked supplies, sterilized glassware and other materials, and generally maintained lab areas for functional use

#### **Curatorial Assistant, Museum of Vertebrate Zoology – 2013-2016**

- Organized specimens and curatorial materials, managed freezing of specimen loans, specimen cataloguing, and tissue labeling
- Numbered individual bones of various species of birds and mammals, and analyzed characteristics specific to different vertebrates
- Identified pests in specimen cases by checking each specimen for frass or casings, then freezing and cleaning affected specimens