Research Plan

*From field collection to molecular barcode reference library in two weeks*

- Field collection of primary biodiversity specimens
- Marine invertebrate taxonomy and identification
- DNA extraction
- DNA amplification of COI (barcode) gene
- Cleaning of amplified DNA for sequencing
- Evaluation and editing of DNA sequences
- Register barcode sequences in Barcode of Life (BOLD) library
Learning Objectives

• **Biology**
  • Biodiversity science
  • Marine field collecting
  • Molecular genetic biodiversity quantification

• **Research Skills**
  • Science communication
  • Field and lab specimen processing techniques
  • Core molecular biology techniques
  • Direct interaction with international genetic repositories

• **Life Skills**
  • Confidence and self-awareness training
  • Exploration of university opportunities in the U.S.
  • Experiencing U.S. culture around leading universities
<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
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<tbody>
<tr>
<td>Tu 25 July</td>
<td>F: Intertidal collecting trip to San Pedro (sunrise 6a, tide -1.0 ft at 5:34) T: Beach time at Cabrillo Beach T: Visit <a href="http://research.nhm.org/disco/arip2017">Cabrillo Marine Aquarium</a> (noon) G: Research presentation prep</td>
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<tr>
<td>We 26 July</td>
<td>R: Final sequence editing and specimen photo cleanup G: Research presentation rehearsal</td>
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<tr>
<td>Th 27 July</td>
<td>R: Molecular sequence posting to <a href="http://research.nhm.org/disco/arip2017">Barcode of Life Database</a> G: Getting into U.S. colleges and college life G: Research presentation revisions</td>
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<tr>
<td>Fr 28 July</td>
<td>G: Research presentation prep G: Final research presentations G: Closing ceremonies and awards G: Farewell dinner</td>
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<td>Sa 29 July</td>
<td>Departures</td>
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Lab Introductions

- **Regina Wetzer** — Associate Curator & MBC Director
- **Dean Pentcheff** — DISCO Program Coordinator
- **Kathy Omura** — Collections Manager, MBC
- **Adam Wall** — Collections Manager, Crustacea
- **Jenessa Wall** — Assistant Collections Manager, MBC
Policies & Procedures

- Professional working environment
- Intellectual property
- Interacting with the public
- Lab etiquette
- Bathrooms and doors
Natural History Museum of Los Angeles County

- Research & Collections
  - Ornithology
  - Mammalogy
  - Dinosaur Institute
  - ...
  - Crustacea
  - Marine Biodiversity Center
  - DISCO
  - UNRC

- Finance
  - Exhibits
  - Operations
  - Advancement
  - Human Resources