

# Abegail Rio Bigasin

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## EDUCATION

*BS, from University of California, San Diego* *Expected Jun 2021*

Major in Biology - Ecology, Behavior, and Evolution

GPA: 3.73

Upper Division GPA: 3.93

*UCSD Honors - Provost Honors*

7/11 Quarters

Earned GPA Higher than 3.5 in the quarter

*Division of Biological Sciences Honors Thesis Program*

*Sep 2020 - Jun 2021*

Graduating with "Distinction" in Jun 2021

## RESEARCH EXPERIENCE

**UCSD Scripps Institution of Oceanography Research Assistant** *Oct 2019 - Current*

*Mentors: Dr. Deirdre Lyons, Grant Batzel, Ph.D. Student*

- Wrote scripts using the package BIOpython to automatically BLAST shell proteins against the NCBI database
- Rearing and animal husbandry of the gastropod mollusc, *Crepidula atrasolea*

**Scripps Undergraduate Research Fellowship**

*Jun 2020 - Aug 2020*

*Mentors: Dr. Deirdre Lyons, Dr. Jessica Goodheart*

- Analyzing differential gene expression through Python and R of different *Berghia stephanieae* tissues
- Performing regeneration experiments on *Berghia stephanieae* to analyze cnidosac and cerata regeneration timing
- Rearing and animal husbandry of nudibranch, *Berghia stephanieae*

**UCSD Ecology, Behavior, and Evolution (EBE) Lab Volunteer**

*Apr 2019 - June 2020*

*Mentors: Dr. Joshua Kohn, Daniela Zarate, Ph.D. Student*

- Assisted with genomic and mitogenomic admixture analysis of feral honey bees across the Americas
- Performed behavioral aggression assays on collected honeybees from on-campus hives both in the lab and the field through invoking stings as their aggression index

**Volunteer with San Diego Zoo Global**

*Sep 2019 - January 2020*

*Mentor: Dr. Sula Vanderplank*

- Field work in Baja California to locate rare plants and collect seeds
- Participated in identification of plants endemic to both Southern and Baja California

**UCSD EBE Lab Volunteer**

*Sep 2018 to Sep 2019*

*Mentors: Dr. James Nieh, Dr. Bahram Kheradmand, Amy Geffre, Ph.D. Student*

- Assisted Dr. Bahram Kheradmand with behavioral analysis and video scoring of honey bees' response to varying amounts of sucrose fed and distance from hive, using R to analyze the data

## PRESENTATIONS

- Association for the Sciences of Limnology and Oceanography Conference 2021** *Jun 2021*
- > Exploring Nematocyst Sequestration and Regeneration in *Berghia stephanieae*
- Society for Integrative and Comparative Biology Virtual Conference 2021** *Jan 2021*
- > Thirty-five Genes Found Upregulated in *Berghia stephanieae* Distal Cerata
- SACNAS Virtual Conference 2020** *Oct 2020*
- > A Search for the Genes That Allow Nudibranchs to Steal Anemone Stinging Organelles

## TEACHING EXPERIENCE

- Instructional Assistant, UCSD Department of Biology** *Mar 2021 - June 2021*
- > Teaching BIEB 146: Genome Dynamics and Diversity, an undergraduate course with 33 students per section
  - > Demonstrating an understanding of genomics, laboratory techniques, and molecular biology, while grading quizzes, answering emails, and collaborating with other instructional assistants
- Instructional Assistant, UCSD Department of Biology** *Jan 2021 - Mar 2021*
- > Teaching BIEB 150: Evolution, an undergraduate course with 33 students per section
  - > Demonstrated an understanding of mathematical derivations to students, breaking down lectures into a digestible format, helping students prepare for midterms, and being a mentor to students who want to get involved in research
- Instructional Assistant, UCSD Department of Biology** *Sep 2020 - Dec 2020*
- > Teaching BIEB 174: Ecosystems and Global Change, an undergraduate course with 33 students per section about the ecosystems around the world and how they are responding to anthropogenic changes
  - > Prepared new slides every section, graded work in a timely manner, and answered students' questions and concerns
- Instructional Assistant, UCSD Department of Biology** *Sep 2019 - Dec 2019*
- > Taught BIEB 126: Plant Ecology, an undergraduate course with 33 students per section, covering: plant physiology, plant ecology, and plant community dynamics
  - > Developed quizzes, prepared new slides every section, graded work in a timely manner, and answered students' questions and concerns

## SKILLS

### Laboratory

- > Experimental design and protocol execution and mastery
- > Animal husbandry and handling; preserving specimen
- > Basic knowledge of molecular techniques including: **DNA/RNA/mDNA extraction, PCR, gel electrophoresis, chromogenic in-situ hybridization, confocal microscopy, CRISPR-Cas9 editing** \*Performed few times before COVID-19 limitations

### Computer Skills

- > Programming: Java [beginner], Python [intermediate], R [intermediate]
- > Applications: Windows OS, common Microsoft applications, Adobe Creative Cloud

## CLUBS AND EXTRACURRICULARS

### Vice President of UCSD EBE Club

*Jan 2019 - Current*

- Informing other students at UCSD about environmental activism, internship, and research opportunities available to them, and offering students a way to network
- Mentoring members about advertising, planning, and setting up events
- Organized events for volunteering all across San Diego for habitat restoration and conservation education, helping students participate

## REFERENCES

Dr. Joshua Kohn, Professor  
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