

GINA LUCAS

BACHELOR OF SCIENCE, BIOLOGY

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Riverside, CA

EDUCATION

University of California, Riverside

Biology 2015-2019 GPA 3.6

CERTIFICATIONS

Animal Care and Use (Non-Biomedical Research) - UCSC

Animal Care and Use (Biomedical Research) - LLU

EXPERIENCE

Senior Lab Assistant in Duerksen-Hughes Lab

Aug 2019 - Present

DEPT. OF BIOCHEMISTRY, LOMA LINDA UNIVERSITY

- Assists in projects studying HPV related cancers, Sars-Cov-2, and oxidative stress
- Manages lab inventory, purchasing, inspections and communications with collaborators
- Maintains mammalian cell cultures, including cell storage and cryobank cataloging
- Performs western blots, RNA extraction/quantification, PCR and various assays
- Trains volunteers in common laboratory protocols
- Serves as primary point of contact for purchasing, safety compliance and facility maintenance in Biochemistry Department
- Functions as teaching assistant to the LLU School of Medicine Physiology Lab. Teaches first year medical students on how to set up 12-lead EKGs and performs physiological demonstrations

Volunteer Lab Assistant in Reznick Lab

Oct 2018 - Aug 2019

DEPT. OF EVOLUTION, ECOLOGY & ORGANISMAL BIOLOGY, UC RIVERSIDE

- Assisted in studying the evolution of placentas in the fish family Poeciliidae, an empirical study of macroevolution
- Performed dissections on fish averaging 20mm under microscope. Included ovary extractions, embryo staging, gut extraction/analysis
- Identified evidence of superfetation and matrotrophy in species
- Maintained vivarium and assisted in husbandry

California Ecology and Conservation Field Course

Apr 2019 - May 2019

UC NATURAL RESERVE SYSTEM

- Seven weeks of intensive in-field learning and research at UC Natural Reserves across California
- Included collaborative and independent research projects, papers and presentations on subjects ranging from bird foraging behavior to fire-mediated tree-recruitment
- Provided an opportunity to practice field research techniques as well as experimental design and data analysis

Sep 2017 - Jun 2018

Program Coordinator

UC RIVERSIDE RESIDENTIAL LIFE

- Planned and implemented large scale programs and activities for UCR residence halls
- Submitted funding proposals and paperwork
- Coordinated with vendors and resource centers
- Advertised events throughout multiple residence hall communities
- Worked closely with a team of peers, maintained communication and demonstrated extensive teamwork

Jan 2017 - Jul 2017

Resident Advisor

UC RIVERSIDE RESIDENTIAL LIFE

- Managed community development and well-being of residents in UCR campus apartment's first-year community
- Responded to emergency situations and filed incident reports
- Handled facility reports, property management, maintenance issues and health & safety inspections
- Provided peer mediation and mentoring
- Planned, advertised and executed events centered around community building
- Provided students with resources to assist them in reaching their academic and personal

PROJECT CONTRIBUTIONS

Loma Linda International Surveillance Network (Current)

Developing workflow and protocols for Oxford Nanopore Technology's MinIon DNA sequencer to be used in international surveillance program. Includes coordinating with clinicians for patient samples, DNA/RNA extraction, library preparation, sequencing and analyzing.

30-Hydroxygamabogic Acid in HPV+ Tumor Reduction (Current)

Performing in vitro viability assays to identify efficacy of new drug compared to/in combination with existing chemotherapy treatments. Preparing for animal study in mouse model.

Induction of Reactive Oxygens Species with DL-Buthionine-Sulfoximine (Current)

Observing effects of BSO on ROS levels and identifying pathway changes in cancer cell lines. Utilizes flow cytometry, western blotting, RNA extraction, cDNA synthesis, PCR and protein quantification.

Convalescent Plasma for Covid-19: A Single Center Prospective Experience with Serial Antibody Measurements

Performed antibody tests on patient samples before and after receiving convalescent plasma treatment.

Under review for Publication in MDPI Journal of Viruses

The Role of Diet in the Rapid Evolution of Species Coexistence

Performed gut extraction/analysis and identified relative measurements of fecundity to determine the effects of population density and interspecies interactions on the diet and reproductive success of guppies (*Poecilia*).

Presented in UCR Undergraduate Research Symposium. May 16, 2019

Abiotic Differences and Anthropogenic Interference in Foothill Yellow-Legged Frog Breeding Habitats

Studied abiotic factors affecting oviposition in *R. boylei* across gradient of human disturbance. Primarily focused on an area with a recent dam removal in order to see the effects on the population and its ability to withstand the heavy disturbance of hydraulic construction.

Presented in California Ecology and Conservation Final Symposium. May 19, 2019

Featured in UCNRS California Ecology and Conservation Research Journal. Spring 2019

Effects of Restorative Conservation on Small Mammal Populations

Surveyed small mammal populations of McLaughlin Natural Reserve in serpentine grasslands that have, over the span of 12 years, been restored to about 99% native California plant species. Replicated a small mammal survey done prior to this restoration effort in order to observe the possible shifts in community composition and abundance. Involved mammal trapping, handling, and species identification.

Presented in California Ecology and Conservation McLaughlin Reserve Symposium. Apr 26, 2019

SKILLS

LABORATORY

Mammalian Cell Culture
PCR
Western Blotting
DNA/RNA Extraction
Dissections
Flow cytometry

FIELD

Species Identification
Small Mammal Trapping and Handling
Camera Trapping
Handheld GPS and Mapping

TECHNICAL

Excel
JMP Statistical Software
ImageJ
Oxford Nanopore
MinKnow & Epi2Me
Publisher