

Education

Master of Science in Oceanography

University of Rhode Island Graduate School of Oceanography

Fall 2021- present

Bachelor of Science, Cellular and Molecular Biology, minor in Sociology

California State University Dominguez Hills

Summer 2021 Carson, CA

Associate of Arts, Natural Sciences

Associate of Arts, Behavioral Sciences

Mt. San Antonio College

2015-2018 Walnut, CA

Experience

Graduate Research Assistant

URI, GSO August 2021-present

Biological Oceanography- Dr Roxanne Beinart

- Using molecular tools to analyze the symbiotic relationship of ecto/endosymbiotic archaea and bacteria on protist hosts.

Research Assistant

CSUDH May 2019- August 2021

Biology Department- Dr. Karin Kram

- Bacterial evolution in *Escherichia coli* in long-term stationary phase. ○ Studying genes that affect the cell's ability to survive in long term cultures by competing mutants against WT strains and measuring colony forming units.
- Presenting at lab meetings and maintaining a lab notebook.
- Use molecular techniques such as: growing and storing samples, transductions, serial dilution, PCR, gel electrophoresis, and making growth media using the autoclave.

Research Assistant

Summer Undergraduate Research Fellowship

Scripps Institution of Oceanography June 2020- August 2020

Marine Biology Department- Dr. Doug Bartlett

- Comparative genomic analysis of halophilic microbes
- Analyzed molecular mechanisms involved in adaptations to hypersaline and low water activity environments using genomic tools (including IMG, PATRIC, ITOL, and NCBI) for published genomes and experiments using adaptive laboratory experiments.
- Reviewed literature in the field of marine extremophiles and astrobiology

Laboratory Technician

Priva Path Labs Dec 2020- Feb 2021

- Covid testing center. Assorted at home kit samples and amplified DNA for the presence of Covid-19

Laboratory Assistant

Pomona Valley Hospital Medical Center Dec 2018- July 2019

Microbiology Department

- Daily Operations include stocking Clinical Lab Scientist's work benches with lab supplies like equipment and media, produce stock solutions, quality control of all incoming equipment, labeling inventory, and clerical work. Assisting in simple stain techniques, transporting specimens, operating equipment. Maintaining sanitized equipment and work areas.

Biomedical Engineering Department

- Daily Operations include sanitize and maintain instrumentation and equipment to ensure compliance with quality system. Equipment retrieval and distribution to and from other departments

Hospice Care Giver

Right At Home 2012- 2017

West Covina, CA

- Provided assistant living care to the elderly and the terminally ill. Care included ways to overcome anxiety and depression and making as comfortable as possible.
- Provided physical care like assisted bathing, feeding, and dressing.

Awards

2020 CSUDH Deans Supplemental Travel Award in support of travel to the CSUPERB conference

2018 Abstract finalist at Mt. SAC 8th Annual Research Showcase and Competition.

2017 1st place winner in Natural Science Category, Cash Scholarship

Presentations

Raul Gutierrez and Karin E. Kram. 2020. *Identifying Genes That Play a Role in Long Term Stationary Phase*. Virtual oral Presentation. West Coast Bacterial Physiology conference. HI

Raul Gutierrez, Luke Fisher and Doug Bartlett. 2020. *Comparative Genomic Analysis of Halophilic and Xerophilic Microbes to Elucidate Adaptation to Chaotropic and Low Water Activity Environments*. Virtual poster symposium at American Geophysical Union conference (AGU)

Raul Gutierrez, Luke Fisher and Doug Bartlett. 2020. *Comparative Genomic Analysis of Halophilic and Xerophilic Microbes to Elucidate Adaptation to Chaotropic and Low Water Activity Environments*. Virtual poster symposium at Scripps Institution of Oceanography SURF REU. La Jolla, CA

Raul Gutierrez, Erik Martinez, and Karin E. Kram. 2020. *Identifying Genes That Play a Role in Long Term Stationary Phase*. Poster presentation at CSUDH 20th Annual Student Research Day. Carson, CA

Erik Martinez, Raul Gutierrez and Karin E. Kram. 2020. *Identifying Genes That Play a Role in Long Term Stationary Phase*. Poster presentation at California State University Program for Education and Research in Biotechnology (CSUPERB) symposium. Santa Clara, CA

Raul Gutierrez and Sonal Singhal. 2019. *A Quantitative Study on The Degradation of Polystyrene Products by The Production of Bacterial Enzymes*. Round table presentation at CSUDH 19th Annual Student Research Day. Carson, CA

Raul Gutierrez and Carola Wright. 2018. *Protein Tagging Applications on Non-Pathogenic Bacteria*. Walnut, CA

Raul Gutierrez and Stephanie Rothman. 2017. *Examining Mealworms as A Waste Management Tool for Non-biodegradable Materials*. Oral presentation at Mt. SAC 7th Annual Research Showcase and Competition. Walnut, CA.

Affiliations, Professional Memberships and Fellowships

- LS- AMP Scholar (Louis Stokes Alliance for Minority Participation)
- CSUPERB (California State University Program for Education and Research in Biotechnology)
- SURF (Summer Undergraduate Research Fellowships at Scripps Institution of Oceanography)
- AGU (American Geophysical Union)
- SACNAS (Society for Advancement of Chicanos and Native Americans in Science) • Geo Futures
- SCASM (Southern California American Society for Microbiology)
- PCE3 (Prebiotic Chemistry of Early Earth Environments)

Volunteer work and Outreach

- ORCA (Ocean Recovery Community Alliance) beach cleanup in New England. 2021- present
- REU Applications Workshop Spring 2020
 - Assisting undergrads in the process of applying for summer internships, including writing CV's and personal statements
- Graduate School Applications Workshop Spring 2020
 - Assisting undergrads in the process of graduate school applications, including writing CV's, reaching out to potential advisors and personal statements.
- Dr. Deborah Boroch Discovery Day 2017
 - Mt. SAC's annual kid's science fair. Assisting families navigate through natural science buildings. Working and developing interactive science games for children with the theme "Water is Life"
- Mt. SAC Conservation assistant 2018
 - Cleaning up and removing nonnative plants at Mt. SAC's Wildlife Sanctuary

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