

Linton Freund

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Education

PHD | 2019-2025 | University of California Riverside

- Program: Genetics, Genomics and Bioinformatics
 - Member of Dr. Emma Aronson's Lab
 - Advanced to Candidacy February 2022
 - Awarded Chancellor's Distinguished Fellowship (2019)

MS | 2019 | California State University, Long Beach

- Major: Biology (GPA 3.7)
 - Student in the Bioinformatics Lab (Dr. Renaud Berlemont)
 - Related coursework: bioinformatics, ecology, computer modeling
 - Thesis: Insights into the Structure and Function of the Gut Metagenome in Cartilaginous Fishes

| 2017 | Moorpark College

- Major: Biology (GPA: 3.69)
 - Related coursework: microbiology, general and organic chemistry, biology, protein purification

B.A. | 2014 | University of California, Santa Barbara

- Major: Psychology and Brain Sciences (Major GPA 3.7, GPA 3.4)
 - Related coursework: Cognitive psychology, learning and memory, biopsychology

Publications

Maltz, M.R.; Carey, C.J; **Freund, H.L.**; Botthoff, J.; Stajich, J.E.; Hart, S.C.; Aarons S.; Aciego, S.; Blakowski, M.; Cullen Dove, N.D.; Barnes, M; Pombubpa N.; Aronson, E. Landscape topography and regional drought alters dust microbiomes in the Sierra Nevada of California. *Frontiers in Microbiology* 2022 13:856454.

Freund H.L., Maltz M.R., Swenson, M.P., Topacio, T.M., Montellano, V.A., Porter, W., Aronson, E. Microbiome interactions and their ecological implications at the Salton Sea. *California Agriculture* 2022 76: 1.

Jackson, D.; Maltz, M.R.; **Freund, H.L.**; Borneman, J.; Aronson, E. Environment and Diet Influence the Bacterial Microbiome of *Ambigolimax valentianus*, an Invasive Slug in California. *Insects* 2021 12: 7.

Nguyen, S. T. C., **Freund, H. L.**, Kasanjian, J., and Berlemont, R. 2018. Function, distribution, and annotation of characterized cellulases, xylanases, and chitinases from CAZy. *Applied Microbiology and Biotechnology* 102: 4.

Awards

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|------|---------------------------------------------------------------------------------------------------|
| 2023 | College of Natural Sciences' Dean's Fellowship Fund (\$6,200) |
| 2022 | National Microbiome Data Collaborative Champion |
| 2021 | University of Washington Summer Institute of Statistical Genetics Scholarship (\$900) |
| 2021 | Dr. Janet M. Boyce Memorial Endowed Scholarship Fund for Women Majoring in the Sciences (\$2,000) |
| 2020 | Best Flash-Talk at the UC Riverside Genetics, Genomics, and Bioinformatics Annual Symposium 2020 |
| 2020 | SKC West Inc. Equipment Grant (\$1,605.95) |
| 2020 | Honorable Mention for the Zymo-UCR Microbiome Fellowship |
| 2019 | Chancellor's Distinguished Fellowship Award (UC Riverside) |

2018 Dr. Vern Eveland Memorial Award (\$2,500)
 2018 Linda Lee Warren Graham Endowed Scholarship (\$2,000)

Presentations

2022 BREATHE Annual Workshop (co-presenter: Talyssa Topacio)
 2020, 2021 UC Riverside Genetics, Genomics, and Bioinformatics Annual Symposium
 2019 California State University Annual Biotechnology Symposium
 2017, 2018 Southern California Branch of the American Society for Microbiology (SCASM) Student Colloquium
 2017, 2018 California State University Long Beach Graduate Research Conference

Research Experience

2017-2019 **Graduate Student Researcher, Bioinformatics Lab**
 Biology Department, California State University Long Beach
Supervisor: Dr. Renaud Berlemont
Thesis: Insights into the Structure and Function of the Gut Microbiome in Cartilaginous Fishes
Tasks: Data mining via custom bioinformatics pipelines and algorithms using BASH (shell scripting)
 Conduct statistical analyses via R scripts and RStudio packages
 Investigate current research on enzymatic polysaccharide deconstruction by microbes in the gut of vertebrates
 Assist Principal Investigator in writing, editing and reviewing lab publications

2016-2017 **Contract Biologist, The Butterfly Project**
 Biology Department, Moorpark College
Supervisor: Dr. Jana Johnson
Research: Population maintenance and propagation of the Lange's Metalmark Butterfly and the Palos Verdes Blue Butterfly
Tasks: Release pupae and capture gravid foundresses in field
 Conduct and supervise butterfly feedings
 Document oviposition and create maps of egg location
 Build habitats for larvae, pupae and butterflies

2016 **Student Intern; Biotechnology Laboratory**
 Biotechnology Department, Moorpark College
Supervisor: Professor Subhash Karkare
Research: Optimization of Enzyme-Linked Immunosorbent Assay (ELISA) for the Biotechnology Certification Program curriculum
Tasks: Prepare samples of sCTLA-4 for analysis
 Reduce duration of ELISA and determine necessary sample dilutions
 Research purpose and technique behind ELISA
 Qualitative analysis of assay results

2014 **Lead Clinical Research Coordinator; LY Pharmacy Inc.**
Supervisor: Luna Yojay, PharmD.
Research: Direct Phase 2 and Phase 3 clinical trials testing pharmaceuticals targeting Chronic Kidney Disease and associated complications/illnesses
Tasks: Oversight of administering of pharmaceuticals to participants
 Monitor vital signs of patients after drug administration
 Manage data utilizing Medidata Rave (electronic-data capture)
 Meet with Clinical Research Associates to discuss data and protocol

2013-2014 **Research Assistant; Computational Cognitive Neuroscience Laboratory**
 Department of Psychology and Brain Sciences, University of California Santa Barbara

Supervisor: Dr. F. Gregory Ashby

Research: Utilization of computational modeling to understand the cortical substrates involved in cognitive skills such as category learning

Tasks: Collect data and organize data into Microsoft Excel
 Assist in data analysis of computer-based experiments
 Observe and practice creating scripts using Python and MatLab
 Conduct experiment targeting procedural and declarative learning systems

Skills

Computing: Bash, R, Git, Python, Microsoft Office

Wet Lab: DNA extraction, DNA extraction quantification, PCR, vacuum filtration, microbial culturing

Extracurriculars

2020-2023 UC Riverside Genetics, Genomics, and Bioinformatics Student Association

- Vice President 2022-2023
- Vice President 2020-2021
- Student Representative Alternate 2019-2020

2020-2023 UC Riverside Queer Graduate Student Association

- Vice President 2022-2023
- Vice President 2021-2022

2021-2022 Student Researchers Union

- Bargaining Representative Alternate 2022
- Biosciences Organizer 2021-2022

2018-2019 California State University Long Beach Biology Graduate Student Association

- Board Member 2018-2019
- Vice President 2021-2022