Laura Herron

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EDUCATION

UC San Diego: Jacobs School of Engineering- Bioengineering, MS — Expected June 2025

UC Berkeley: College of Letters and Sciences- Molecular & Cell Biology and Data Science, BA — May 2023

- Edward Frank Kraft Award, Fall 2019
- Relevant Coursework: Biotechnology Entrepreneurship, Biochemistry & Molecular Biology Laboratory, Human Genome & Public Health, Pathways Mechanisms and Regulation, Microbial Biotechnology, Mammalian Genomics, Biophysical Chemistry, Data Mining and Analytics, Data and Decision Making, Databases & Information Systems, Human Contexts & Ethics of Data

University of Copenhagen: Biotechnology - Exchange Student — Jan 2022- June 2022

RESEARCH EXPERIENCE

Innovative Genomics Institute- Center for CRISPR Target Discovery — Oct 2022 - May 2023, *UC Berkeley*

- Responsible for passaging cells and maintaining sterility during a month long CRISPR knock down screen
- Packaged a virus for a dual guide sgRNA system
- Optimized gDNA extraction and PCR to prepare samples for NGS
- Supported bioinformatics efforts to understand NGS data

Signaling Pathways, Antibiotic Persistence and Iron Homeostasis Microbiology Biology Lab — Feb 2021 - Dec 2023, *UC Berkeley*

- Develop new mutants through molecular cloning and plasmid construction
- Develop fitness tests to explore oxidative stress resistance in C. crescentus
- Analyze data in a Jupyter Notebook with Pandas and Seaborn

California Summer School for Mathematics and Science (COSMOS) — Summer 2018 - *UC Irvine, Dep of Biology*

- Synthesized a novel beta lactam antibiotic by studying the production of penicillin
- Lead my lab group to design our experiment and formally present findings

WORK EXPERIENCE

Drug Discovery Biology Intern — June 2023-Aug 2023 - *Hexagon Bio*

- Generated data to influence company standardization for forward genetics screen parameters in S. cerevisea
- Supported small molecule design with high throughout viability screens in human cancer lines
- Identified genes and natural products of interest for targeted drug development from genetic screen data

Oncology- Functional Genomics Intern — July 2022-Aug 2022 - *Pfizer*

- Explore mechanisms of resistance in cancer via gene knock out and saturation mutagenesis assays
- Explored CDK4 inhibitor, ErSO, Palbociclib
- Optimized the LAPSE assay with the Jeko1 cell line

Data Analyst Intern — June 2021-October 2021 - *Revance Therapeutics*

- Utilize Looker to build SQL based dashboard insights for stakeholders
- Build efficient and modular tables and dictionaries for non technical users
- Answer questions in a visual manner to improve internal data driven decision making

LEADERSHIP & TEACHING

The Suitcase Clinic — September 2019 – May 2023

Undergraduate Student Instructor and Class Director — September 2020-May 2023

- Instruct a weekly undergraduate class to encourage critical thinking and respectful conversation
- Build and maintain a database of institutional memory and member contact information
- Apply to, research, and write grants proposals to raise funds

Alpha Chi Omega Sorority — September 2019 – May 2023

Vice President of Risk Management — December 2020-December 2021

- Teach trainings on substance awareness, sexual assault prevention, and mental health support
- Maintain high standards and accountability during the COVID-19 pandemic to enhance individuals safety

CONFERENCES AND MEETINGS

- 2023 Society for Laboratory Automation & Screening (SLAS) Annual Meeting, Leveraging a CRISPR-based LAPSE workflow to guide drug targeting strategies. Caressa Robinson, Rubina Tuladhar, Ana Flores-Bojorquez, **Laura Herron**, Lynn Wang, Steve Searles[2], Chris Dillon, Jon Oyer. San Diego, CA, 2023

SKILLS & MOTIVATION

- Molecular biology, cloning, mammalian & bacterial cell culture, CRISPR screen execution and design, virus packaging, PCR optimization & primer design, protein purification
- Scientific communication and effective presentation skills
- Software: Python, Java, SQL, Pandas, R, GitHub, Jupyter Notebook, LookML, Looker, Relational Databases
- EDA, Data Visualization, PCA
- Machine Learning algorithm implementation
- Microsoft Office Suite
- Motivated by combining big data with traditional biology in the field of oncogenics and drug discovery
- Self starter, dedicated, and cheerful!