**Laura Herron**

# 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

Jan 2022- June 2022

University of Copenhagen: Biotechnology - Exchange Student

# 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 Searles2,

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!