Stacy Li
PhD Candidate – University of California, Berkeley

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Education

» May 2025
August 2019

Ph.D. Integrative Biology, Emphasis in Computational and Genomic Biology
University of California, Berkeley
Proposed thesis : Developing sequencing methods for studying the population genomics of aging

May 2016
August 2012

B.S. Microbial Biology
University of California, Berkeley
Highest distinction (top 3% major graduates)

Research Experience

Present
January 2021

Graduate Researcher, Sudmant Lab, University of California, Berkeley
Studying the genomic basis of aging across diverse populations.
> Developing a novel method for characterizing complex haplotypes and germline mutations using ultra-sensitive linked-read sequencing.
> Collaborating with Dr. Liana Lareau's group to jointly identify disease-linked haplotypes for poison exon CRISPR therapeutic strategies.
> Collaborating with NOAA and CCGP to create a reference genome for *Sebastes paucispinis*, along with assessing the impact of overfishing on population genetics via low-coverage sequencing.

August 2020
April 2020

Graduate Researcher, Hsu Lab & Marson Lab, University of California, Berkeley
Collaborative research response to benchmark the performance of both authorized and unauthorized COVID-19 rapid antigen tests.
> Conducted daily literature review of COVID-19 case studies, focusing on tracking incubation, symptom emergence, and potential biomarkers for COVID immune response.
> Performed daily round-up reports of circulating rapid tests using a combination of publicly available import-export data, clinical vendor catalogs, overseas suppliers, and social media reports.

January 2021
August 2019

Graduate Researcher, Shapira Lab, University of California, Berkeley
Studying the role of host genetics and aging in shaping the gut microbiota.
> Developed end-to-end protocol and designed analysis pipeline for 16S metagenomic studies of gut microbiota in *C. elegans* mutants.
> Received Honorable Mention for NSF GRFP proposal ("Investigating the evolutionary processes underlying host-microbiota interactions").

August 2019
April 2018

Research Associate, ViewPoint Therapeutics, South San Francisco, CA
Research and development of molecular therapeutics for cataracts.
> Assessed cytotoxicity of drug compounds in mammalian cell and & *ex vivo* tissue culture models.
> Developed an image analysis algorithm in Python to categorize cataract severity in canine models and monitor progression over time.

April 2018
March 2016

Research Associate, AoBiome Therapeutics, San Francisco, CA
Characterizing the structure and function of the human skin microbiota.
> Characterized temporal persistence dynamics of a live bacterial therapeutic, *Nitrosomonas eutropha* using qPCR and fluorescent reporter assays.
> Developed a novel protocol for using a gelatin-alginate matrix to longitudinally assess inflammatory biomarkers and bacterial metabolites following topical application of *N. eutropha*.

May 2016
July 2013

Research Assistant, Niyogi Lab, University of California, Berkeley
Studying the genetics of photosynthesis and light sensitivity in Chlamydomonas reinhardtii.
> Designed and conducted longitudinal analyses of light-sensitive mutant growth under high and low light conditions.
> Genotyped and analyzed mutant proteins using gradient chloroplast extraction, PCR, gel electrophoresis, and Western blots.

August 2015 June 2015	Clinical Research Assistant, PROJECT VIETNAM FOUNDATION, Los Angeles, CA *Characterizing the prevalence of pediatric anemia in rural farming communities.* › Collected and processed blood samples in patients ranging from ages 2-17 in rural communes of Ba Vì district. › Used R to generate summary tables describing study demographics and sample data.

ORAL PRESENTATIONS

Li, S., Scalable sequencing techniques for studying the population genomics of aging. UC Berkeley Computational & Genomic Biology Retreat. Los Altos, California. November 4-6, 2022.

POSTER PRESENTATIONS

Li, Stacy., Rocha, J., Vazquez, J.M., et al. Haplotype and de novo mutation structural variant inference using linked-read sequencing. UC Berkeley Computational & Genomic Biology Retreat.. Los Altos, California. November 4-6, 2022.

PUBLICATIONS

Whitman, J., Joseph H, Cody M., Brian S., Ruby Y., Tori Y., Ujjwal R., **(Li, S., author 19)**, et al. 2020. "Evaluation of SARS-CoV-2 Serology Assays Reveals a Range of Test Performance." Nature Biotechnology 38 (10) : 1174–83.

Choi, R*., Kim, D*., **Li, S.***, Massot, M.*, Narayan, V.*, Slowinski, S.*, Schulenburg, H., Shapira, M. (2020). "Extra-intestinal regulation of the gut microbiome : The case of C. elegans TGFβ/SMA signaling." in *Cellular Dialogues in the Holobiont*. Boca Raton, FL : CRC Press. (* = shared first authorship)

FEATURED IN PRESS

Sridharan, S. "One fish, two fish, rockfish, new fish : Reeling in the mysteries of aging." Berkeley Science Review, April 30, 2022.

Mandavilli, A. "Coronavirus Antibody Tests : Can You Trust the Results?" The New York Times, April 24, 2020.

AWARDS & HONORS

› **Berkeley Connect Fellowship in Computational Biology**. 2022 - 2023.
› **Laboratory for Genomics Research Innovation Award**. 2022 - 2023, awarded $100,000.
› **UC Berkeley Computational & Genomic Biology Retreat – Best Lightning Talk**. 2022.
› **UC Berkeley Computational & Genomic Biology Retreat – Best Poster Presentation**. 2022.
› **UC Berkeley Department of Integrative Biology Summer Research Grant**. 2022, awarded $3,000.
› **UC Berkeley Outstanding Graduate Student Instructor Award**. 2022.
› **UC Berkeley NIH Genomics Training Grant**. 2021 - present.
› **NSF Graduate Research Fellowship Program (GRFP)**. Honorable mention (2020).
› **UC Berkeley Dean's List**. 2013 – 2016.

TEACHING

Present May 2021	Principal Coordinator, UC BERKELEY CENTER FOR COMPUTATIONAL BIOLOGY › Responsible for hiring and managing staff and organizing logistics of workshop series, in addition to head lecturer duties. › Led revamp of teaching resources, focusing on applications of open-source data science packages (Pandas, Matplotlib, Numpy and Scipy stack) and integration with Google Colaboratory.
December 2021 August 2021	Graduate Student Instructor, IB 134L – PRACTICAL GENOMICS › Instructed 55 undergraduate students : responsibilities included developing genomics tutorials and laboratory assignments, debugging and advising for independent projects, and holding office hours for both lecture/lab.
August 2021 July 2021	Graduate Student Instructor, BIO 1B – GENERAL BIOLOGY LECTURE & LABORATORY › Instructed 60 undergraduate students : responsibilities included leading lab activities, supervising undergraduate teaching assistants, writing quizzes, grading quizzes and exams, and holding office hours.
May 2021 December 2020	Lecturer, UC BERKELEY CENTER FOR COMPUTATIONAL BIOLOGY › Delivered interactive lecture series in biological data science, focusing on broad applications of the Python programming language and package ecosystem for genomics data analysis.
May 2021 January 2021	Graduate Student Instructor, MCB 104 – GENETICS, GENOMICS, & CELL BIOLOGY › Instructed 62 undergraduate students : responsibilities included guiding best practices for virtual learning, leading discussion and review sections, writing weekly quizzes, and holding office hours.

December 2020 August 2020	Graduate Student Instructor, BIO 1B – General Biology Lecture & Laboratry > Instructed 60 undergraduate students : responsibilities included leading lab activities, supervising undergraduate teaching assistants, writing quizzes, grading quizzes and exams, and holding office hours.

Mentorship

Present January 2022	Graduate Fellow, Berkeley Connect for Computational Biology *Mentoring undergraduate students interested in pursuing studies in computational biology.* > Hosting lecture & discussion series for undergraduates, focusing on introducing modern research topics and techniques in computational biology. > Individually meet with mentees to create semesterly goals and identify longer-term goals and paths towards research and careers in science.
June 2022	Graduate Mentor, Cal Genomics Undergraduate Research Program *Organized and served as a mentor for an undergraduate research workshop.* > Mentored undergraduates across four independent research projects centering on California biodiversity. > Prepared materials and managed project timelines for field collection, DNA extraction, Nanopore sequencing, and data analysis.

Service & Outreach

Present December 2020	UC Berkeley Center for Computational Biology Curriculum Committee > Surveyed graduate students regarding existing curriculum and degree requirements. > Served as the designated representative for discussions regarding new curriculum offerings at the undergraduate and graduate levels.
February 2020	Expanding Your Horizons, University of California, Berkeley > Developed and presented a short microbiology workshop titled *Pandemic! Microbes Gone Wild* for a one-day conference for middle and high school students interested in STEM.

Professional Organizations

> **American Aging Association**. Member, 2022 - present.
> **Sigma Xi**. Member, 2021 - present.
> **Genetics Society of America**. Member, 2021 - present.