

Natalie Horvath

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Education

University of California, Santa Barbara (UCSB)

June 2025

Bachelor of Science (B.S.) - Biochemistry and Molecular Biology Major

- Professional Writing Minor, Science Communication Track
- Member of Biomedical Engineering Society, Breaching BioTech, American Society for Biochemistry and Molecular Biology, and Biology Research Club

Relevant Coursework

- Upper division: Biochemistry (series and lab), Genetics, Physiology, Neurobiology, Microbiology, Developmental Biology, Oncogenesis, Health Professions Writing, Science Writing for the Public, Science and Technical Writing
- Introductory Biology, Physics, Chemistry, Organic Chemistry, Statistics, Calculus, Science Communication Writing

Research Experience

Undergraduate Research Assistant, Weimbs Lab, UC Santa Barbara

June 2023 - Present

- Perform weekly genotyping using PCR to accurately characterize genetic traits
- Maintain detailed records of experimental results, ensuring data accuracy and consistency
- Conduct immunofluorescence (IF) and immunohistochemistry (IHC) staining procedures weekly
- Write literature reviews and prepare research papers using laboratory data; present findings at lab meetings
- Collaborate with other lab members on various stages of research projects studying Polycystic Kidney Disease

Research Intern, University of Glasgow, Scotland

June 2024 - August 2024

- Designed and executed an independent research project following an in-depth literature review
- Troubleshoot experimental protocols and adjusted methodologies as needed; independently designed and ran an experiment
- Authored a research paper on Wnt and Hedgehog signalling and presented findings to faculty and peers

Campus Involvement

Internal Vice President, Phi Sigma Rho

December 2023 - December 2024

- Planned high-profile events, including Founder's Day Celebration, Orchid Ball, and Winter Retreat, coordinating activities for 100+ members
- Supervised leadership teams and managed all internal affairs, demonstrating effective organizational leadership.

External Vice President, Phi Sigma Rho

December 2022 - December 2023

- Coordinated three social events per quarter in collaboration with academic clubs and organizations
- Developed skills in event planning, project management, and conflict resolution

Summer Events Intern, Center for Science and Engineering Partnerships, UC Santa Barbara

June 2023 - September 2023

- Organized and managed Summer Scholarship Program events, ensuring smooth execution
- Planned and executed a research poster symposium, highlighting academic achievements of participants
- Maintained event documentation and records for future reference

Community Service

Volunteer, SciTrek, UC Santa Barbara

September 2021 - Present

- Lead classes of 25 elementary students through interactive science experiments over five-week sessions
- Collaborate with volunteers and program leads to plan and execute lessons
- Assess student progress and provided detailed feedback to program coordinators

Volunteer, UCSB Chemistry Outreach, UC Santa Barbara

January 2023 - Present

- Lead hands-on chemistry demonstrations for visiting fifth-grade students
- Collaborate with faculty and volunteers to prepare and organize materials
- Explain scientific concepts in an accessible manner to young audiences

Skills and Qualifications

- **Laboratory Techniques:** PCR, restriction digest, gel electrophoresis, immunofluorescence (IF), immunohistochemistry (IHC), H&E staining, microscopy, tissue imaging, CRISPR, spectrophotometry, mass spectrometry, western blotting, SDS-PAGE, protein purification, bacterial transformation
- **Writing Skills:** Technical writing (research papers, proposals, grants, literature reviews), science communication (lay abstracts, public outreach materials, project on Congenital Leber Amaurosis)