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Helena Klein

Education

Master of Science, Bioinformatics and Genomics Program Expected Dec 2019
University of Oregon, Eugene, OR

Bachelor of Science, Biology, Chemistry minor 2014-2018
Robert D. Clark Honors College, University of Oregon, Eugene, OR
Summa cum laude, departmental honors, Phi Beta Kappa

Skills

Programming & Software

- *Familiar Languages:* Python, R, Bash, MATLAB
- *Familiar Tools:* GSNAP, Trimmomatic, STAR, DESeq2, Breseq, rStan, Stacks

Laboratory Competencies

- Illumina Library Prep
- Zebrafish Gnotobiology
- Bacterial culture
- Protein Isolation

Research Experience

De novo cis-element prediction and discovery (Master's Project) 2018-Present
Bazzini Lab, Stowers Institute, Kansas City, MO

- Optimized and reengineered a bioinformatic pipeline to analyze ribosome profiling and RNA-seq data.
- Utilized custom python scripts to identify novel regulatory sequences in 5' and 3' UTRs.

Bacterial Experimental Evolution (Research Assistant) 2015-Present
Guillemin Lab, Institute of Molecular Biology, University of Oregon, Eugene, OR

- Identified new factors that contribute to bacterial colonization of the environment using bacterial genetic engineering and whole genome sequencing and analysis.
- Defended honors thesis "Experimental Evolution of a Bacterial Symbiont to its Host's Environment"; passed with highest honors (distinction) in May 2018.
- Currently preparing a manuscript of thesis work for publication.
- Second contributing author "Experimental bacterial adaptation to the zebrafish gut reveals a primary role for immigration" accepted to *PLOS Biology*, November 2018.

Retrospective Surgical Analysis (Research Intern) Summer 2017
Division of Vascular Surgery, Oregon Health and Science University, Portland, OR

- Carried out retrospective study surveying vein harvest methods for lower leg bypass in patients with critical limb ischemia.
- Presented findings as one of two undergraduates invited to give a talk at the annual meeting of the Pacific Northwest Vascular Society in November 2017.

Professional and Leadership Experience

JUMP! Program Mentor **2018-Present**

Women in Graduate Sciences Program, University of Oregon, Eugene, OR

- Mentored seven undergraduate students in STEM from diverse backgrounds.
- Advised preparation of graduate school and scholarship applications.

Biology Undergraduate Lab Assistant and Tutor **2016-2018**

Biology Department, University of Oregon, Eugene, OR

- Designed and led review sessions for 200+ undergraduates.
- Gained extensive experience communicating scientific concepts to wide audiences through weekly labs and office hours.
- Mentored and helped new TAs develop their teaching skills through weekly workshops.

Statistics Grader **2017-2018**

Mathematics Department, University of Oregon, Eugene, OR

- As the top student in the introductory statistics course was selected to grade for the class.
- Honed skills in biological statistics which and applied them across a variety of projects.

Scholarships and Honors

Henry V. Howe Scholarship **2017-2018**

College of Arts and Sciences, University of Oregon, Eugene, OR

Awarded for academic merit in the natural sciences.

Clarence and Lucille Dunbar Scholarship **2016-2017**

College of Arts and Sciences, University of Oregon, Eugene, OR

Recognized for merit in the natural sciences.

Presidential Scholarship Recipient **2014-2018**

University of Oregon, Eugene, OR

Received as one of the top 50 matriculating students for the graduating class of 2018.

Stamps Scholarship Semifinalist **2014**

University of Oregon, Eugene, OR

Selected as one of the top ten applicants from the state of Oregon.