

## Programming Background

### Programming Languages

- Python, R, Bash, MatLab, Arduino

### Bioinformatics Tools

- Proficient in: Velvet, BLAST/BLAT, GMAP/GSNAP, FastQC, SAMtools,
- Experience in: Biopython, VANTED, Lipid Maps, RStan

### Other Programming Tools

- Slurm, Tidyverse

## Education

### University of Oregon

- M.S. Bioinformatics and Genomics Program **Expected December 2019**
- B.S. Biology with a minor in Chemistry **March 2018**

## Research Experience

### Muscle Metabolism and the Reprogramming Effect of Offspring Diet

**September 2018 – Present**

*Graduate Researcher at the McCurdy lab in Eugene, OR*

- Analyzed 121 lipid species from 4 groups of monkeys for trans-generational effects of maternal obesity on the lipidome
- Statistically modeled interactive effects between maternal and juvenile diets
- Investigated RNA expression data for correlation to lipidome via pathway and gene-module analysis
- Employed statistical and biological analysis techniques and visualization in R

### Behavioral Analysis of *Mus. musculus* Olfaction

**June 2017 – April 2018**

*Undergraduate Researcher at the Smear Neuropsychology Lab in Eugene, OR*

- Created and designed experiments as project leader for other undergraduate students
- Conducted and attended multiple mouse surgeries in preparation of experiments
- Performed behavioral analysis via Go-Nogo experiments employing/altering pre-existing programs
- Gained coding skills in Arduino and MatLab languages
- Enhanced existing code to include a user interface and to synchronize with other programs

### Phylogenetic Analysis of miRNA in Antarctic Fish

**September 2016 – June 2017**

*Undergraduate Researcher at the Postlethwait Lab in Eugene, OR*

- Performed large-scale genetic, phylogenetic, and statistical analysis regarding gene retention, alteration and duplication from existing genome assemblies
- Studied miRNA expression and evolution by performing personally-designed heat and cold shock experiments with zebrafish and teleost species
- Manuscript in preparation for heat and cold shock data

### Investigation of Chemoreceptor TlpC Structure in *H. pylori*

**September 2015 – June 2016**

*Undergraduate Researcher at the Remington Lab in Eugene, OR*

- Worked to find the function and structure of bacterial proteins, including chemoreceptors in *H. pylori* through x-ray crystallography
- Practiced techniques of sample preparation, bacterial culture, experimental design and x-ray crystallography methodology

## Work Experience

### Graduate Employee

September 2018 – Present

University of Oregon in Eugene, OR

- Taught Animal Behavior to 200 undergraduate students
- Lead three 1-hour discussion groups per week
- Graded exams and homework for 50 – 75 students per week
- Worked 1-on-1 with students in and outside of class to further their scientific skills and knowledge

### Assistant Manager

June 2012 – June 2018

What's the Scoop? Ice Cream in Portland OR

- Aided in founding a small family ice cream business and creation of best-practice methodologies
- Created flavors and toppings
- Trained 15+ new employees
- Communicated both in-person and via social media with patrons for a superior customer experience

### Treasurer

October 2015 – June 2015

University of Oregon Residence Hall Association in Eugene, OR

- Representative for over 500 students to the Housing department and higher administration of the university
- Represented the University of Oregon at a regional conference

## Volunteer Activities

Housing advisory council member, University of Oregon

January 2015 – Present

- Provided student perspective regarding decisions made by the housing department

Volunteer at the Columbia Humane Society, St. Helens, OR

March – June 2014

University of Oregon National Residence Hall Honorary, Eugene, OR

June 2015 – June 2016

- Service organization working through the Residence Hall Association at the University of Oregon