Kerry Leigh McGowan

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Graduation Date: **November 2022**

SUMMARY

Ph.D. candidate at Washington State University, WA with 5+ years of experience in bioinformatics and computational biology. I develop pipelines to analyze terabytes of next-generation sequencing data, visualize patterns, and test hypotheses. I thrive in the dynamic, collaborative environment of biotechnology start-ups.

TECHNICAL AND PROFESSIONAL SKILLS

- High-performance & cloud computing (incl. AWS)
- Bash, Python, R, SQL
- RNA-seq, including nascent technologies
- Complex analysis of NGS data
- Data cleaning and visualization
- Dimensionality reduction, feature selection
- Statistical modeling and inference
- Supervised and unsupervised learning
- Version control with Git and GitHub
- Workload management (SLURM)
- Therapeutics development
- Working experience with start-ups

WORK EXPERIENCE

Data Science Intern, A-Alpha Bio, Seattle, WA, summer 2022

- Analyzed large-scale, multiplexed datasets of antibody proteins and their targets.
- Optimized a proprietary pipeline in Python to reduce cost and computational resources.
- Collaborated with software engineers, machine learning scientists, and bioinformaticians.
- Presented work company-wide.
- Potential to file for a patent pending proof of concept.

Ph.D. Researcher, School of Biological Sciences, Washington State University, Pullman, WA, 2017-present

- Produced and analyzed NGS datasets, including RNA-seq, capped-small RNA-seq, and whole-genome re-seq.
- Developed pipelines in Bash, R, and Python for variant discovery and population genetics analyses.
- Awarded $16,200 in awards and scholarships.
- Published 5 papers in peer-reviewed journals, including 2 as lead author.
- Presented at 14 conferences at the local, national, and international level.
- Collaborated with researchers across 5 universities and 2 countries.
- Led a research team of undergraduates through a nascent transcriptomics pipeline.
- Completed coursework in statistics, probability, bioinformatics, Python, and R.

EDUCATION

Washington State University, School of Biological Sciences, Pullman, WA, 2017-present
Ph.D. in Biology with Graduate Certificate in Bioinformatics

Muhlenberg College, **Allentown, PA, 2011-2015**
B.S. in Biology, *summa cum laude*

SELECTED PUBLICATIONS (out of 6 total)

*See scholar.google.com/citations?user=sZYs99oAAAAJ&hl=en for a full list of all publications.

McGowan, KL, Passow, CN, Arias-Rodriguez, L, Tobler, M, Kelley, JL. Expression analyses of cave mollies (*Poecilia mexicana*) reveal key genes involved in early-stage eye regression. *Biology Letters*. 2019; 15: 20190554.

Kelley, JL, Desvignes, T, **McGowan, KL**, Perez, M, Arias-Rodriguez, L, Brown, AP, Culumber, Z, Tobler, M. microRNA expression variation as a potential molecular mechanism contributing to adaptation to hydrogen sulphide. *Journal of Evolutionary Biology.* 2021; 34: 977-988.

McGowan KL, Duttke S, Arias-Rodriguez L, Tobler M, Kelley JL. Nascent transcription reveals regulatory changes in extremophile fishes inhabiting hydrogen sulfide-rich springs. *In prep. (Manuscript available upon request.)*