BELLA PFEIFFER
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EDUCATION

Boston University | School of Computing and Data Sciences Boston, MA
Master of Science in Bioinformatics Sep 2024 - Current

- Coursework: Programming, Data Analytics, and Machine Learning in Python; Biological Database Systems; Molecular Biology & Biochemistry for Bioinformatics; Translational Bioinformatics Applications; Genomic Data Mining; Bayesian Modeling for Biomedical Research & Public Health

The George Washington University | Columbian College of Arts and Sciences Washington, DC
Bachelor of Science in Biological Sciences | Minor in Public Health Sep 2019 - Dec 2022

- Harlan V. Wilbur Research Fellow, 2022

EXPERIENCE

Rubin Lab, Harvard Department of Stem Cell & Regenerative Biology Cambridge, MA
Research Assistant Oct 2023 – Sep 2024

- Designed and performed in silico, in vitro, and in vivo experiments to pursue team goals of developing a regenerative cell therapy able to mimic the function of satellite cells in skeletal muscle.
- Analyzed data in R to produce time-based clustering analysis, presented in lab meetings, and conducted literature review to define future goals and develop new project ideas. Grew cell lines in 2D and 3D culture.

HelixBind, Inc Boxborough, MA
Research Technician Jan 2023 - Sep 2023

- Designed and conducted experiments to create an innovative automated diagnostic platform for identifying microorganisms in whole human blood using DNA extraction and analysis.
- Experiments required use of PCR, PNA and bead-based immunoassays, and DNA amplification/purification.

Smith Insect Biology Lab, George Washington University Washington, DC
Harlan Research Fellow and Undergraduate Student Researcher Aug 2021 - Sep 2022

- Conducted independent research on insect nutrient distribution using multi-layer network analysis.
- Performed data analysis and interpretation of results in R and Excel, forming a radar map of nutritional networks and social behaviors. Visualized data and presented poster to other researchers and a jury of peers.

Biology Department, George Washington University Washington, DC
Laboratory Teacher's Assistant Aug 2021 – May 2022

- Instructed students via interactive biology labs for 40+ undergraduate students over the course of two semesters.

Manier Genetics Lab, George Washington University Washington, DC
Undergraduate Student Researcher May 2020

- Contributed meta-analysis of the *myc* gene in *Drosophila simulans* in the Flybase Genetics Database.

PUBLICATIONS

Price, F.D., Matyas, M.N., Gehrke, A.R. ***et al.*** Organoid culture promotes dedifferentiation of mouse myoblasts into stem cells capable of complete muscle regeneration. *Nat Biotechnol* (2024). https://doi.org/10.1038/s41587-024-02344-

PROFESSIONAL SKILLS

Programming: Python (pandas, numpy, scikit-learn), R (Rshiny, dplyr, ggplot2), Java**,** SQL, Unix/Linux Shell, AI/Machine Learning, Data Wrangling, Data Analysis

Dry Lab: Single-cell multiomics, sc/RNA-Seq, ATAC-Seq, Transcriptomics, Next Gen Sequencing, High Content Image Analysis

Wet Lab: Mammalian Cell Culture, Organoid Culture, Assay Development, High Throughput Screening, PCR/qPCR, ELISA, Microscopy, Western Blot, FACS, MACS