Megan McNutt

Contact Information

Email: megan.mcnutt@osumc.edu

LinkedIn: www.linkedin.com/in/megan-mcnutt-77107018b

Education

2018 – 2023   B.S. Bachelor of Science in Biomedical Engineering, Magna Cum Laude

Minors: History, Neuroscience

The Ohio State University, Columbus, OH

Research Interests

- Neuroscience and Alzheimer's Disease
- Single-Cell Multiomics
- Spatially resolved transcriptomics

Work Experience

2023- Present   **Senior Research Technician, Bioinformatics and Mathematical Biosciences Lab, The Ohio State University**

- Conducts cutting-edge analysis of single-cell multi-omics data and next-generation sequencing data to gain insights into complex biological systems and diseases.
- Creates data visualization plots to be used for publication.

2023 - Present   **Clinical Research Associate, Department of Otolaryngology, Nationwide Children's Hospital**

- Oversees clinical research projects in the Department of Otolaryngology.
- Prepares and submits IRB documents for review.
- Coordinates with physicians to create and organize clinical research in the department.
- Collects consent from patients for data collection.

Spring 2023   **Teaching Assistant, Anatomy for Engineers, The Ohio State University**

- Dedicated up to 10 hours a week to assisting students with questions and grading assignments.
- Encouraged students to ask questions and become passionate about class material.

2022 – 2023   **Undergraduate Research Assistant, Bioinformatics and Mathematical Biosciences Lab, The Ohio State University**

- Dedicated 10-20 hours weekly assisting with lab projects.
- Analyzed single cell and spatial data using R statistical analysis and Python.
- Utilized critical thinking and problem-solving skills when analyzing data and preparing papers for publication.

2022 – 2023   **Student Research Assistant, Nationwide Children's Hospital**

- Dedicated 20+ hours a week during Summer 2022 and ~3 hours weekly during the school year collecting clinical data by navigating patient charts and interacting with patients in the clinic and operating room.
- Shadowed physicians in the clinic and operating room and actively engaged with patients.
- Utilizes critical thinking and problem-solving skills when analyzing data and preparing papers for publication.

Summer 2021   **Student Intern, Dodd Rehabilitation Hospital**

- Dedicated 180 hours over the course of the summer working with physical, occupational, and speech therapists, as well as shadowing physicians.
- Assisted physical therapists in their therapy and compiled data for a clinical research project that studied patient heart rate data in therapy.

Summer 2019   **Undergraduate Research Assistant, Alzheimer's Disease Research, The Ohio State University**

- Dedicated 20+ hours a week in the lab genotyping mice and performing necessary laboratory functions.

- Learned organizational skills and gained an understanding of how research is performed.

LEADERSHIP DEVELOPMENT

2018 – 2023   NCAA Division I Varsity Women's Rowing, The Ohio State University

2020 – 2023   Treasurer, Buckeye Spectrum, The Ohio State University

2022   Moderator, Bold Conversations with Buckeyes Panel, The Ohio State University

2020 – 2022   Lead Like a Buckeye, Monthly Leadership Seminar, The Ohio State University

CONFERENCE POSTERS (*co-first author)

1. Isabelle Aguilar*, Brooke Barber*, **Megan McNutt***, Maddie Reidl*. A Removal Device for Tunneled Intravascular Catheters. 2023 American Society for Artificial Internal Organs Conference. June 14-17, 2023. San Francisco, CA.
2. **Megan McNutt**, Amy Fulmer, Austin Schafer, Natalie Quinn, Tran Bourgeois, Michael Boutros, Charles Elmaraghy. Assessing trends in intervention for epistaxis during the COVID-19 pandemic. 2022 Society of Ear, Nose, and Throat Advancement in Children's Conference. December 1-3, 2022. Philadelphia, PA.
3. Austin D. Schafer, **Megan McNutt**, Amy Fulmer, Tran Bourgeois, Charles A. Elmaraghy. Comparing Recurrence Rates between Cautery Techniques for Recurrent Epistaxis in Children. 2023 Triological Society Combined Sections Meeting

JOURNAL PUBLICATIONS

1. Wang, Cankun, Anjun Ma, **Megan E. McNutt**, Rebecca Hoyd, Caroline E. Wheeler, Lary A. Robinson, Carlos H. F. Chan, et al. "A Bioinformatics Tool for Identifying Intratumoral Microbes from the ORIEN Dataset." bioRxiv, 2023, https://doi.org/10.1101/2023.05.24.541982.

HONORS & AWARDS

2018 – 2023   Honors College: The Ohio State University

June 2023   3rd Place: ASAIOfyi-for young innovators - Student Design Competition

April 2023   Outstanding Senior Leadership Award, The Ohio State University Student Life

April 2023   Ohio State Athletics M/I Homes Foundation Award

2021– 2023   Big Ten Distinguished Scholar

2020– 2023   Ohio State Scholar Athlete

2020– 2023   Academic All-Big Ten

Sep. 2019   First Year Honors Competition Scholarship, The Ohio State University

July 2019   Fundamentals of Engineering Honors 2019 Design Project Scholarship, The Ohio
                State University

SKILLS

- Next-generation sequencing and single-cell multi-omics data analyses (R, Python)
- Programming languages and Modeling: R, Python, Matlab, COMSOL Multiphysics,
  SOLIDWORKS
- DevOps (GitHub)
- Data Visualization (Adobe Illustrator, ggplot2, Circos)
- Molecular Techniques (PCR, gel electrophoresis, DNA/RNA extraction)
- Scientific Writing (manuscript preparation, manuscript reviews, grant preparation)

SERVICE

October 2021- Present   **Mid-Ohio Food Collective Volunteer**
- Assists shoppers in the market while keeping shelves stocked
  and ready.
- Prepares the market at close in preparation for the morning
  food delivery.

Summer 2021-2023   **Para-Adaptive Rowing Program (PARP) with the Greater
                           Columbus Rowing Association Volunteer**
- Served the organization one to two times a week by coaching
  people with disabilities in the sport of rowing.
- Assisted with the handling of equipment and rowed with
  athletes with disabilities in a two-person boat to aid them in
  the traffic patterns on the river.
- Ensured the safety of athletes while they were on the water.