Bailey E. Quinn

he/they
baileyequinn@gmail.com | 352.213.2198
https://darkghastful.shinyapps.io/InteractiveUniversityData/

PUBLICATIONS

[1] B. E. Quinn, J. A. R. Rodríguez, E. K. Sam, et al. The nasal microbiome in early infancy is primarily shaped by the maternal nasal microbiome. *Journal of Allergy and Clinical Immunology*, In Press, Journal Pre-proof.

EXPERIENCE

WASHINGTON UNIVERSITY IN ST. LOUIS MEDICAL SCHOOL DIVISION OF INFECTIOUS DISEASE | Bioinformatician

Sept 2024 - Present | St. Louis, MO

- Identified single nucleotide polymorphisms that were significantly more associated with a viremic non-progressor status among a population of people living with HIV through whole exome sequencing analysis.
- Processed and evaluated single cell sequencing data to evaluate the relative expression of genes in immune cells between HIV infected samples and controls.
- Developed a RNAseq pipeline to process, reconstruct, assign, and evaluate the tropism switch that occurs over the course of an HIV infection.

WASHINGTON UNIVERSITY IN ST. LOUIS MEDICAL SCHOOL DIVISION OF ALLERGY AND IMMUNOLOGY | Bioinformatician

Aug 2022 - Sept 2024 | St. Louis, MO

- Wrote a publication, developed a pipeline, and conducted statistical analysis for a cohort of mother infant dyads. This was a study with three participating hospitals to evaluate the microbial transfer between the nasal microbiome of a mother and infant across different regions.
- As a continuation of the previous project, I evaluated the association between the infant saliva and gut microbiome to various maternal microbiomes.
- Identified differences in the virome of individuals with severe Asthma when compared to that of a healthy population.
- Compared the nasal mycobiome of a cohort of Asthmatic individuals and controls utilizing 18s rRNA sequencing data.

UNIVERSITY OF MISSOURI | Undergraduate research assistant

Aug 2018 - May 2021 | Columbia, MO

- Created a lesson plan for a classroom accessible experiment implemented in Missouri middle schools through a science in education program.
- Maintained a line of macrophage cells though cell passage, made media and assisted in experiments.

ORGANIZATIONS

SOUTH BROADWAY ART PROJECT | Working Member

Mar 2024 – Present | St. Louis, MO

MIZZOU STEEL BRIDGE TEAM | Graphics

Aug 2018 – May 2022 | Columbia, MO

BIOCHEMISTRY CLUB

Aug 2018 – May 2022 | Columbia, MO

COLLEGE MENTOR FOR KIDS

Aug 2019 – Dec 2021 | Columbia, MO

EDUCATION

UNIVERSITY OF MISSOURI

Bachelor of Science in Biochemistry
2022 | Columbia, MO
GPA 3.4

SKILLS

SOFTWARE

R • Python • SQL • Linux • Docker • Shiny • AWS • REST API

BIOINFORMATICS

Single cell • Whole genome • RNAseq • 16s • 18s • Virome

DATA

Pipeline development • Statistical analytics • Machine learning • Clustering • Visualization • Multi-omics • Patient data

PRESENTATIONS

DOCKER/18S WORKSHOP

Nov 2023 | St. Louis, MO
Ran a workshop detailing the use of Docker images and how to process and analyze 18s rRNA sequencing data.

REGENERATIVE MEDICINE WIP

Apr 2023 | St. Louis, MO
Presented work on the transmission of bacteria from the maternal nasal microbiome to the infant nasal microbime.

ACHIEVEMENTS

BLACK AND GOLD SCHOLAR

Aug 2018 - May 2022 | Columbia, MO

MIZZOU ALUMNI SCHOLAR

Aug 2018 - May 2022 | Columbia, MO

HONORS DISCOVERY FELLOWSHIP

Aug 2018 - May 2019 | Columbia, MO