Position Summary

We are looking to hire a full-time research associate (postdoc) to work on an NIH funded project to understand the role of the lung microbiome in Cystic Fibrosis Pulmonary Exacerbations. Patients with this disease battle complex lung infections throughout their lifetime and our laboratory is studying how microbial metabolism and dynamics may be responsible for flares of CF disease. This project involves a multi-faceted approach including microbial culture models of the lung environment, big data multi-omics analysis, and mathematical modelling. Skills in microbiology and multi-omics data generation, including mass spectrometry and high-throughput nucleic acid sequencing, are highly desirable. The research associate will work tightly with clinicians and other scientists in the laboratory to develop a comprehensive approach to understanding these important clinical events of CF disease.

This position will involve generation and analysis of metabolomics and microbiome sequencing data. There will also be a large culture-based approach involving multi-species biofilm communities and high-throughput perturbations of the lung microbiome in a mucus-plugged bronchiole microcosm. This position will require an understanding of multivariate statistics and methods for integration of multi-omics datasets. Experience with computer coding languages for data analysis such as Python and R are highly desirable. The research associate will also gain experience in mentoring undergraduates and graduate students in scientific studies related to the project.

Required Degree

Doctorate - Biochemistry, Microbiology or related

Minimum Requirements

PhD in biochemistry, microbiology or related field; experience with omics data analysis.

Desired Qualifications

Experience in microbiology and omics data analysis with a passion for exciting science.

Required Application Materials

Curriculum vitae, cover letter, and at least three letters of reference.

Quinn Lab Website

https://bmb.natsci.msu.edu/faculty/robert-quinn/

Application Website