

Job Description

The Microbiome Systems Medicine Group at Mayo Clinic (Rochester, MN, USA), led by Dr. Jaeyun Sung, invites applications for postdoctoral positions in systems approaches to omics data analysis and personalized medicine. This position has been created, in part, to increase our computational capacity to systematically analyze, integrate, and model the tremendous amount of longitudinal, multi-omics data currently being generated at Mayo Clinic. These data sources include genomes, proteomes, metabolomes, microbiomes, and clinical and physiological surveys. Our overall aim with these data is to further understand the complex interactions between commensal gut microbial organisms and human health. Current research fields include: 1) Omics data-mining for clinical biomarker discovery; 2) metabolomics and exposomics; 3) multi-omic disease network analysis; 4) gut microbiome community-level metabolism and ecological dynamics; 5) microbial role in gut-liver axis; and 6) gut microbiome and auto-immune disease. Additional information can be found at: www.sung-lab.org.

Fellows will be mentored by Dr. Jaeyun Sung and other faculty investigators of the Microbiome Program in the Center for Individualized Medicine at the Mayo Clinic. The Center is a vibrant, well-funded environment, with strong mentoring and training opportunities for individual career development. In addition, the candidate will have access to a wealth of resources including high-quality data, a state-of-the-art high-performance computing facility, and the latest sequencing platforms.

Qualifications

The applicant must be strongly familiar with programming languages commonly used in data science (e.g. R, Python, Perl, or Matlab), and with standard bioinformatics tools for processing and analyzing 'omics datasets. He/she should have a PhD in one of the following fields: computational biology, biostatistics, bioinformatics, biophysics, applied math, or bio-engineering. PhD candidates with soon anticipated graduation are also encouraged to apply. Excellent written and verbal communication skills, strong ability to independently and creatively solve research problems, while working effectively with the principal investigator and lab colleagues, is a required. Prior experience working with omics data analysis (WGS metagenomics, RNA-seq and scRNA-seq, MS metabolomics), systems biology, machine-learning, metabolic modeling, or network science, as demonstrated through past research accomplishments, would be ideal.

To Apply

If you are interested in joining, please email Dr. Jaeyun Sung (Sung.Jaeyun[at]mayo[dot]edu) your CV, contact information of three individuals who can provide strong reference letters, PDFs of 3 of your representative publications, and a <1-page personal statement describing: your general research interests, previous experience, career goals, and specific research direction you'd like to pursue in our group.

Mayo Clinic is widely regarded as one of the United States' best hospitals, and was ranked #1 in the country on the 2017–2018 *U.S. News & World Report* List of "Best Hospitals" of the United States, maintaining a position near the top for more than 25 years. It has been on the list of "100 Best Companies to Work For" by *Fortune Magazine* for thirteen consecutive years. Rochester is a vibrant town located in southern Minnesota, and is close to several parks, hiking/biking trails, and wilderness areas. It enjoys a local culture rich in music, art, and theater, and has consistently been ranked as one of the best places to live in the United States.