HARVARD SCHOOL OF PUBLIC HEALTH

Department of Biostatistics
655 Huntington Avenue
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Postdoctoral Research Positions in Computational Biology and Metagenomics

Description:

The Huttenhower lab in the Biostatistics Department of the Harvard School of Public Health is seeking to fill three bioinformatics postdoctoral research positions:

- Computational methods development for biomolecular function and pathway analysis of metagenomes and metatranscriptomes. The successful candidate will build on the lab's HUMAnN, ShortBRED, and PICRUSt methods for microbial community profiling to create the next generation of meta'omic metabolic reconstruction algorithms. Expertise in machine learning, Python development, and the Linux/Unix command line environment is required.

- Analysis of the human microbiome in colorectal cancer. The successful candidate will be appointed through the Broad Institute and will be responsible for executing a STARR Cancer Consortium-funded project investigating the gut microbiota's role in modulating dietary and genetic (Lynch syndrome) colorectal tumorigenesis.

- Analysis of multi'omic data describing the human microbiome in type 1 diabetes. The successful candidate will be appointed through the Broad Institute and co-advised jointly with Dr. Dirk Gevers' lab, and he or she will be responsible for computational analysis of over 10,000 microbiome samples as part of the TEDDY (The Environmental Determinants of Diabetes in the Young) study.

The Huttenhower lab is broadly engaged in methods development for and multiple collaborative studies of the roles of the human microbiome in health and disease, with a focus on computational methods to characterize biomolecular functions within these microbial communities and their interactions with host immunity and genetics. The group works closely with the Broad Institute, the Dana-Farber Cancer Institute, and the broader Boston biomedical and life sciences communities, resulting in a rich environment for quantitative, computational, and laboratory collaborations.

Qualifications:

Doctoral degree in Computer Science, Statistics, Biostatistics, Bioinformatics, Biology, or a related field; proficiency in one or more statistical or scripting languages appropriate
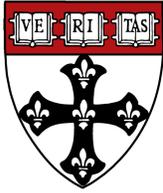
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for scalable data analysis; comfort and experience with programming for biological data analysis; familiarity with functional genetic and/or genomic data, as indicated by publication record; ability to communicate scientific material and collaborate well.

Additional Information:

Please submit a cover letter (including a brief but <u>detailed</u> statement of interest), CV, and contact information for at least three references to Dr. Curtis Huttenhower at chuttenh@hsph.harvard.edu **AND** to biostat_postdoc@hsph.harvard.edu.