

Position description:

The Zhu Lab in the Department of Human Science and Comprehensive Cancer Center (CCC) in The Ohio State University (OSU) is currently looking for qualified B.S. or M.S. students to join our lab as Ph.D. graduate students. The Lab is directed by Dr. Chris Zhu, an assistant professor and member of the CCC at OSU (<https://u.osu.edu/zhu.2484/>). The Metabolomics research program aims to bring together the latest methodology and technology in biological science to tackle the major global health challenges of today. The aim is to understand and conceptualize how foods and food derived compounds, fractions and ingredients can be used to obtain a healthy, sustainable lifestyle. Our lab is currently funded internally by support from OSU and the Comprehensive Cancer Center, OSU Discovery Theme Food for Health Initiative, and externally by National Institute of Health, the United State Department of Agriculture, and the Department of Defense. This is a position with the initial contract for one-year term and the potential to be renewed for additional year(s) based on performance.

The multidisciplinary research to be conducted including expertise in nutrition, food science, medicine, metabolomics, systems biology and bioinformatics, we will develop and test strategies for identifying early life determinants of metabolic diseases and cancers. We hypothesize that diet and gut microbiota play an important role for the development of these diseases. We will integrate data from metabolomics and microbiota composition to identify biomarkers and perturbed metabolic pathways related to metabolic diseases and cancers. This PhD-project will have a strong emphasis on analytical technology development and implementation but will also be expected to utilize data analytical and computational tools for predictive modelling and compound identification. Samples from different microbiology, animal and human studies will be used.

Major responsibilities

- * Developing mass spectrometry based analytical and bioinformatic tools for metabolomics studies
- * Run MS-based metabolomics experiments on biological samples
- * Utilize computational tools for unknown compound identification in MS-based metabolomics
- * Co-ordinate analysis of gut microbiota in collaboration with internal lab members and external laboratories
- * Conduct statistical data analysis and reporting
- * Present and disseminate results for different audiences

Qualifications

You must have a Bachelor or Master's level degree in chemistry, biology, microbiology, bioinformatics, biomedical engineering or related majors. Documented experience of analytical and/or microbiology skills is required. Experience with multivariate data analysis, metabolomics on clinical material is an advantage. The position requires sound verbal and written communication skills in English.

Our offer to you

OSU offers a cultivating and inspiring working environment in the dynamic city of Columbus, Ohio. To know more about The Ohio State University and the City of Columbus, check out these links.

https://en.wikipedia.org/wiki/Ohio_State_University

https://en.wikipedia.org/wiki/Columbus,_Ohio

Once admitted, you will be fully funded through the discovery theme or additional funding from the Lab director, assuming satisfactory performance.

Application procedure:

Applicants are strongly encouraged to reach out to Dr. Chris Zhu (zhu.2484@osu.edu) first before putting into official application to OSU system. Please send the following documents to Dr. Zhu via email.

- CV
- Statement of purpose
- Transcripts of completed education, grades and other certificates, eg. TOEFL and GRE test results.