



PLANT GENE EXPRESSION CENTER

Agricultural Research Service  
United States Department of Agriculture

Plant & Microbial Biology  
University of California, Berkeley



# POSTDOCTORAL RESEARCHER POSITION IN METAGENOMIC ANALYSIS OF PLANT-MICROBE INTERACTIONS

A two-year postdoctoral research position is available immediately in the Plant Gene Expression Center under the supervision of Dr. Devin Coleman-Derr (<https://colemanderrlab.wordpress.com/>) at the United States Department of Agriculture. The lab is affiliated with the Plant and Microbial Biology Department at the University of California at Berkeley, and is in the city of Albany, California within the San Francisco Bay Area.

The postdoctoral fellowship will help build on current efforts in the Coleman-Derr lab to use genome-resolved metagenomics to investigate plant-microbe interactions within the rhizospheres of various crop plants, including the bioenergy crop *Sorghum bicolor*. Emerging strategies in genome-resolved metagenomics have the potential to allow for an unprecedented high-resolution dissection of functional interactions in complex crop microbiomes, but benchmarking and pipeline development are needed for effective integration of metatranscriptome and metagenome-derived bins. This position will involve the analysis of genome-resolved bins from shotgun metagenomics data within the ARS high-throughput computational infrastructure (CERES), and the development of tools for use with existing shotgun datasets from recent plant microbiome research in our lab.

Research activities will include the generation and analysis of new metagenomic and metatranscriptomic datasets from rhizosphere samples collected from field grown sorghum, as well as bioinformatic tool development. The postdoc will work closely with other members of the lab that are working on externally funded research projects in the sorghum microbiome. Applicants should have a doctoral degree in Plant Biology, Microbial Biology, Computational Biology or a related field. Experience with shotgun metagenomics or metatranscriptomics analysis is requested. The postdoc appointment will be for two years, with the possibility of extension, and is only open to Citizens and Permanent Residents of the United States.

**Application process:** Interested candidates should apply by August 31st, 2022, but the position will be filled as soon as possible. Applicants should submit their CV and a letter of introduction to Dr. Devin Coleman-Derr at [colemanderr@berkeley.edu](mailto:colemanderr@berkeley.edu) .

**Selection Criteria:** Candidate selection will be based on: 1) a PhD in an appropriate field of biological or computational research, 2) demonstrated experience in metagenomics and/or metatranscriptomics analysis, 3) experience with plant microbiome datasets, 4) experience in the development of bioinformatics tools, 5) demonstrated ability to conduct high quality research and deliver impactful publications, 6) well-developed verbal and written communication skills, 7) ability to work effectively both in an independent role and collaborative with others in a diverse academic setting.