

From: Marco Keiluweit
Subject: PhD Assistantship available (Microbial Biogeochemistry, UMASS Amherst)

PhD Graduate Research Assistantship available in the Keiluweit Lab at UMASS Amherst.

Research Project: Organic Matter Mineralization and Metal Cycling During Flood Plain Evolution

We are inviting applications for a fully funded PhD positions in the Soil and Microbial Biogeochemistry group at the University of Massachusetts—Amherst.

Research: The successful candidate will conduct research into the biogeochemical cycling of organic matter within floodplains. The overarching goal of this research is to decipher the coevolution of organic matter and metal chemistry within the dynamic floodplains, and its resulting determinant of soil carbon storage and metal contaminant fate and transport. This research is focused on the East River watershed in Colorado, where a legacy of mining has left floodplain soils contaminated with uranium and other metals. The candidates will combine experiments in laboratories with field sampling and long-term monitoring to examine the key microbial processes responsible for the cycling of carbon and associated metals. Candidates will have the excellent opportunity to apply cutting-edge synchrotron-based spectroscopy/microscopy, mass spectrometry, and molecular biology techniques to study the microbial transformations of carbon and metals. This research will be conducted in collaboration with a supportive team of scientists at Stanford University, the Lawrence Berkeley National Lab, and the Environmental Molecular Science Lab.

Qualifications: Applicants with B.S. and/or M.S. degrees in soil science or a related field (environmental science, geoscience, microbiology, or environmental chemistry) are encouraged to apply. We expect the student to have a general interest in fundamental biogeochemical mechanisms in soils, and to creatively integrate his or her own ideas within the broader framework of the project. Location: UMass Amherst, the flagship campus of the University of Massachusetts system, sits on nearly 1,450-acres in the scenic Pioneer Valley of Western Massachusetts, 90 miles from Boston and 175 miles from New York City. The campus provides a rich cultural environment in a rural setting close to major urban centers.

Application: Interested candidates are asked to send their CV, copies of Bachelor and/or Master degrees (including academic transcripts), and a list of two potential references (including full contact addresses). These materials, and inquiries for further information, should be sent to Dr. Marco Keiluweit (keiluweit@umass.edu).

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