

**Frontiers in Biological Sciences
Seminar Series Presents**

**Integrated Molecular Approaches to Study
Microbial Ecology and Evolution in an Acid
Mine Drainage-Based Model System**



Speaker: Dr. Jill Banfield

Professor, Departments of Earth and
Planetary Science
and Environmental Science, Policy,
Management,
University of California-Berkeley

Date: Friday, March 19, 2010

Time: 9:30-10:30 am

Place: EMSL Auditorium

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Dr. Banfield's research group studies interactions between microorganisms and minerals, especially the impact of microorganisms on mineral weathering and crystal growth, biomineralization, and geochemical cycling. In this seminar, she will describe a highly productive ecosystem in an extreme natural environment that is supported by air, water, and iron sulfide minerals. Through integrating cultivation-independent molecular ('omic, 3-D electron tomography, and other) methods with geochemical approaches, it has been possible to begin to determine how these communities are structured and to unravel complex interdependencies, spatial organization, and evolutionary pathways.



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