

Analysis of Microbial Community Structure and Interactions in a Natural Metal-Contaminated Ecosystem

- **Purpose:**

- An important facet of understanding how bacteria survive and thrive in natural microbial communities involves comprehensive characterization of the proteome of this organism under different growth conditions.
- State-of-the-art mass spectrometric approaches combined with multidimensional liquid chromatographic separations are being developed and implemented for these “shotgun” proteome measurements.
- Work in this project will involve both qualitative and quantitative proteome measurements.
- The longer term objective is to collaborate with biological colleagues to understand the metabolic diversity and functional relationship of a natural microbial community in an acid-mine drainage ecosystem by using integrated biochemical, proteomic, and comparative genomics approaches.



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- **Sponsor: U.S. DOE, Office of Biological and Environmental Research, Microbial Genome Program (FY 2004-2006)**