

Primary Investigator: Karen G. Lloyd

Institution: University of Tennessee

Project: –Quantification of cell specific activities previously uncharacterized microorganisms in deep subsurface sediments

Co-PIs: Andrew D. Steen

NSF Division: OCE **Solicitation Info:** Expedition Objective Research (EOR) PD 05-5720

Submission Date: 02/15/2014

Overview: We will quantify the abundances of specific microbial taxa, examine single cell genomes of uncultured microbes, and measure enzymatic activity of deep subsurface sediments from the Baltic Sea.

Data description: Four holes in the Baltic Sea Basin will be sampled, with 29 total depths.

Description of existing data and samples: IODP Leg 347: Baltic Sea Basin Paleoenvironment samples will be used. We currently have a selection of frozen whole round cores, samples preserved in formaldehyde for FISH, and samples preserved in glycerol for single cell genomics.

Data analysis summary: CARD-FISH cell counts of archaea and bacteria, DAPI cell counts, qPCR quantifications of specific taxa, single cell amplified genomes, enzyme activity measurements

Includes field work? No

Expected data product #1

Data type: Analytical, Processed Data

Responsible investigator: Karen Lloyd

Product description: CARD-FISH cell counts of archaea and bacteria, DAPI cell counts, qPCR quantifications of specific taxa

Intended repository: BCO-DMO

Timeline for data release: Two Years from acquisition/analysis

Expected data product #2

Data type: Processed Data

Responsible investigator: Karen Lloyd

Product description: single cell amplified genomes

Intended repository: GenBank

Timeline for data release: Two Years from acquisition/analysis

Expected data product #3

Data type: Processed Data, Experimental

Responsible investigator: Andrew Steen

Product description: enzyme activity measurements

Intended repository: BCO-DMO

Timeline for data release: Two Years from acquisition/analysis