The project will produce several observational and experimental datasets described below. In addition, educational resources produced by the project, including data and images, and Science in Art project will be available for public use on the COSEE.net website. Observational data collected during IODP Expedition 385 (selected nutrient analyses) are available through the IODP website:

Observational Data Sets:

1. Shipboard core data for Expedition 385. Filetype: excel format converted to .csv. Repository: IODP http://web.iodp.tamu.edu/OVERVIEW/. Link will be provided to this at BCO-DMO.

2. Shipboard nutrient data. Filetype: excel format converted to .csv. Repository: IODP htty://web.iodp.tamu.edu/OVERVIEW/. Link will be provided to this at BCO-DMO.

Experimental Data Sets:

1. Sequence data: MiSeq PE 300bp iTAG data will be generated for Bacteria and Archaea and for Fungi in field samples by the end of year 1 for all samples in our collection. iTAG data (same target taxa) will also be collected on pools of FACS-sorted cells produced during analyses of BONCAT experiments and from timepoint samples from SIP experiments. File types: Short-read archive (.sra) and .fasta files. Repository: NCBI; accession numbers to be provided to BCO-DMO.

2. Sequence data: Illumina NextSeq PE 2x150 data for mRNA pools from selected field samples and from culture-based incubation experiments (SIP with ^{13}C-labeled substrates). File types: Short-read archive (.sra) and .fasta files. Repository: NCBI; accession numbers to be provided to BCO-DMO as soon as sequence data are available.

3. Metagenomic and metatranscriptome data: Illumina NextSeq PE 2x150 data for DNA extracts for selected field samples and for pools of FACS-sorted cells from BONCAT experiments. File types: Short-read archive (.sra) and .fasta files. Repository: NCBI; accession numbers to be provided to BCO-DMO.

4. Environmental fungal strains: All unique fungal isolates will be directly cryopreserved in 15% glycerol stocks and/or 5% dimethyl sulfoxide and deposited in the UBOCC (University of Brest Culture Collection, http://www.univ-brest.fr/ubocc/) by collaborator Burgaud, and duplicate stocks in -80°C freezers in Edgcomb's laboratory at WHOI (on emergency power backup) by the Research Associates. All isolates will be available upon request during or after our project term. Data from taxonomic characterization and physiological experiments will be shared electronically among all collaborators by collaborator Burgaud and the Research Associate, and will be posted to a dedicated project page on Basecamp (https://basecamp.com) by during the project period by the PI. Links to data and lists of cultures available will be provided to BCO-DMO and will be available on a dedicated project page on Edgcomb's laboratory website.

5. Hydrocarbon data (saturated hydrocarbons and alkylated PAHs) for field samples (Filetype Excel spreadsheet and chromatographic profiles) from Alpha Analytical and gas chromatography data (Filetypes: chromatographic converted to PDF and Excel spreadsheet data converted to .csv) for SIP incubation studies produced by collaborator Reddy's lab will be deposited in BCO-DMO as they are generated.

6. Lipid biomarker data from selected field samples and from ^{13}C-SIP experiments along with sample blanks and standards. Filetype: Excel spreadsheet data converted to .csv format, and chromatographs converted to .pdf. Data to be provided to BCO-DMO.

7. Nutrient analyses of field sample performed by Louisiana State University Wetland Chemistry Lab along with standards and quality control data. Filetype Excel spreadsheet converted to .csv. Will be provided will be deposited to BCO-DMO as they are generated

8. Microscopy cell counts of Fungi and total prokaryotes for selected field samples and for SIP incubation studies. File type: Excel spreadsheet converted to .csv and deposited to BCO-DMO as they are generated.

9. Data from the Sony SH800S fluorescence activated cell sorter (FACS) will be stored in FCS 3.1 format used by third party analysis software as well as in pdf format. All FACS data will also be backed up to the Dropbox of the Hatzenpichler lab, in addition to storing them on the microscope or FACS workstation, which hard-disks are undergoing constant backups onto MSU servers.