

## **Data Management Plan**

Our project will include several forms of data, including 1) oceanographic (Bergen, Norway), 2) physiological, 3) microscopy, 4) digital video.

### **Types of Data**

*Oceanographic:* We will collect a variety of physical data (temperature, salinity, dissolved oxygen, fluorescence, scatter) using a Sea Bird Electronics (SBE) conductivity, temperature and density (CTD) profiler. We will also collect data on *in situ* light levels using a Biospherical PAR meter.

*Physiology:* We will generate fluorescence data (FIRE fluorometer) using software developed by Satlantic (Halifax, CAN). Also, flow cytometry data using either Guava easyCyte (Millipore), InFlux Model 209S (Mariner), or Accuri C6 (BD Biosciences) using software native to the individual cytometer. Further data will be collected by a Beckman Coulter Counter, and analyzed by software developed by Beckman. These data will be exported and processed in Excel or Matlab.

*Microscopy:* We will collect data on cell counts and transparent exopolymer particle (TEP) composition using standard light microscopy.

*Video:* Particle size and sinking velocity will be captured using digital videos using CCD machine vision digital cameras.

### **Formats and standards**

*Oceanographic:* All CTD data will be acquired as .dat or .hex files for use in Seasave V7. The data will be converted to a .cnv file for use in SBE Data Processing's Sea Plot or converted to ASCII for use in excel.

*Physiology:* FIRE fluorometer data is collected using Satlantic software FIREView, FIREPro and FIRECont, all of which run in a DOS OS. Data files (.dat) will be exported and imported into Excel for formatting. Flow cytometry data will be acquired using the native software of the particular flow cytometer used, producing files in FSC 3.0 format, and allowing for import into other programs such as Excel.

*Microscopy:* Microscopy data will be collected as raw Zeiss LSM or standard TIF format. Images can be exported in a variety of data formats (e.g. TIF, JPG).

*Video:* Digital video data will be collected as .raw files, and then converted into .avi files.

### **Data access and sharing**

*Oceanographic:* all oceanographic data will be submitted to the BCO-DMO data repository. We will also make data available by request.

*Physiology, Microscopy, Video:* We will submit annotated data files to BCO-DMO for grazing experiments and also make data available on our website and by request.

### **Policies for data use**

We will generally apply the least restrictive data and program licenses to generate the highest impact for collaborative efforts. Data will be freely available for commercial and non-commercial re-use after publications in peer-reviewed journals with associated funding.

### **Plans for archiving data/samples**

*Oceanographic:* All cruise metadata will be entered into BCO-DMO data repository and posted as a download on Co-PI Johnson's website.

*Physiology, Microscopy, Video:* These data will be submitted to BCO-DMO and published, in both print and online as journal articles or as supplemental materials.