DATA MANAGEMENT PLAN

The primary type of data generated by the proposed research will be lipidomic data of suspended and sinking particulate organic carbon. These will be in the form of tabulated estimated concentrations and fluxes, for suspended and sinking particulate matter, respectively, for individual lipid molecules. In addition, new R scripts for the lipidomic data analysis workflow [Collins, J.R., Edwards, B.R., Fredricks, H.F., Van Mooy, B.A.S., (2016) LOBSTAHS: An Adduct-Based Lipidomics Strategy for Discovery and Identification of Oxidative Stress Biomarkers. *Anal. Chem.* 88, 7154-7162.] will be generated. All samples will be spiked with internal, isotope-labeled, or chromophoric lipid standards before analysis. These standards will be used to assure mass accuracy during analysis and proper identification using LOBSTAHS. Recoveries of these standards will be tabulated for every sample. Net community production rates of triacylglycerols (TAGs) will be determined from water column concentration oscillations. Rates of net and gross primary TAG production will be determined using ^{13}C-tracing methods [Popendorf, K.J, Lomas, M.W., and Van Mooy, B.A.S. (2011) Microbial Sources of Intact Polar Diacylglycerolipids in the Western North Atlantic Ocean. *Org. Geochem.* 42: 803-811].

Nutrient concentrations, cell abundances, and net primary production rates will be determined by established methods.

Van Mooy maintains a rigorous open-access data policy for his lab. Data access, sharing, re-use, redistribution, and development will be licensed under Creative Commons Attribution-NonCommercial ShareAlike 4.0 International with no embargo.

In addition, all data will be archived in tabulated form by the Biological and Chemical Oceanography Data Management Office (BCO-DMO) and will be available online from the BCO-DMO data system [*http://bco-dmo.org/data/*]. Full descriptions of methods and standards will be provided to BCO-DMO upon submission of datasets. The BCO-DMO will also archive all the data they manage at the appropriate national archive facility, such as NODC and NGDC.

New LOBSTAHS R scripts will be available on Van Mooy's open-source, open-development site on Github. These scripts will also be mirrored on Bioconductor.

Provisions for data access will also be made as required by publishers of the expected peer-reviewed papers describing the proposed research.