Woods Hole Oceanographic Institution

Biology Department Seminar

Thursday, April 27, 2017
Redfield Auditorium – 12:00 Noon

The dark side of the ocean: understanding the microbiome of the ocean's aphotic realm

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The dark ocean contains one of the largest microbiomes on Earth, composed of active and metabolically diverse microorganisms. These biota impact local processes as well as global carbon and nitrogen cycling. An increasing body of evidence suggests chemoautotrophy in the dark ocean may also be significant, with potentially major implications for the ecology of the dark ocean and global nutrient cycling. Yet, the genomic repertoires, natural histories, and geographic distributions of even the most abundant taxonomic groups of marine microorganisms remain largely unknown. I will provide examples of how '–omics' approaches and stable isotope geochemistry are used to understand feedbacks between the environment and distributions and activities of microorganisms central to major biogeochemical cycles.