

Transcriptomics of natural communities responding to DOM and nutrient additions, from R/V Kilo Moana KM0814 (OPEREX) in the North Pacific Subtropical Gyre north of Hawaii, July to August 2008 (C-MORE project)

Website: <https://www.bco-dmo.org/dataset/517616>

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Project

» [Center for Microbial Oceanography: Research and Education](#) (C-MORE)

Contributors	Affiliation	Role
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Dataset Description

Transcriptomics of natural communities responding to DOM and nutrient additions.

Data from the accession numbers listed below can be accessed from NCBI (<http://www.ncbi.nlm.nih.gov/>).

GenBank accession numbers

BioProject: [PRJNA222583](#) SRA: Metagenomes ([SRP030766](#))

Nucleotide: fosmids

[KF742554](#) bacterium B3TF_MPn1

[KF742555](#) bacterium B3TF_MPn2

[KF742556](#) bacterium B3TF_MPn1

Manuscripts

Front. Microbiol. doi: 10.3389/fmicb.2013.00340 (2013)

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Parameters

Parameters for this dataset have not yet been identified

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Deployments

KM0814

Website	https://www.bco-dmo.org/deployment/58018
Platform	R/V Kilo Moana
Start Date	2008-07-30
End Date	2008-08-14
Description	<p>OPEREX Cruise Objective The objective of the OPEREX cruise will be to explore the potential and limitations of perturbation experiments at sea. We will follow some natural perturbations including blooms and eddies, and we will perform some of the artificial perturbation experiments including bench/lab scale incubations, ship deck incubations, and ship deck pH shift experiments. Original cruise data are available from the NSF R2R data catalog Related information from the C-MORE OPEREX cruise Web site: Homepage: http://cmore.soest.hawaii.edu/cruises/operex/index.htm Science plan: http://cmore.soest.hawaii.edu/cruises/operex/science_objective.htm Data: http://hahana.soest.hawaii.edu/cmomoreoperex/operex.html Cruise track: http://hahana.soest.hawaii.edu/cmomoreoperex/OPEREXtrack.gif Cruise plan: http://cmore.soest.hawaii.edu/cruises/operex/documents/km0814_cruise_pla... Cruise overview: http://hahana.soest.hawaii.edu/cmomoreoperex/OPEREX_overview.pdf Cruise schedule: http://cmore.soest.hawaii.edu/cruises/operex/documents/OPPEREX_schedule.xls</p>

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Project Information

Center for Microbial Oceanography: Research and Education (C-MORE)

Website: <http://cmore.soest.hawaii.edu/>

Coverage: North Pacific Subtropical Gyre (large region around 22 45 N, 158 W)

Project summary

The **Center for Microbial Oceanography: Research and Education** (C-MORE) is a recently established (August 2006; NSF award: EF-0424599) NSF-sponsored Science and Technology Center designed to facilitate a more comprehensive understanding of the diverse assemblages of microorganisms in the sea, ranging from the genetic basis of marine microbial biogeochemistry including the metabolic regulation and environmental controls of gene expression, to the processes that underpin the fluxes of carbon, related bioelements and energy in the marine environment. Stated holistically, C-MORE's primary mission is: *Linking Genomes to Biomes*.

We believe that the time is right to address several major, long-standing questions in microbial oceanography. Recent advances in the application of molecular techniques have provided an unprecedented view of the structure, diversity and possible function of sea microbes. By combining these and other novel approaches with more well-established techniques in microbiology, oceanography and ecology, it may be possible to develop a meaningful predictive understanding of the ocean with respect to energy transduction, carbon sequestration, bioelement cycling and the probable response of marine ecosystems to global environmental variability and climate change. The strength of C-MORE resides in the synergy created by bringing together experts who traditionally have not worked together and this, in turn, will facilitate the creation and dissemination of new knowledge on the role of marine microbes in global habitability.

The new Center will design and conduct novel research, broker partnerships, increase diversity of human resources, implement education and outreach programs, and utilize comprehensive information about microbial life in the sea. The Center will bring together teams of scientists, educators and community members who otherwise do not have an opportunity to communicate, collaborate or design creative solutions to long-term ecosystem scale problems. The Center's research will be organized around four interconnected themes:

- (Theme I) microbial biodiversity,
- (Theme II) metabolism and C-N-P-energy flow,
- (Theme III) remote and continuous sensing and links to climate variability, and

- (Theme IV) ecosystem modeling, simulation and prediction.

Each theme will have a leader to help coordinate the research programs and to facilitate interactions among the other related themes. The education programs will focus on pre-college curriculum enhancements, in service teacher training and formal undergraduate/graduate and post-doctoral programs to prepare the next generation of microbial oceanographers. The Center will establish and maintain creative outreach programs to help diffuse the new knowledge gained into society at large including policymakers. The Center's activities will be dispersed among five partner institutions:

- Massachusetts Institute of Technology,
- Woods Hole Oceanographic Institution,
- Monterey Bay Aquarium Research Institute,
- University of California at Santa Cruz and
- Oregon State University

and will be coordinated at the University of Hawaii at Manoa.

Related Files:

[Strategic plan \(PDF file\)](#)

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Funding

Funding Source	Award
US Department of Energy (DOE)	unknown C-MORE DOE
NSF Division of Biological Infrastructure (NSF DBI)	DBI-0424599
Gordon and Betty Moore Foundation (GBMF)	unknown C-MORE Moore

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