NExUS Ongoing Projects and Activities Fri Nov 16 03:00:27 EST 2018

Name	Ocean Acidification: The Influence of Ocean Acidification and Rising Temperature on Phytoplankton Proteome Composition
Description	From the project summary available at nwf.gov: In this project, a research team at the Woods Hole Oceanographic Institution will investigate physiological mechanisms set into motion by the environmental stimuli associated with ocean acidification by quantifying changes in the proteome of four marine phytoplankton species: the abundant cyanobacteria Synechococcus and Prochlorococcus, the key nitrogen fixing cyanobacterium Crocosphaera, and an Antarctic diatom Nitzschia sp., in response to ocean acidification. In recent years, the team has adapted and developed quantitative proteomic capabilities for marine microbes using liquid chromatography mass spectrometry systems. The approach has become virtually routine and could be applied to a variety of problems related to ocean acidification. In addition, because of the climatic link between ocean acidification and global warming, the synergistic influences of increasing temperature will also be studied.
Category	- Climate-change Specific Projects
Sector	- Natural Ecosystems - Biota
Focus Area	- Sustainability of Marine Ecosystems
Region	- Regional Or State -- New England -- Mid-Atlantic -- South East
Status	- Ongoing
Timelines	2012-2015 (estimated)
Lead Agencies	National Science Foundations (NSF), Division of Ocean Sciences (OCE), Directorate for Geosciences (GEO); Woods Hole Oceanographic Institute, Woods Hole, MA
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