



NExUS Ongoing Projects and Activities Thu Feb 21 21:29:29 EST 2019

<b>Name</b>	Ocean Acidification: The Influence of Ocean Acidification and Rising Temperature on Phytoplankton Proteome Composition
<b>Description</b>	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 <i>Synechococcus</i> and <i>Prochlorococcus</i> , the key nitrogen fixing cyanobacterium <i>Crocospaera</i> , and an Antarctic diatom <i>Nitzschia</i> 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.
<b>Category</b>	- Climate-change Specific Projects
<b>Sector</b>	- Natural Ecosystems - Biota
<b>Focus Area</b>	- Sustainability of Marine Ecosystems
<b>Region</b>	- Regional Or State -- New England -- Mid-Atlantic -- South East
<b>Status</b>	- Ongoing
<b>Timelines</b>	2012-2015 (estimated)
<b>Lead Agencies</b>	National Science Foundations (NSF), Division of Ocean Sciences (OCE), Directorate for Geosciences (GEO); Woods Hole Oceanographic Institute, Woods Hole, MA
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