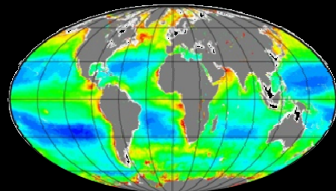
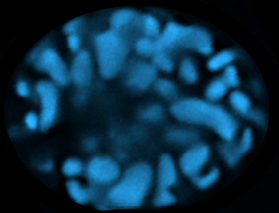
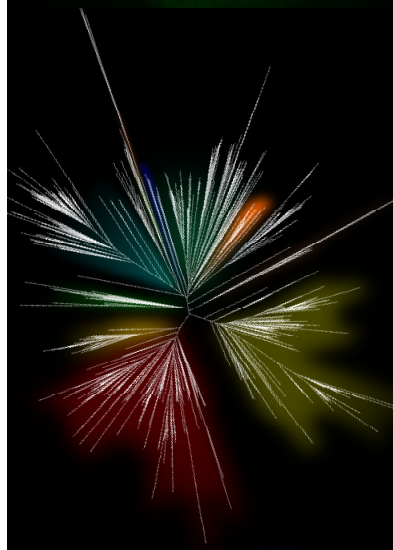
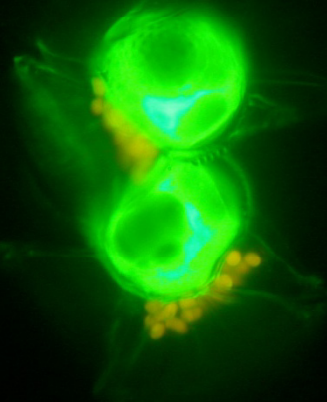
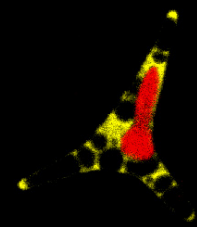


# ECOLOGY & DIVERSITY OF AQUATIC PROTISTS: ADVANCES & METHODOLOGIES



## ASLO Ocean Sciences Meeting Portland, OR February 22-26, 2010

Session Co-Chairs:

**Alexandra Z. Worden<sup>1</sup>, Elif Demir<sup>1</sup> & Andrew E. Allen<sup>2</sup>**

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**ASLO Session B021:** Protistan microbes are central players in global biogeochemical cycles. Autotrophic protists (**phytoplankton**) are major oceanic primary producers and **heterotrophic protists** play predatory roles in a variety of aquatic systems. More complex trophic modes such as **mixotrophy** or **symbiotic** and **parasitic interactions** are also observed. Application of molecular approaches to explore these populations is leading to significant advancements. Data on protistan **diversity**, **functional roles**, **ecological** impacts and discovery of novel lineages is increasing rapidly. For example, recently tremendous diversity of the smallest protists, the picoeukaryotes (<2-3  $\mu\text{m}$  diameter), has been revealed as well as extensive **genomic divergence** between strains thought to be a single species.

This session seeks to bring together scientists developing and using different methodologies as well as to highlight research at the forefront of the field. The overall session goals will be interrelating **comparative** genomic, **metagenomic** and **transcriptomic** research with targeted *in situ* methods, such as **FISH** and **qPCR**, **flow cytometry** and **diversity** measures (clone libraries and TAG sequencing). In addition, culture based studies on **physiology**, gene function and **genome analyses** as well as investigation of protists within the context of the broader community are welcome. The session will facilitate two major advances. First, cumulatively, this knowledge will allow us to synthesize a more refined view of protistan roles in **microbial food webs** and **carbon cycling**. Second, the synthesis will help identify areas requiring development, including needed innovations for addressing unsolved questions on **eukaryotic diversity and interactions**.

Please Post

Abstract Subm. Deadline: 15 Oct. 09

<http://www.agu.org/meetings/os10/index.php>

top right: Diatom Chloroplast (red) w/FBA I Cytosolic FISH (yellow) - A. Allen ; top left: Protist/Cyanobact. Interactions - R. Foster; middle: 454-TAG Phylogenetic Mapping - A. Monier; bottom: Raphidophyte Chloroplast Fluorescence by Confocal Microscopy- E. Demir.