Public Relations
East shore campus
Wischhofstraße 1-3

Tel: +49 431 600-2802
Fax: +49 431 600-2805

Research Project at the Cape Verde

Scientists from German and Cape Verdean institutes have started collecting data at Cape Verde Observatory Tenatso in 2008, measurements that they hope to continue in order to follow the effect of global change in the tropical Atlantic Ocean. Their research is part of the SOPRAN project (Surface Ocean Processes in the Anthropocene) that is largely supported by the German Federal Ministry of Education and Research (BMBF).

Nitrogen fixers and UCYN-A

There is plenty of nitrogen gas (N2) in the atmosphere but only few organisms are able to "fix" it so that it turns into a fertilizer with biologically useful molecules. Cyanobacteria or blue-green algae are amongst the most important nitrogen-fixers. Until recently scientists thought that single-cell organisms could only fix the nitrogen during the night because during the day, oxygen is released through photosynthesis and inhibits nitrogen fixation by poisoning the enzyme responsible for it. The cyanobacterium UCYN-A doesn't seem to work like that. It lacks the genes for photosystem II that are needed for the oxygen release and apparently cannot fix carbon dioxide into sugars. Thus, it may utilize light energy in other ways and forgoes photosynthesis, as is normally carried out by land plants and other algae. Although this organism has never been isolated in pure culture, an initial characterization of its genome was published in 2008 by the group of Jonathan Zehr at University of Santa Cruz (Zehr et al. 2008, Science Vol. 322 no. 5904, pp. 1110-1112).

Links:
http://sopran.pangaea.de/ BMBF-project SOPRAN

Figures:
At www.ifm-geomar.de/presse images are available for download.

Contact:
Prof. Dr. Julie LaRoche, Marine Biogeochemistry, Tel. +49 431 600-4212, jlaroche@ifm-geomar.de
Katja Machill (Public relation), Tel. +49 431 600-2807, kmachill@ifm-geomar.de