



## SAMOSA

### HOW DOES MARINE PHYTOPLANKTON ADAPT TO ENVIRONMENTAL CHANGES

The oceans are particularly sensitive to environmental changes. This sensitivity translates as a rise in the average temperature of surface seawater and in UV radiation flux with consequences for marine organisms such as phytoplankton.

*Synechococcus* cyanobacteria are among the most appropriate organisms to study to improve understanding of these environmental changes, as they are to be found everywhere in abundance in the marine environment. How they are organised can be studied at every level from gene to global ocean.

The SAMOSA project will characterise and model the principal mechanisms that *Synechococcus* cyanobacteria deploy to acclimatise and adapt to environmental changes. This research will make it possible to predict more accurately their adaptability, dynamics and distribution at different scales of time and space in an environment that is subject to global change.

The role their genes play in adapting to stress will be verified by analysing various metagenomes and metatranscriptomes obtained during the TARA-OCEANS mission from different ocean regions and depths and involving contrasting environmental parameters.

#### Partners

##### Research centers

Station Biologique de Roscoff, UMR 7144, Roscoff [Project Developer]  
Université de Nantes, Laboratoire d'informatique de Nantes Atlantique, Nantes

#### Funder

- Agence Nationale de la Recherche

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4 108 K€