



## RHOME0

### HOW DO MARINE BACTERIA USE LIGHT TO PRODUCE CARBON?

The oceans occupy more than 70% of the world's surface, regulating its climate and supporting biological and non-biological resources. Present in concentrations of a billion cells per litre, microorganisms play a fundamental role in the biogeochemical cycles that shape our planet by recycling nutrients and influencing climate at a global level. A large proportion of these microorganisms, known as photoheterotrophs, is capable of using light to supplement their energy supply.

The object of the RHOME0 project is to use microbial strains as models for assessing the impact of light on the efficient use of carbon by organisms that are plentiful in the environment. The aim is to identify those with a particular property, namely the capacity to use light as additional nutrition. These experiments will ultimately determine the quantity of carbon produced by these bacteria as a result of using light energy.

The project's results will have significant implications for our understanding of the marine carbon cycle and, consequently, for our understanding of long-term climate predictions.

#### Partners

##### Research centers

Observatoire Océanologique de Banyuls-sur-Mer [\[Project Developer\]](#)  
Station Biologique de Roscoff, Roscoff

#### Funder

- Agence Nationale de la Recherche

#### Labelisation

23/09/2011

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1 235 K€