



## BIOPAINDROP

### ENVIRONMENTALLY FRIENDLY ANTI-FOULING PAINT BASED ON TROPICAL MARINE MOLECULES

Complementing the PAINTCLEAN and ECOPAINT projects, BioPainTrop is part of the research into new, environmentally friendly antifouling paints which, in the case of this project, incorporate biomolecules from the island of Reunion's marine tropical resources. In particular, BioPainTrop will provide fishing businesses throughout the intertropical zone with antifouling paints suitable for use in tropical marine environments.

This multidisciplinary project combining chemistry, physicochemistry, biology and ecology will first need to identify eco-friendly molecules that are active in tropical coral habitats. Coral organisms, including microalgae, produce substances that help protect them from colonisation by foreign organisms. These active substances constitute a major resource that could be economically developed for use in, for example, antifouling coatings, and could serve as a model for creating synthetic chemical equivalents.

The tropical molecules identified will be incorporated into PAINTCLEAN and ECOPAINT biodegradable paints before being tested in temperate and tropical environments. One of the project's main aims is to perfect artificial modelling of a tropical biofilm to enable rapid identification of high value-added active molecules that are effective against fouling in tropical environments.

Once the active molecules have been identified, successfully incorporated, and proved to be effective and eco-friendly, the project will, in its final stages, set out the process for industrial production of the active extracts. This process will rely on green chemistry and mass production and extraction techniques. Directed by key economic players in Reunion via a local R&D agency (ARVAM), BioPainTrop will help make the 'Green Island' an experimental centre for devising environmentally friendly, high value-added products and processes.

#### Partners

##### Companies

Bioalgostral, Sainte-Clotilde, La Réunion  
IPL, Lille  
Nautix, Guidel

##### Research centers

HydroRéunion, Sainte-Clotilde, La Réunion [Project Developer]  
LBCM, Université de Bretagne Sud, Lorient  
Université de Toulon, Laboratoire MAPIEM

##### Other partner

LCSNSA, Université de la Réunion

#### Funder

- Agence Nationale de la Recherche

#### Labelisation

18/12/2009

#### Overall budget

1 066 K€