

## BioCatAlgae

### Microalgal cell factory: biocatalytic conversion of algal biomass for renew-able biodiesel

#### ABSTRACT

The project aims to produce renewable chemical feedstocks through the application of “one pot” enzymatic process on engineered microalgae. For this, genetically modified algal strains will be developed and evaluated for recombinant enzyme activities and lipid content. Relevant applications to downstream transesterification of microalgal lipids will be targeted. The major innovation is to explore the possibility of having the recombinant biocatalyst, for the downstream process, produced in situ during cultivation by the microalgae strain itself.

The main goal of the mobility period will be to achieve the construction of genetically modified *C. reinhardtii* clones that efficiently produce functional recombinant LipAc (rLipAc). Cultivation experiments of the positive clones will also start at the Cal-CAB, to identify the key parameters to reach high lipid content and sufficient rLipAc production.

**Year :** 2015

**Project number :** 1502-213

**Type of funding :** AAP MOBILITE

**Project type :** AAP

**Research units in the network :**

**Start date :** 2017-03-01

**End date :** 2017-08-31

**Flagship project :** no

**Project leader :** Maeva Subileau

**Project leader's institution :** InstitutAgro

**Project leader's RU :** IATE

**Budget allocated :** 12000 €

**Total budget allocated ( including co-financing ) :** 12000 €

**Funding :** Labex