

# MAGNIFICENT

MICROALGAE AS A GREEN SOURCE FOR NUTRITIONAL INGREDIENTS FOR FOOD/FEED AND INGREDIENTS FOR COSMETICS BY COST-EFFECTIVE NEW TECHNOLOGIES

Project duration: 1-6-2017 | 31-5-2021

Today there are only market opportunities for high value applications of microalgae products due to production costs, which are still too high to make microalgae a competitive feedstock for commodities. There is presently a large production capacity for a small number of microalgae strains in Europe. However, the number of concrete products and market applications is limited. The expansion of current market applications for high-value microalgae ingredients will lead to new business opportunities, industrialize the technology and provide the knowledge and experience required to enter the medium to low value market within 5-10 years.

MAGNIFICENT will expand the range of commercial products and their market volume substantially and in a sustainable manner. The overall objective of the project is to develop and validate a sustainable and economically feasible new value chain based on cultivation and processing, with the aim to transform microalgae biomass into valuable ingredients for food, aquafeed and cosmetics applications. Development and validation of new product formulations of microalgae are included in the project.

#### To achieve this, optimization will be done of:

- 1 Upstream, cultivation related processes via adaptation and selection of more productive algae varieties, improvement of growing conditions and target product concentration in the algae cell and
- 2 Downstream process steps (separation, extraction, purification) in order to achieve the overall aim to maximise the production of compounds of interest: phospholipids rich in omega-3 fatty acids EPA and DHA and fucoxanthin as main molecules.

The work will be supported by chain evaluation, market assessment, socio-economic impact assessment and Life Cycle Assessment (LCA). Specific attention will be paid to the requirements of the existing EU regulatory framework.

The MAGNIFICENT consortium has 16 partners from 7 EU countries incl. 10 Small and Medium sized Enterprises, 3 Large Enterprises, 1 University and 2 Research and Technology Organisations, and comprises commercial partners in the entire value chain and the three target markets.



This project has received funding from the Bio Based Industries Joint Undertaking under the European Union's Horizon 2020 research and innovation programme under grant agreement No. 745754

# MAGNIFICENT

MICROALGAE AS A GREEN SOURCE FOR NUTRITIONAL INGREDIENTS FOR FOOD/FEED AND INGREDIENTS FOR COSMETICS BY COST-EFFECTIVE NEW TECHNOLOGIES

Project duration: 1-6-2017 | 31-5-2021



## Contact

**Coordination**  
Maria.Barbosa@wur.nl

**Communication manager**  
Susana.gomessantana@wur.nl

**BBI Project Officer**  
Paloma.Mallorquin@bbi.europa.eu

[www.wur.eu/magnificent-algae](http://www.wur.eu/magnificent-algae)