



*EUBIA & the ALGADISK Project Consortium present...*

## *Open Workshop on Microalgae Market*

**Venue:** Scotland House - Rond Point Schuman, 6, B1040, Brussels.

**Date:** Wednesday 12<sup>th</sup> November 2014

EUBIA, The European Biomass Industry Association, is currently working in several activities aimed to foster the emerging microalgae sector.

Since 2011, the association is engaging more and more on promoting new technologies, market solutions and initiatives to support the development of a real microalgae market in EU. A fast growing interest has been demonstrated by representatives of several sectors. EU and United States policy makers, large power plant Companies, Biochemicals production industries, transportation biofuel producers, but also small enterprises for food and waste treatment are carrying on research projects and initiatives where different advanced technologies are investigated to increase the competitiveness of microalgae cultivation and processing processes.

The huge potential of microalgae is given by the wide range of species available. Different species can grow and duplicate at different rates, in different climate conditions, they present a wide range of lipid content, pigments, etc.. These flexible characteristics make microalgae very interesting for many industry sectors. The identification of suitable cultivation systems, valuable processing technologies in relation with the possible microalgae species to be used and the final aim of their application is the interesting topic where EUBIA is hard working in these years.

This Event aims to present the new EUBIA approach to microalgae and to show the present and potential impact of this sector in the EU economy. To this end, an overview on microalgae market update, present most interesting technologies and project developed in EU and a further presentation on a new microalgae cultivation technology (ALGADISK) will be included in the workshop.

***The Event is open and free of charge!***

Below the last version of the Agenda

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## OPEN ALGAE WORKSHOP AGENDA

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### **09.30 Welcome to participants and Event programme presentation**

Andrea Salimbeni, EUBIA Project Manager

### **09.45 Introduction of EUBIA Approach and Activities on Microalgae**

Giuliano Grassi - EUBIA Secretary General

### **10.10 European Policy framework influencing microalgae market**

Juan Elias Vergara Miguez, EUBIA Policy Officer

### **10.30. Latest development in microalgae cultivation technologies and future perspectives**

Giuseppe Torzillo, Italian National Research Council, Ecosystem Study Division, Florence

### **10.50. Microalgae in biofuels and bioenergy sector in North West Europe (EnAlgae Project)**

Sofie Van Den Hende, Ugent University Ph.D

### **11.10 Microalgae integration in Biorefineries. AlgaeBioGas project Presentation**

Mr Robert Reinhardt, Algen Company

-----**11.30 Coffee Break**-----

### **11.45 Protein Supply and feed safety targets in EU**

Mr. Arnaud Bouxin - European feed Industry Association Secretary General

### **12.05 Microalgae potential in EU Food market**

Mr Detlef Weber - Algae Natural Food company

### **12.25 Presentation of ALGADISK Project - Objective and Concept**

Virginia Fernandez, Cesfac, ALGADISK Project Coordinator

### **12.40 ALGADISK Video Projection**

## **12.45: Presentation of ALGADISK technology: Tests' in Spain, Results and estimated business plan**

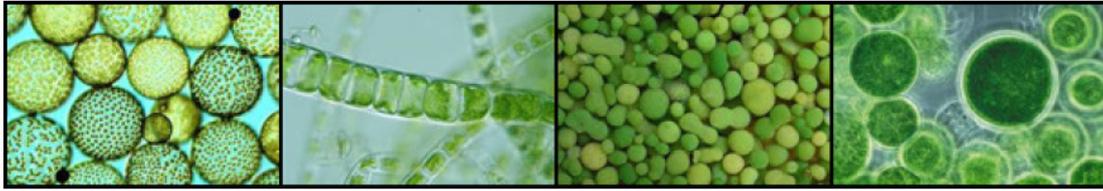
Andrea Salimbeni, EUBIA Project Manager

- a. Context: Climate conditions, hours operation, algae species, etc..*
- b. Growth rate*
- c. Energy consumption*
- d. Nutrients (N-P consumption)*
- e. CO<sub>2</sub> consumption*
- f. Biomass productivity*

## **13.10 Closing Session**

*Registration is open and free...*

...Fill in and send your registration form to [andrea.salimbeni@eubia.org](mailto:andrea.salimbeni@eubia.org) as soon as possible! The deadline is the 1st of November!



## **ALGADISK - Novel algae-based solution for CO<sub>2</sub> capture and biomass production**

The ALGADISK project aims to develop a biofilm reactor for algae biomass production which could compete with current algae cultivation technologies (e.g. open-pond and tubular photobioreactors). Biofilm formation is a widely observed characteristic of microalgae, which is considered as one of the main problems of tubular, flat-plate and other suspended photobioreactors. While in ALGADISK reactor, biofilm formation is enhanced and supported due to its special design, allowing harvesting high dry solid content biomass, reducing water loss and decreasing energy consumption. The reactor is scalable, modular, contains a sensor and control system to follow and keep growth conditions in optimal range, real time (e.g. pH and volume of medium, nutrient concentrations, temperature). Reactor consists of vertically positioned plastic disks and non-transparent tanks, in which disks are placed half way in growth medium. Surfaces of disks are modified in order to intensify primary biofilm formation and provide sufficient cell number for regrowth of biofilm after harvest. Continuous rotation of disks provides proper wetting of the whole surface and light distribution over the biofilm. In addition, negative effects of saturating light intensity are precluded by cyclic movement of biofilm from light part into the dark tank. Due to the position and orientation of disks, light utilization of reactor can reach a high level, resulting in high biomass productivity. Modules are covered with transparent, removable lids in order to reduce risk of contamination and protect biofilm from extreme weather changes. During the process of system development, concept of CO<sub>2</sub> capturing from flue gases was one of the main aspects of design. Reactor is capable of enhancing CO<sub>2</sub> to dissolve in the growth medium, just as to reach a high CO<sub>2</sub> percentage in the air phase, thus microalgae have access to CO<sub>2</sub> both in liquid and gas phase, that results in high biomass production. A semi-automatic harvesting system was developed uniquely for the ALGADISK reactor to provide an easy and efficient method of biomass collection.

[www.algadisk.eu](http://www.algadisk.eu)