



GENIALG

GENetic diversity exploitation for Innovative macro- ALGal biorefinery

Deliverable D7.6

GENIALG Conference 1 Event Report

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Summary

The GENIALG project aims to boost the Blue Biotechnology Economy (BBE) by increasing the production and sustainable exploitation of two high-yielding species of the EU seaweed biomass: the brown alga *Saccharina latissima* and the green alga *Ulva spp.* GENIALG will demonstrate the economic feasibility and environmental sustainability of cultivating and refining seaweed biomass in multiple use demanded products of marine renewable origin. The consortium integrates available knowledge in algal biotechnology and ready to use reliable eco-friendly tools and methods for selecting and producing high yielding strains in economically feasible quantities and qualities. By cracking the biomass and supplying a wide diversity of chemical compounds for existing as well as new applications and markets, GENIALG will anticipate the economic, social and environmental impacts of such developments in terms of economic benefit and job opportunities liable to increase the socio-economic value of the blue biotechnology sector. In a larger frame, conservation and biosafety issues will be addressed as well as more social aspects such as acceptability and competition for space and water regarding other maritime activities. GENIALG is the first industry driven consortium offering to associate pioneering companies implementing the concept of large-scale integrated biorefineries in the EU with experts in seaweed cultivation, genetics and metabolomics for selecting high value seaweed strains able to improve the seaweed industry. This combination will significantly boost innovation and competitiveness in the blue biotechnology sector.



Introduction

Objective

This report summarises the conference event “Sea Tech Week 2018” in which the GENIALG project (supported by Olmix Group and CBB Capbiotek) organised two sessions corresponding to a full day of presentations and discussions for a conference on 11th October 2018.

Rationale

The function of organising a GENIALG Conference was to highlight all Work Packages major outcomes on the environmental and economic sustainability of selecting and producing high yielding strains for multi-use purposes. It was hoped inviting international reference academics in seaweed biorefinery would aid the promotion of the GENIALG project and EU advances on seaweed biorefinery.

Results

Sea Tech Week 2018

The Sea Tech Week is an international open-door conference event on marine science and technology organised by Brest Metropole every two years. This event took place from 8th – 12th October 2018. The conference consisted of presentations, workshops, an industry exhibition and Business to business (B2B) meetings, all based on 2018’s theme: “Marine Bioresources”. This theme covered the entire value chain from the characterisation of the resource to the economic development of the sector.

Within this framework the GENIALG project led by CNRS, and supported by CBB Capbiotek and Olmix Group, organised a one-day conference named “**SUSTAINABLE USES OF MARINE RESOURCES: TOWARDS BIOREFINERIES**” to present pioneering companies and projects implementing the concept of large-scale integrated biorefineries in the European Union (EU). International academics and industrial representatives described advances on the process of refining the biomass and developing a wide diversity of products. This conference addressed scientific discoveries and industrial developments in the value chains for seaweed biorefineries but also for other biomass in the blue biotechnology sector.



The poster features a blue background with a glowing blue sea anemone in the center. At the top left is the 'BREST LA' logo, and at the top center is 'CAMPUS MONDIAL DE LA MER'. At the top right is the 'BRITTAGNE' logo. The main title 'SEA BREST-FRANCE TECH WEEK' is prominently displayed in yellow and white. Below the title is the website 'www.seatechweek.eu'. On the left, it identifies the 'Featured country' as 'NORWAY' with its flag. The bottom half of the poster is yellow and contains the text 'MARINE BIORESOURCES' in large black letters, followed by 'INTERNATIONAL MARINE SCIENCE & TECHNOLOGY WEEK' in smaller blue letters. The dates '8 > 12 OCT. 2018' are shown in large blue font. Below the dates, it lists the location 'BREST / QUARTZ CONGRESS CENTRE' and the types of events: 'CONFERENCES > WORKSHOPS > TRADE FAIR B TO B MEETINGS > SOCIAL EVENTS'. A list of topics follows: 'TECHNOLOGY // SOCIO ECONOMICS // MANAGEMENT & PRESERVATION BIO PROCESS // REGULATION // ENVIRONMENT // FISHERIES & AQUACULTURE'.

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M^r Jean-Claude Juncker,
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Figure 1. Sea Tech Week Promotional Poster



GENIALG Conference Event 2018: Sustainable Uses of Marine Resources: Towards Biorefineries

Agenda

09:00 Opening – Philippe Potin and Pi Nyvall

09:30 Part 1-1 Marine biomass sourcing for biorefineries

Chair of session: Philippe Potin, Station Biologique de Roscoff (CNRS), GENIALG scientific Coordinator and/or Luiza Neves, Seaweed Energy Solutions

09:45 Luiza Neves, Seaweed Energy Solution, Norway

Title: Large-Scale Supply of Brown Seaweeds: A Cultivator's Perspective

09:55 Jorunn Skjermo, SINTEF Ocean, Norway

Title: Technology development for upscaling kelp biomass production

10:15 Corjan Van Den Berg, Wageningen University and Research, The Netherlands
Title: Algal Biorefineries: from mild process technologies to new products

10:35 John Bolton, University of Cape Town, South Africa

Title: Integrated Multitrophic Aquaculture with land-based cultivation of Ulva

10:45 Coffee break

11:00 Part 1-2 Presentation of running biorefineries: marine and terrestrial examples

Chair of session: Corjan Van Den Berg, Wageningen University and Research

11:00 Pi Nyvall, OLMIX, France

Title: Seaweed biorefinery: Accelerating to a circular economy through efficient processing

11:20 Gabriel Acien, SABANA project, University of Almeria, Spain

Title: SABANA: Demonstrating a sustainable algae biorefinery for agriculture and aquaculture



11:40 Simon McQueen-Mason, University of York, UK

Title: Developing sustainable biorefineries for terrestrial and marine plant biomass

12:30 End of session BT3 - Part 1

15:00 Part 2-1 Major biorefinery projects – Short presentations

Chair of session : Jean-François Sassi, CEA of Cadarache, France

Benoit Queguineur, ALGAIA, France

Title: Development of a biorefinery at ALGAIA: a market and regulatory led approach

Elleke Bosma, Technical University of Denmark

Title: ThemoFactories: developing novel platform organisms for seaweed biorefining

Mehdi Abdollahi, Chalmers University, Sweden

Title: Food valorisation of underutilized marine resource from lab scale to market

15:45 Round table: How to develop specialised biorefineries close to biomass resources?

Chair of session: Jean-François Sassi, CEA Cadarache, France

Speakers: Olmix Group and short presentations

16:45 FILM Presentation of the Olmix Group biorefinery video

17:10 Conclusions

17:30 – 19h00 Seaweed food testing

The morning session was dedicated to presentations on “Marine biomass sourcing for biorefineries”. Speakers from the GENIALG consortium highlighted the problematics of scaling up seaweed cultivation, from the cultivator point of view with a focus on the technologies used for that purpose. John Bolton (Emeritus Professor and Senior Research Scholar at Cape Town University) kindly came to the session to introduce Integrated Multitrophic Aquaculture (IMTA) in land based systems, explaining the history of this concept and the benefits of it, by presenting IMTA with ALGApplus (GENIALG partner). Then speakers focused on the biorefinery aspects for seaweed, micro algae and land plants,



explaining how sustainable biorefineries should be implemented, from the refining processes to product releases and its economic feasibility.

During the afternoon session a round table was organised on the topic: How to develop specialised biorefineries close to biomass resources? Pi Nyvall (Olmix Group) and Jean-Francois Sassi (Commissariat à l’Energie Atomique in Cadarache) led a debate between speakers and people present in the room.

Conclusion

Boasting some 1000 participants, Sea Tech Week 2018 reached its objectives, both in terms of its visitor numbers and its international recognition. This is evidenced by the significant proportion of overseas contributors (30%) from around twenty or so countries, including Norway, the guest of honour, Canada, China, India and also Vietnam. With the distinctiveness of an event which is at the juncture of the domains of research and business, its trade show enjoyed similar success with a host of some thirty or so French and overseas exhibitors. A go-to space for exchanges with their most loyal partners, for newcomers it was an opportunity to get themselves known in their market and network with potential clientele. Indeed, with around a hundred B2B appointments arranged in the space of three days, the participants, particularly those from overseas, were able to make the most of their trip by increasing the amount of networking carried out.

In terms of media, Sea Tech Week was also a success. Six press releases were published at national and regional level, with high popularity. Press interest followed and resulted in an article being published in one of the most read French newspapers “Le Monde” (https://www.lemonde.fr/planete/article/2018/12/13/dans-l-ouest-l-essor-des-biotechnologies-marines_5396682_3244.html?xtmc=genialg&xtcr=1) where the GENIALG project is mentioned. At the international level four foreign journalists, Catherine Longworth from Informa (UK/Ireland), Rahul Koul from Bio Voice News (India) and Joao Antonio Da Cruz and Rodrigues Goncalves from Revista Marinha (Portugal) published press releases in their own countries.

During the GENIALG Conference, a hundred people came to listen to the different sessions. The speakers from the GENIALG project provided an overview of the work and outcomes of the project to date. The participation of speakers involved in other similar projects allowed to cross the knowledge coming out from sustainable biorefinery research projects.



Document Information

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