Workshop on
The long-term potential of marine biotechnology
Organised within the framework of the OECD project on
The Future of the Ocean Economy
Plentzia Marine Station PiE-UPV/EHU; Plentzia-Bizkaia, Basque Country, Spain
29-30 September 2015

Agenda

Co-chairs: Torgeir Edvardsen, Øystein Lie and Ionan Marigómez
(OECD, Norwegian University of Life Sciences and University of the Basque Country)

Tuesday, 29 September 2015

12.30 Arrival and welcome by Iñaki Goirizelaia (Rector, UPV/EHU) and Barrie Stevens (OECD)

13.00 Towards a Marine Biotechnology framework for sustainability by Torgeir Edvardsen and Kathleen D'Hondt (OECD)
Brief overview of recent works addressing the contribution of Marine Biotechnology for sustainability
Overview of the Future of the Ocean Economy Project
Objectives of the meeting

13.30 Lunch

14.30 Lead experts’ introduction – Øystein Lie and Ionan Marigómez

14.45 Low Footprint Bio-production

Subtopic 1 Seafood production
Introductory presentation by Odd Magne Rødseth, AquaGen AS and NMBU, Norway – followed by roundtable discussion

Subtopic 2 Non-food production
Introductory presentation by Zhenming Chi, UNESCO Chinese Center of Marine Biotechnology, China – followed by roundtable discussion

Subtopic 3 Engineering biotechnology
Introductory presentation by Choul-Gyun Lee, Inha University, Korea – followed by roundtable discussion

Discussion points:
- Enabling Marine Biotechnology for Food Production (Feed and feed technology, molecular approaches for aquaculture, nutrition science, genetics/genomics, breeding, pharma, genetic traceability, bioprocessing)
Industrial Marine Biotechnology (non-food) (biodiscovery, proteomics, drug discovery, screening, drug design, synthetic biology, experimental assays, protein/enzyme engineering, biorefinery, fermentation, enzymology

Gene resources exploration: biodiversity and discovery of marine natural compounds applications (gene resources engineering: biomimicry, bioprocess engineering, and bioengineering Bioenergy, Biomaterials, Engineering & design)

18.50 Wrap up of the day by Ionan Marigómez
19.15 End of first day
20.30 Dinner

Wednesday, 30 September 2015

09.00 Brief remarks on previous day’s proceedings by Øystein Lie
09.10 Ocean & Human Health

Subtopic 1 Healthy Oceans
Protection and management of the ocean health: biosensors, biomarkers, bioassays, bioremediation and bio restoration

Introductory presentation by Laura Giuliano, Institute for Coastal Marine Environment (IAMC-CNR), Italy – followed by roundtable discussion

Discussion points:
- Horizon scanning - What Priorities for Future Marine Industrial Biotechnology
- Protecting the oceans by addressing various parameters and living resources,
- Bio sensors, xenobiotics, etc, genetic markers and whole genome based population mapping/structure and eco dynamics, bio remediation, bio restoration, etc

11.00 Coffee break
11.30 Subtopic 2 Healthy humans
This topic will deal with improving health and wealth in aging; understanding disease, clinical applications, new analytical technologies, etc; bioethical compliance (3Rs)

Introductory presentation by Dominic Poccia, Amherst College, USA – followed by roundtable discussion

Discussion Points:
- a) Sustainable food supply: seafood quality, safety and processing
- b) Marine bioactive compounds to be used in the manufacture of functional foods (Seafood and nutraceutica addressing life style diseases (molecular nutrition science)
- c) Biomedicine – Human health research: marine or aquatic models for systems disease biology studies and drug discovery

13.20 Workshop wrap up
13.30 Lunch