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# Second ERA-MBT Stakeholder meeting report

Work Package 6

Communication, information management and dissemination

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## EXECUTIVE SUMMARY

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The second Stakeholder meeting of the Marine Biotechnology ERA-NET (ERA-MBT), held in Brussels, Belgium, on the 13<sup>th</sup> and 14<sup>th</sup> October of 2014<sup>6</sup> gave participants an opportunity to influence the future of the ERA-MBT and to reinforce the network of researchers, industry, policy makers and funding agencies to support the development of European marine biotechnology.

**Please note that pdf files of the presentations are given at the ERA-MBT web page: <http://www.marinebiotech.eu/stakeholder-meeting-2>.**

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## THE SECOND ERA-MBT STAKEHOLDER MEETING

The topic for this second stakeholder meeting was ‘*Enabling future innovations*’, and had as its outset the ERA-MBT Marine Biotechnology Strategic Research and Innovation Roadmap, which was officially launched the day before the stakeholder meeting. The meeting was held at Hotel Marivaux Congress and Seminar Centre in Brussels, 13-14 October 2016 and gathered around 75 participants. The event had a total of five sessions and an open forum discussion giving feedback for future directions at the end of the meeting.

In his **opening address**, the **ERA-MBT Coordinator Steinar Bergseth** welcomed the participants and made an introduction to the stakeholder meeting, and **Dermot Hurst** from the Marine Institute, Ireland, made a brief presentation of the Strategic Research and Innovation Roadmap.

In **the first session, ‘Marine Biotechnology, and industry perspective’**, five speakers illustrated how marine biomaterials may be sourced, and pointed to various application areas. In her keynote address, **Dagmar Stengel**, National University of Ireland, Galway, gave an extensive overview on algal resources and applications, where she pointed to the opportunities, but also highlighted the challenges. The subsequent speakers presented possibilities for how marine biotechnology can **contribute to fish** and **animal nutrition** through proper feeding regimes, and the nutritional values of marine components in the feed. Other examples of application areas included **cosmetics** and the **consumer goods industry**, including products from fisheries and aquaculture as well as food ingredients, nutraceuticals and functional components in food formulations.



Speakers (Dagmar Stengel (left) and Sarah Hosking (right)) at the ERA-MBT second Stakeholder meeting in Brussels, 13-14 October 2016.



Speakers during the panel discussion at the first session of the ERA-MBT second Stakeholder meeting in Brussels, 13-14 October 2016.

At the end of the session the five speakers participated in panel discussion, where the audience asked questions and the panel responded. This format was applied throughout the stakeholder meeting and gave good feedback from the audience as well as the session speakers.

**The second session, ‘Building a marine biotechnology venture’** was initiated by [Fernando de la Calle](#), PharmaMar, Spain, who gave an overview on how marine biodiversity offers opportunities for biodiscovery of bioactive molecules for the pharmaceutical sector. The other four speakers in the session presented good examples on how marine biotechnology can be [financed](#), the [IP challenges](#), and how products can be [brought to the market](#). In the chain of events for developing promising research results to marketable products, the pitfalls were illustrated. An [early stage investor](#) underlined the importance of maturing R&D projects in the right directions to make good ideas ready for seed capital. This can prevent them from failing at an early stage, which will benefit the whole innovation system. Examples were given on how barriers could be overcome for typical SMEs, and the question was raised why SMEs keep being small and if this was a specific phenomenon for marine biotechnology?



Speakers (Fernando de la Calle (left) and Levent Piker (right) in the panel discussion of the second session at the ERA-MBT second Stakeholder meeting in Brussels, 13-14 October 2016.



Speakers and audience during the panel discussion of the second session at the ERA-MBT second Stakeholder meeting in Brussels, 13-14 October 2016.

**In the third session, ‘Supporting marine biotechnology RTDI’**, [Ole Jørgen Marvik](#), Innovation Norway, presented a keynote on ‘Biorefining marine biomass’ which gave an overview of particularly interesting new sources of biomass not being harvested today. Some of the opportunities would mean harvesting further down the food web in the oceans. He gave examples on how taking out a minor fraction of some of the huge resources could be made sustainably. The three other speakers in the session presented examples on how [research institutes](#) could successfully support marine biotechnology enabled enterprises, how [regional initiatives and networks](#) could create new

ideas for the local industries, and finally, how marine biotechnology support was adopted as part of the [SCAR](#) (Standing Committee on Agricultural Research) foresights.



Speakers (Ole Jørgen Marvik (left) and Hordur G. Kristinnsson (right)) at the third session of the ERA-MBT second Stakeholder meeting in Brussels, 13-14 October 2016.

**In the fourth session, ‘ERA-MBT and other EU supported projects’**, five different projects were presented. Two of the projects resulted from the first ERA-MBT call ‘Development of biorefinery processes for marine bioresources’. Both projects ([MARBioFEED](#) and [MicroMBT](#)) were initiated in 2016 and thus in their initial stages, but they gave good examples on how biotechnology supports the development of biorefinery processes. The three other projects, being supported through the H2020 work programme, were all examples of projects having common interests with ERA-MBT. The [PharmaSea project](#), being at its final stage, aimed at discovering active marine agents and increase the speed at which they can be delivered to the marketplace. The extensive sampling programme of [MicroB3](#) project is applying bioinformatics for integrating data from marine organisms and studying their functions in the environment, where understanding a global microbiome is aimed at. A more recent project, [INMARE](#), aims at streamlining the enzyme discovery pipeline, in which metagenomics is an important component.



Speakers (Jane Kilcoyne (left) and Alan Dobson (right)) of the fourth session at the ERA-MBT second Stakeholder meeting in Brussels, 13-14 October 2016.

In the fifth and last session, ‘Future research and innovation opportunities’, [Laura Giuliano](#), The Mediterranean Science Commission (CIESM), outlined the European perspectives towards market diversification in her keynote presentation, and pointed towards possibilities for increased East-West cooperation in the marine sciences. The four following speakers presented new developments for exploring remote ocean territories, how [bioinformatics](#) and [research infrastructures](#) can improve marine biotechnology research and development, and how [new -omics developments](#) will make the study of marine biodiversity and functions more efficient. Similarly, new technological developments will also contribute to solve the challenges connected to [bioprocessing](#) of marine resources.



Speakers (Dimitra Benaki (left) and Wiebe Kooistra (right)) at the fourth session of the ERA-MBT second Stakeholder meeting in Brussels, 13-14 October 2016.

During the "Open forum" at the end of the stakeholder meeting, [Rachael Ritchie](#), Genome BC, Canada and chair of ERA-MBT International Advisory Group, moderated a discussion where several proposals for the next steps of marine biotechnology developments were presented. As within the earlier sessions of the meeting, a major focus was on how to achieve industrial development based on marine resources. It was concluded that success stories are needed for generating a better understanding on how important it is to develop and utilize marine biotechnology to release the great potential of marine resources for development of the European bioeconomy.



Moderator (Rachael Ritchie) and speakers in the panel of the Open forum at the ERA-MBT second Stakeholder meeting in Brussels, 13-14 October 2016.





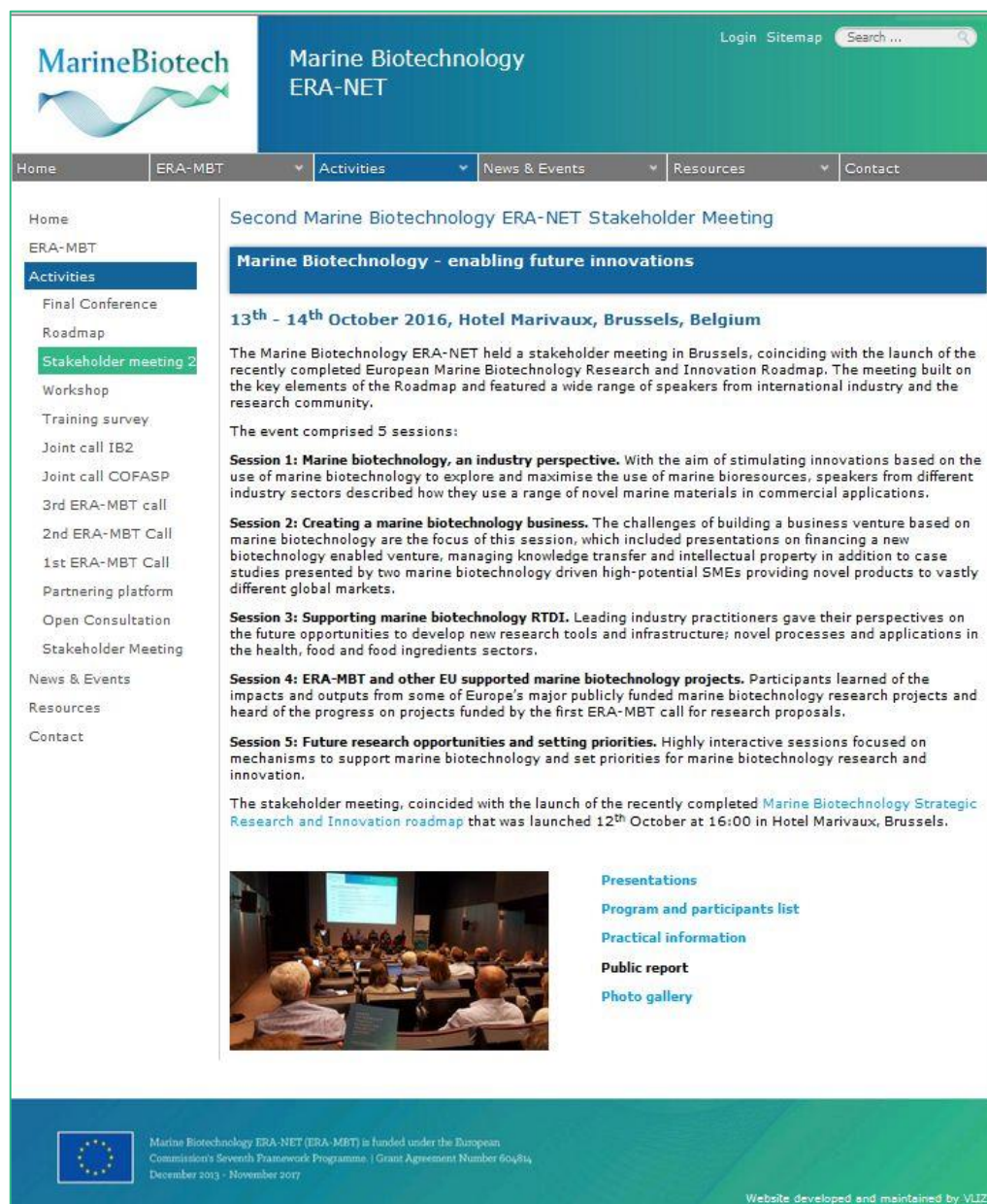
Participants at the ERA-MBT second Stakeholder meeting in Brussels, 13-14 October 2016.



Participants (f.l.t.r. Torger Børresen, Dermot Hurst, Rachael Ritchie and Steinar Bergseth) at the ERA-MBT second Stakeholder meeting in Brussels, 13-14 October 2016.

# AVAILABLE ONLINE OUTREACH MATERIAL

Presentations, a public report and a photo gallery from the stakeholder meeting are available at <http://www.marinebiotech.eu/stakeholder-meeting-2>.



The screenshot shows the website for the Marine Biotechnology ERA-NET. The main heading is "Second Marine Biotechnology ERA-NET Stakeholder Meeting" with the tagline "Marine Biotechnology - enabling future innovations". The event took place on 13<sup>th</sup> - 14<sup>th</sup> October 2016 at Hotel Marivaux in Brussels, Belgium. The page describes the meeting's purpose and lists five sessions: 1) Marine biotechnology, an industry perspective; 2) Creating a marine biotechnology business; 3) Supporting marine biotechnology RTDI; 4) ERA-MBT and other EU supported marine biotechnology projects; 5) Future research opportunities and setting priorities. A photo gallery shows the meeting in progress. Navigation links include Home, ERA-MBT, Activities, News & Events, Resources, and Contact. A footer contains the European Union logo and funding information from the Commission's Seventh Framework Programme (Grant Agreement Number 604814, December 2013 - November 2017). The website was developed and maintained by VLIZ.

Screenshot of webpage <http://www.marinebiotech.eu/stakeholder-meeting-2>..

# APPENDICES

## APPENDIX 1: PROGRAMME

### Stakeholder Meeting: Marine Biotechnology – Enabling Future Innovations Thursday 13 October 2016

- 08:30 Registration and coffee
- 09:00 Welcome and introduction to the meeting  
*Steinar Bergseth (ERA-MBT Coordinator), The Research Council of Norway*
- 09:15 The ERA-MBT marine biotechnology research and innovation roadmap  
*Dermot Hurst (ERA-MBT WP2 leader), Marine Institute, Ireland*

#### Session 1 : Marine biotechnology, an industry perspective

*Chair & Introduction: Torger Børresen, ERA-MBT*

- 09:30 Keynote 1: Algal resources and applications  
*Dagmar Stengel, NUI Galway, Ireland*
- 09:50 Marine biotechnology and aquaculture  
*Ashie Norris, Marine Harvest, Norway*
- 10:05 Marine biotechnology and animal nutrition  
*John T O'Sullivan, BioAtlantis Ltd, Ireland*
- 10:20 Marine biotechnology and cosmetics  
*Remi Laville, Cosmos International Ingredients, France*
- 10:35 Marine biotechnology and the consumer goods industry  
*Sarah Hosking, Unilever Ltd, UK*
- 10:50 Panel discussion  
*moderated by Torger Børresen*
- 11:10 Coffee break

#### Session 2: Building a marine biotechnology venture

*Chair & Introduction: Nathalie Moll, EuropaBio*

- 11:30 Keynote 2: Biodiscovery activity  
*Fernando de la Calle, PharmaMar, Spain*
- 11:50 Financing marine biotechnology projects – what's the attraction?  
*Øyvind Enger, Sarsia Seed AS, Norway*
- 12:05 IP Challenges, pitfalls and opportunities for marine biotech  
*Jan Buch Andersen, Njorth Bio AS, Norway*
- 12:20 Overcoming the barriers in developing marine biotechnology enabled products  
*Levent Piker, oceanBASIS GmbH, Germany*
- 12:35 Getting products to market  
*Andrew Mearns Spragg, Jellagen Pty Ltd, UK*

12:50 Panel discussion  
*moderated by Nathalie Moll*

13:10 Lunch

### **Session 3: Supporting marine biotechnology RTDI**

*Chair & Introduction: Steinar Bergseth, ERA-MBT*

14:10 Keynote 3: Biorefining marine biomass  
*Ole J. Marvik, Innovation Norway, Norway*

14:30 The role of research institutes in supporting marine biotechnology enabled enterprises  
*Hordur G. Kristinsson, Matis Ltd, Iceland*

14:45 Regional marine biotechnology initiatives – what’s their impact?  
*Angela Schultz-Zehden, SUBMARINER Network, Germany*

15:00 Marine biotechnology within frameworks proposed by SCAR foresights  
*Andrew Brown, Scottish Government Marine and Energy Division, United Kingdom*

15:15 Panel discussion: ERA-MBT future  
*moderated by Steinar Bergseth*

15:35 Coffee break

### **Session 4: ERA-MBT and other EU supported projects**

*Chair & Introduction: Alan Dobson, University College Cork, Ireland*

15:55 MARBioFEED  
*Jane Kilcoyne, Marine Institute, Ireland*

16:10 MicroMBT  
*Peik Haugen, The Arctic University of Norway*

16:25 PharmaSea  
*Thomas Vanagt, eCoast, Belgium*

16:40 MicroB3  
*Peter Golyshin, Bangor University, UK*

16:55 INMARE  
*Peter Golyshin, Bangor University, UK*

17:10 Panel discussion  
*moderated by Alan Dobson*

17:30 Networking cocktail and drinks

## Stakeholder Meeting – Enabling Future Innovations Friday 14 October 2016

08:30 Registration and coffee

### Session 5: Future research and innovation opportunities

*Chair & Introduction: Dermot Hurst, ERA-MBT*

- 9:00 Keynote 4: European perspectives  
*Laura Giuliano, CIESM, Italy*
- 9:20 What are likely developments for exploring remote ocean territories?  
*Wiebe Kooistra, Stazione Zoologica Anton Dohrn, Italy*
- 9:35 Tools, techniques and infrastructure – bioinformatics in marine biotechnology  
*Nils Peder Willassen, University of Tromso, Norway*
- 9:50 Novel bioprocessing – what are the future processing challenges?  
*Bruno Sommer Ferreira, Biotrend SA, Portugal*
- 10:05 Future -omics developments  
*Dimitra Benaki, University of Athens, Greece*
- 10:20 Open forum – next steps for marine biotechnology  
*moderated by Rachael Ritchie, Genome British Columbia, Canada*
- 12:00 Close and lunch

## APPENDIX 2: PARTICIPANTS LIST

### Stakeholder Meeting – Enabling Future Innovations Thursday 13 and Friday 14 October 2016

Aachmann Finn Lillelund	NTNU	Norway
Andersen Jan Buch	Njorth Bio	Norway
Anggraeni Santi Rukminita	Technische Universität Dresden	Germany
Baruah Kartik	Ghent University	Belgium
Bastiaens Leen	VITO	Belgium
Benaki Dimitra	National and Kapodistrian University of Athen	Greece
Benayahu Dafna	Tel Aviv University	Israel
Bergseth Steinar	Research Council of Norway+D25	Norway
Bjerga Gro	Uni Research	Norway
Børresen Torger	Research Council of Norway	Norway
Brown Andrew	Energy, Maritime Affairs and Marine Scotland Representative to the EU	U.K.
Bunthof Christine	H2020 PLATFORM project	Netherlands
Calewaert Jan-Bart	SEASCAPE	Belgium
Clarkson Joanna	SUBMARINER Network for Blue Growth EEIG	Germany
Conanec Roland	CBB Capbiotek	France
Dahlström Mia	University of Gothenburg	Sweden
Danckaerts Elien	Flanders' FOOD	Belgium
De la Calle Fernando	PharmaMar	Spain
De Luis Ana	Universidad Católica de Valencia	Spain
De Pascale Donatella	National Research Council	Italy
De Raedemaeker Fien	Flanders Marine Institute	Belgium
De Vicente Carmen	European Commission	Belgium
Dobson Alan	University College Cork	U.K.
Dragomir Cristina	Constanta Maritime University	Romania
Dragomir Liviu	Mediapio SRL	Romania
Einarsson Hjorleifur	University of Akureyri	Iceland
Enger Øivind	Sarsia Seed Management	Norway
Erlendsson Lýður Skúli	Icelandic Centre for Research	Iceland
Fava Fabio	University of Bologna	Italy
Ferreira Bruno	BioTrend Inovação e engenharia em biotecnologia	Portugal
Fokialakis Nikolas	University of Athens	Greece
Funderud Jon	Seaweed Energy Solutions AS	Norway
Giuliano Laura	CIESM	Monaco
Goiris Koen	KU Leuven Technology Campus Ghent	Belgium
Golyshin Peter	Bangor University	U.K.
Haugen Peik	Arctic University of Norway	Norway
Hosking Sarah	Unilever	U.K.
Hurst Dermot	Marine Institute Ireland	Ireland
Ianora Adrianna	Stazione Zoologica Anton Dohrn, Naples	Italy

Jakobsen Greta	Marinova	Denmark
Keersebilck Nathalie	Flanders Marine Institute	Belgium
Kilcoyne Jane	Marine Institute Ireland	Ireland
Kloosterman Ernst	Industrial Biotech Network	Norway
Kooistra Wiebe	Stazione Zoologica Anton Dohrn	Italy
Kristinsson Hordur	Matis - Icelandic Food and Biotech R&D	Iceland
Laville Remi	Cosmo International Ingredients	France
Lundblad Eirik Wasmuth	Arctic University of Norway	Norway
Maes Gregory	KU Leuven / UZ Leuven / Genomics Core	Belgium
Maes Pieter	Flanders Marine Institute	Belgium
Marvik Ole	Innovasjon Norge	Norway
Mascart Thibaud	Ghent University	Belgium
McGovern Brian	BioMarine Ingredients	Ireland
Moll Nathalie	EuropaBio	Belgium
Norris Ashie	Marine Harvest	U.K.
Norton Marta	Fundação para a Ciência e Tecnologia	Portugal
O'Sullivan John T.	BioAtlantis	U.K.
Piker Levent	OceanBASIS	Germany
Pina Mery	European Marine Biotechnology Research Infrastructure Cluster	France
Prieto Auxiliadora	Ministerio de Economia y Competitividad	Spain
Redd Tom	JPI Oceans	U.K.
Rotllant Josep	Institute of Marine Research, National Research Council CSIC	Spain
Schiffers Jens	Forschungszentrum Jülich	Germany
Schultz-Zehden Angela	SUBMARINER Network for Blue Growth EEIG	Germany
Silva Tiago H.	University of Minho - 3B's Research Group	Portugal
Simões Nelson	Regional Directorate for Science and Technology - Azores Government	Portugal
Sletta Håvard	SINTEF Material and Chemistry	Norway
Sorgeloos Patrick	Ghent University	Belgium
Spragg Andrew Mearns	Jellagen	U.K.
Stengel Dagmar	National University of Ireland Galway	Ireland
Stoian Simona	Executive Agency for Higher Education, Research, Development and Innovation Funding	Romania
Storms Virginie	Belgian Science Policy Office - BCCM	Belgium
Tasdemir Deniz	GEOMAR	Germany
Thomsen Tormod	Firmenich	Norway
Urbatzka Ralph	CIIMAR	Portugal
Vanagt Thomas	ECoast	Belgium
Vieira Fábio	Regional Fund for Science and Technology	Portugal
Voorspoels Stefan	VITO nv	Belgium
Vyverman Wim	Ghent University	Belgium
Waller Uwe	University of Applied Sciences Saarbrücken	Germany
Werbrouck Eva	Ghent University	Belgium
Whooley Jason	Bio-marine Ingredients	U.K.

Willassen Nils Peder

Arctic University of Norway

Norway