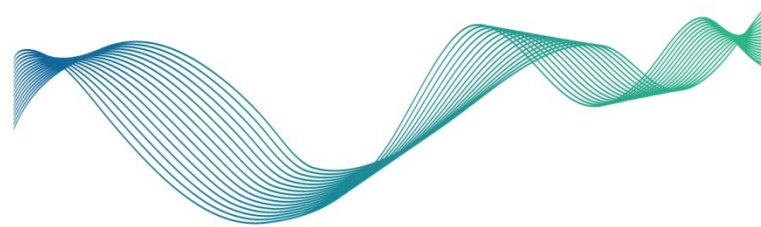


MarineBiotech



ERA-NET Preparatory Action in Marine Biotechnology

www.marinebiotech.eu

Workshop 2, Hamburg, 8-9 Oct 2012



CSA (Coordinating) in Marine Biotechnology. MarineBiotech is funded under the European Commission's Seventh Framework Programme.
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A Global Perspective: High-level analysis of key trends and developments in global marine biotechnology research, technology development and innovation

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BioBridge[®]

turning innovation into action

General comments

- Many countries have national biotechnology strategies or policies
- Fewer have national strategies for MBt: S Korea, Japan
- Sub-national strategic MBt plans eg Tasmania, Quebec
- Some specific national programmes in MBt R&D or industrial applications eg Brazil's BIOMAR, Philippines' PharmaSeas
- Some world-leading or regionally-important institutes eg Ocean University Qingdao; AIMS; Scripps, INSTM Tunisia; KIOST; CEMB Oman
- Important trans-national initiatives: OECD , CIESM, EU-US Task Force on Biotechnology Research, CoML, ANZMBN

OECD

Organisation for Economic Cooperation and
Development

- Multi-national working party initiated by Norway 2010
- Within the Working Group on Biotechnology
- Aligned with OECD Green Growth and the G-20 Global Marine Environment Protection Initiative
- 11 members - 9 individual countries, the EU & OECD BIAC
- Scoping Paper 2011 - 5 areas: molecular aquaculture, algal biofuels, bioremediation, biodiscovery, biosensors.
- MBt working party Global Forum Vancouver May 2012 – report due in near future
- www.oecd.org/sti/biotechnologypolicies/

CIESM

Mediterranean Science Commission



- 22-state organisation headquartered in Monaco
- Non-European members include Egypt, Israel, Morocco, Syria, Tunisia, Turkey, [Algeria]
- Covers all aspects of marine science and research:
 - No specific programme on marine biotechnology
 - Co-organiser of EU-US Task Force Meeting on Marine Genomics, Monaco 2010
 - Decision of CIESM Board 2010 to ‘unite in protecting the economic interests of the Mediterranean against the risk of massive exploitation of their marine genetic resources by foreign companies’ (*F Briand, DG CIESM*)
 - Blue Biotech meeting La Spezia & marine extremophiles meeting Samos, 2011
 - ‘Blog’ forum on Blue Biotech at <http://www.ciesmseaforum.org/category/blue-biotech/>
 - Next congress 2013



MBt in USA, Australia, Canada



- **USA**

- A new national Bioeconomy Plan including biotechnology
- Very strong government support for jet-fuel – algae
- Several world-recognised institutes – MBI Maryland, Scripps, Harbor Branch, Bigelow

- **Australia**

- World-recognised institute AIMS Queensland
- State recognition of strategic value of MBt eg Tasmania, Queensland
- Public-private partnership

- **Canada**

- National Strategy for Biotechnology
- Dept of Fisheries and Oceans & National Research Council MBt activities
- National Bioproducts Programme with bioprospecting, bioactives and bioenergy
- Quebec Marine Biotechnology Research Centre Rimouski



MBt in China, S Korea, India



- **China**

- National Plan for biosciences and biotechnology out to 2050
- Program 836 includes biotechnology and marine technologies as strategic themes
- strong role of Chinese Academy of Sciences and Key Laboratories eg Dalian
- extensive activity eg Ocean University Qingdao, but no easy overview available

- **South Korea**

- Biotechnology Strategy “Bio-Vision 2016” (2006-2016)
- Strong activity in MBRC KORDI, Marine Bioprocess Research Centre Pukyong Uni, Centre for Marine Natural Products and Drug Discovery Seoul Uni, and Busan University

- **India**

- National MBt and microbiology Institute to be established
- €12M joint biofuels programme UK BBSRC and India’s Department of Biotechnology – includes algae



MBt in Brazil, Chile, Argentina, Mexico



- **Brazil**

- BIOMAR – the Marine Biotechnology Action – established 2005 by Ministry of Science and Innovation to fund MBt projects
- RedeAlgas academic networks for innovation
- many research activities in bioactives and in bioenergy but difficult to see cohesion

- **Chile**

- several Unis are highly active: Catolica del Norte (algae); Concepcion

- **Argentina**

- Law promoting biotechnology-based businesses and industrial R&D 2007

- **Mexico**

- National Biotechnology Strategy in PECYT and PECiTI but biosecurity-focused



MBt in Philippines, Thailand, Vietnam



- **Philippines**

- a specific Council for Agriculture, Aquatic [and Marine] Resources Research & Development
- the “Philippine PharmaSeas drug discovery program”
- UP Visayas Marine Biotechnology Centre

- **Thailand**

- long-term work on advanced aquaculture of shrimp/prawn
- BIOTEC (National Center for GenEng & Bt) at Chulalongkorn Uni

- **Vietnam**

- Vietnamese Academy of Science and Technology Nhatrang Institute
- MBt well-established at Vietnam National University
- International University



International infrastructures



- Census of Marine Life 2000-2010: Established by Alfred P Sloan Foundation
- Regional Oceanographic data and information exchange networks established under the aegis of UNESCO's IODE
- Potential for other groupings to be sensitised about marine biotechnology – ASEAN, Arctic Council, SCAR, Asia Biomass Office, ICRAN, INOC.



Future of the information



- Will inform the proposal being written by the ERA-NET working group on marine biotechnology
- Will be available as a downloadable report on web-site by end of year
- Will be set up as a series of Wikipages on the web-site, for continued update by interested expert parties

www.marinebiotech.eu

Thank you!

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