MarineBiotech Registers (IMIS) and Infopages (WIKI)

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Workshop 2
Hamburg
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Vlaams Instituut voor de Zee
Flanders Marine Institute

CSA (Coordinating) in Marine Biotechnology. MarineBiotech is funded under the European Commission's Seventh Framework Programme.
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Outline

- VLIZ: mission and services
- VLIZ Contribution to CSA MarineBiotech: Development of a long term information system
- Contributions of different stakeholders
- The way forward…

Flanders Marine Institute (VLIZ)

VLIZ is a scientific institution supporting coastal and marine scientific research, but does not conduct scientific research.

- Non-profit organisation (Board of Directors, General Assembly, **Scientific Committee**)
- Established in 1999
- Supported by the **Flemish government** (95% of total subsidies) and **province of West-Flanders** (5% of total subsidies)

Flanders Marine Institute (VLIZ)

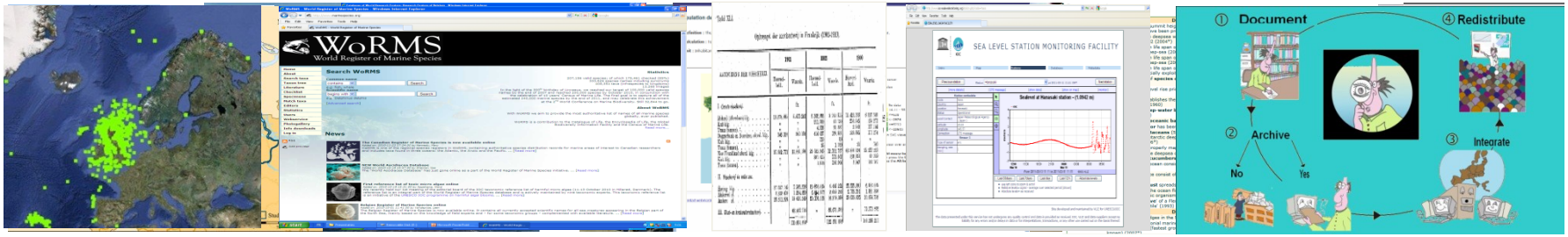
VLIZ Strategic Objectives

- Promoting Flemish marine scientific research and related coastal research and education.
- Promoting the international impact of marine scientific research as well as international marine education.
- Acting as a catalyst and an international point of contact in the field of marine sciences.
- Promoting the visibility of marine research to the public at large by means of popularisation and sensitisation.
- Providing scientific information on the sea, coast and tidal systems to policy makers, so that they can use it to develop their policy with regard to marine affairs.
- Hands free to support/network, since not doing research.

Flanders Marine Institute (VLIZ)

VLIZ provides services

- Logistic support (infrastructure on land & at sea)
- Marine library
- Information, communication & education desk
- Figures for policy making
- Flanders Marine Data and Information Centre (FMDC)



VLIZ contribution to CSA MarineBiotech

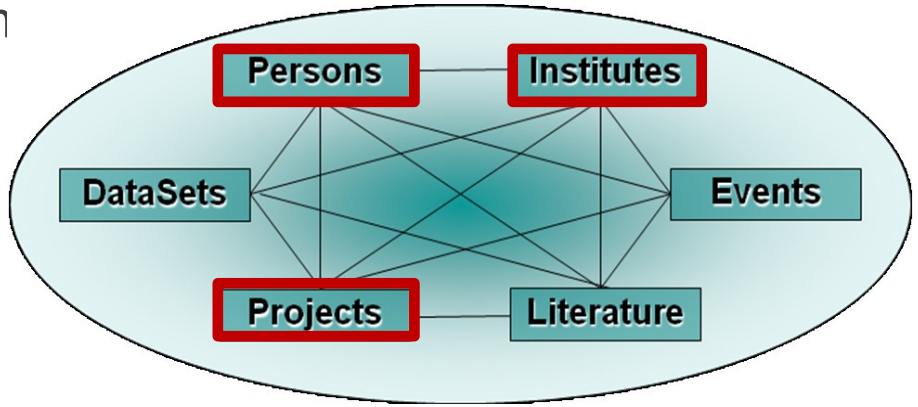
Development of a long-term information management system

- MarineBiotech Registers
  (Information database, hosted at VLIZ, based on **IMIS**)
- MarineBiotech Infopages
  (Online software, freely accessible, created within coastal and marine **WIKI**)

=> Available at www.marinebiotech.eu

MarineBiotech Registers (IMIS)

- Adaptation of existing **Integrated Marine Information System (IMIS),** hosted at the VLIZ data centre
- Modular Information system



- Architecture developed to the specific needs of the project: emphasis on Persons – Institutes – Projects
- Scientific community + Networks + Funding agencies + Commercial companies + Education

MarineBiotech

Home | About us | Our events | News | Library | MarineBiotech Registers | Infopages | Calendar | Contact | Login

- List of Registers
- List of Institutes

MarineBiotech Registers

General information

This information database offers an overview of marine biotechnology stakeholders and projects in Europe.

These registers are being developed within the current CSA MarineBiotech project and will be constantly updated and expanded during the subsequent ERA-NET in Marine Biotechnology.

On the longer term, these registers will facilitate the consultation of publically accessible resources regarding Marine Biotechnology in Europe.

A list of registers guides you through the available and accessible Persons, Institutes and Projects related to marine biotechnology. You can request a full list of a specific register or make a selection using a simple or advanced search interface.

A list of institutes provides an easy overview of the different institutes (Scientific, Education, Funding agency, Network, Commercial) involved in Marine Biotechnology.

Add Contact Information

If you are associated with a European company or institute and active in the field of marine biotechnology you can add your contact details to the information database. This will increase your visibility in the European community of marine biotechnology and will allow authorisation for editing the Portal on Marine Biotechnology (Infopages) within the Coastal and Marine Wiki.

Please download and fill out the spreadsheet below and send it back to info@marinebiotech.eu

To submit **person** and/or **institute** details: Download file

To submit detailed information on a European MarineBiotech **project**: Download file

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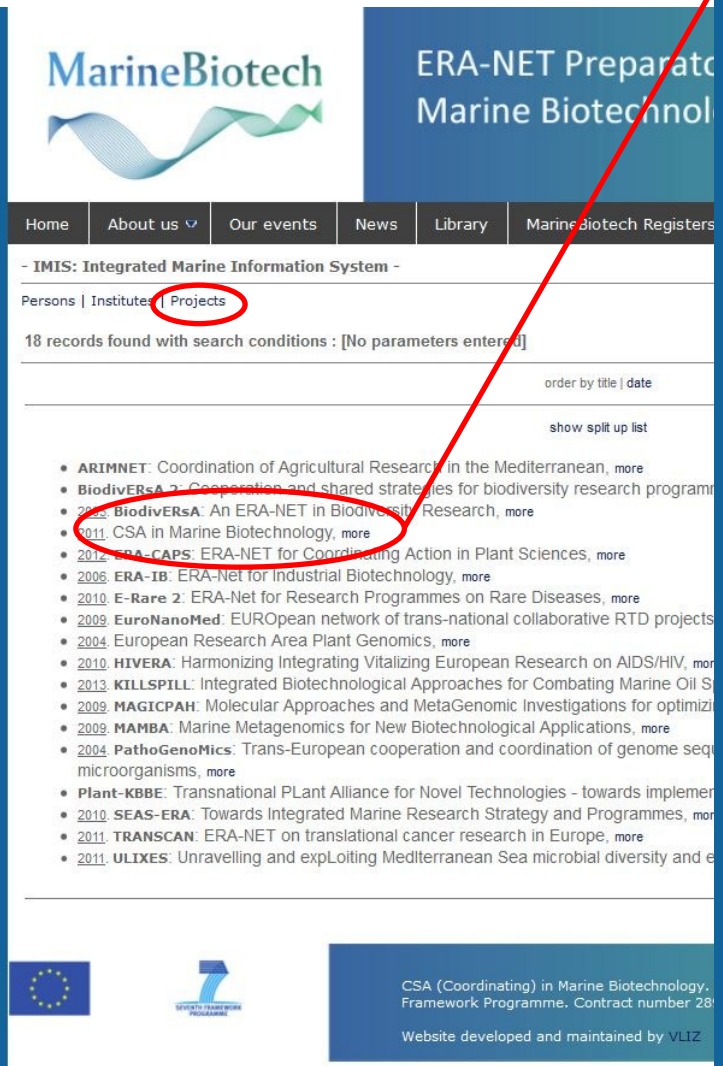
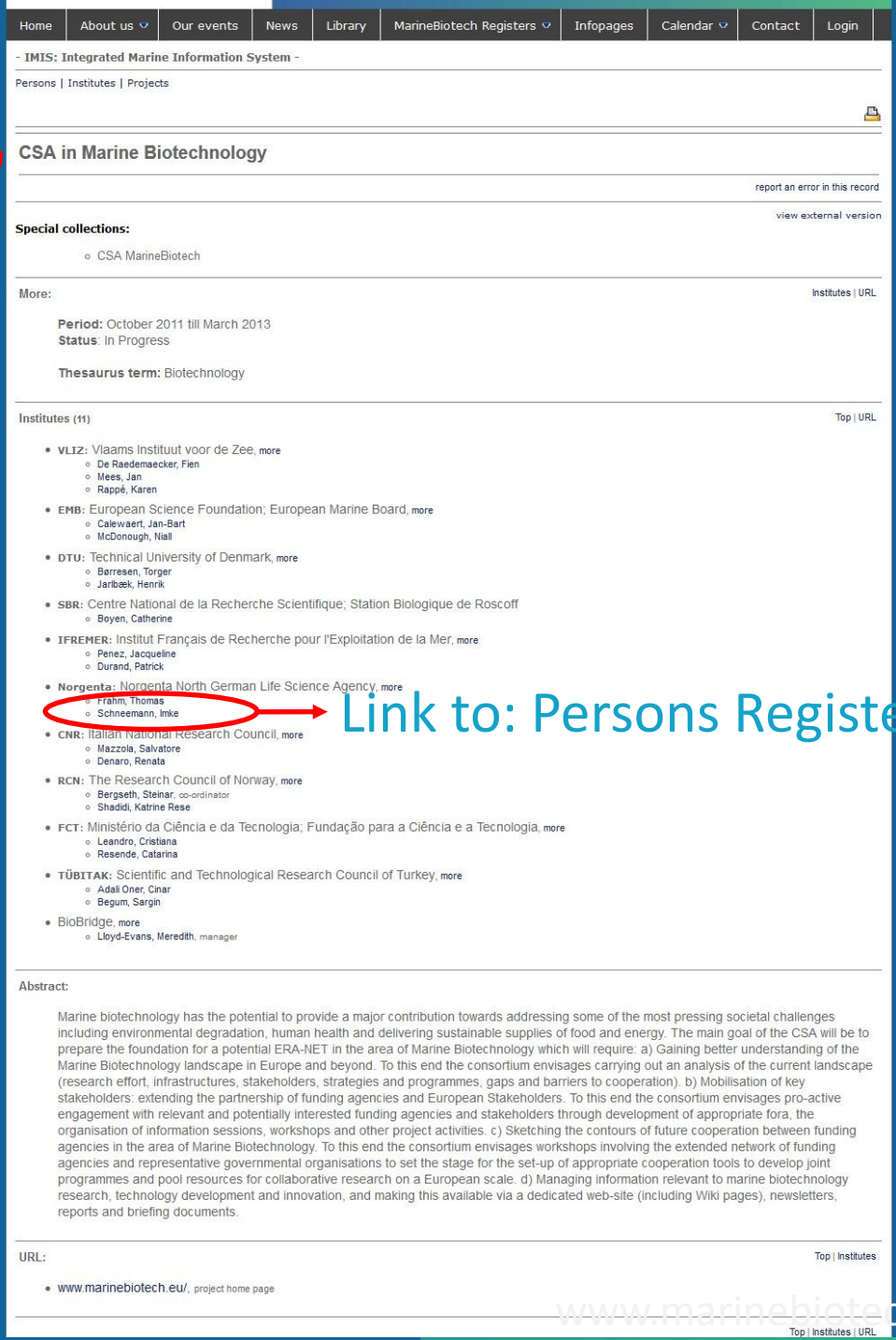
List of Registers

Project Register

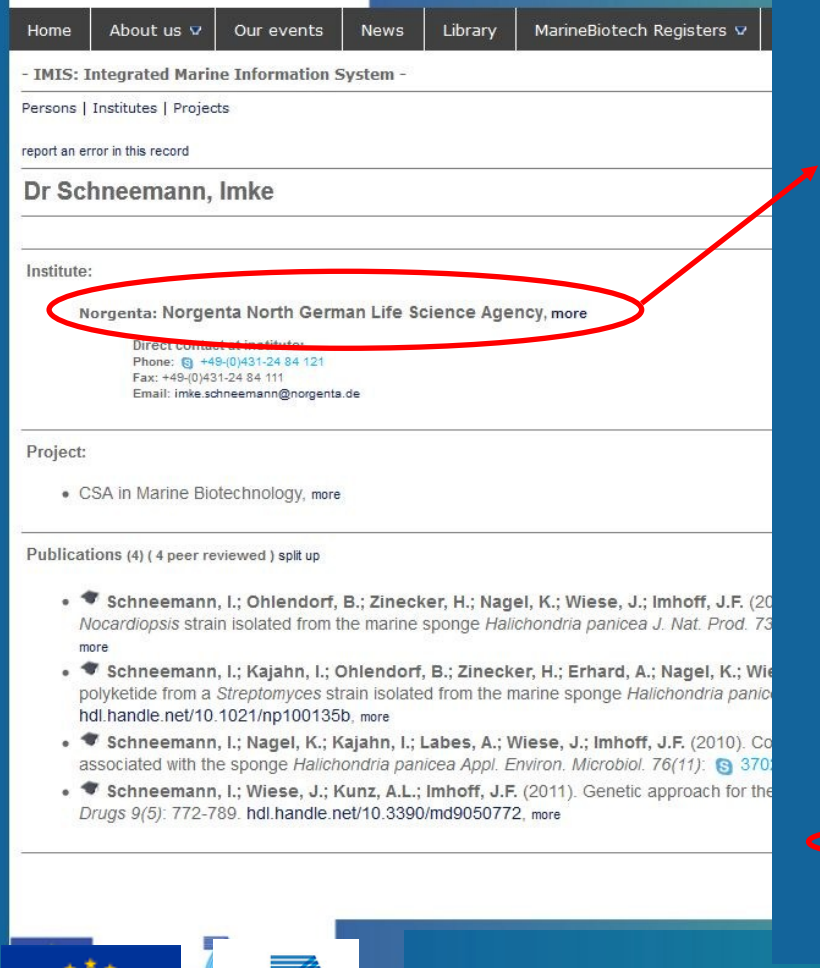




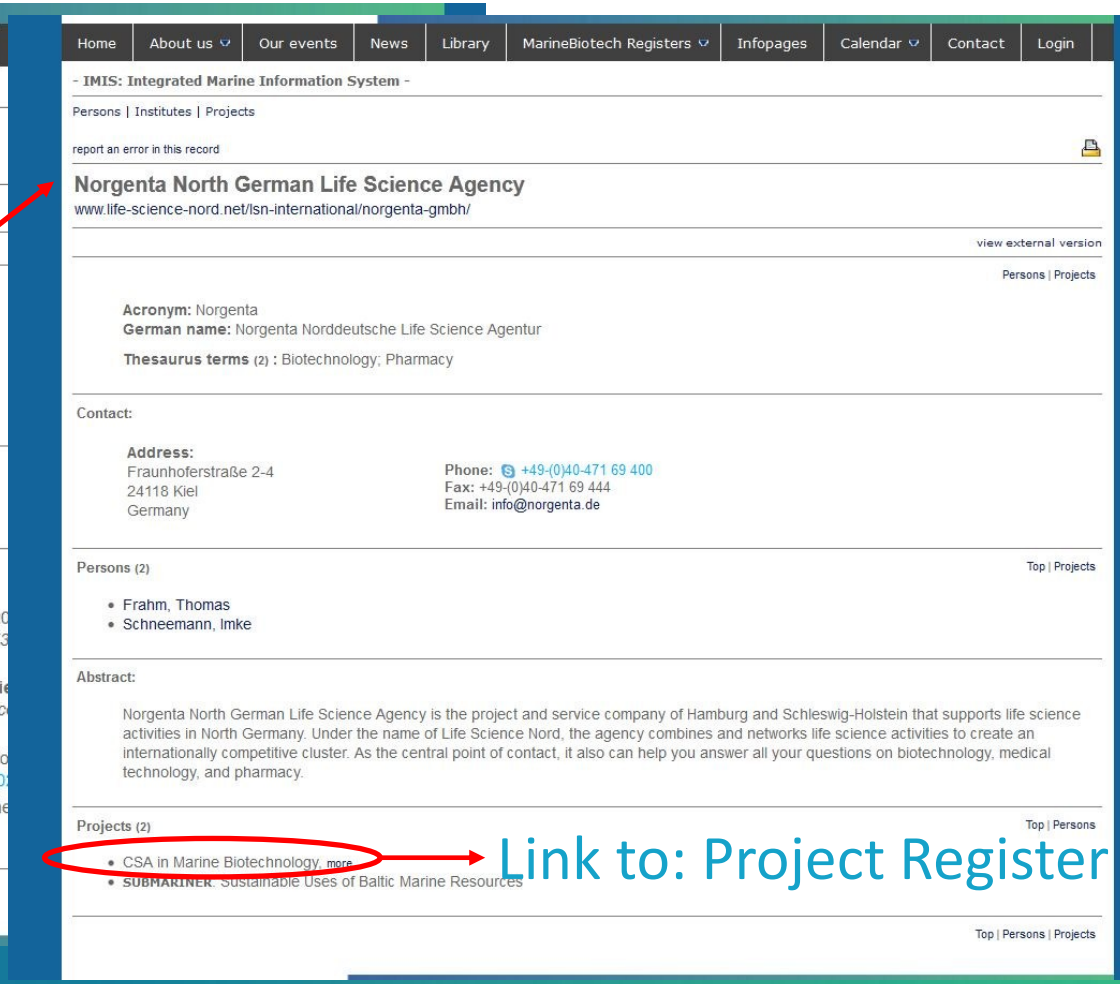
Link to: Persons Register

List of Registers

Persons Register



Institute Register



Link to: Project Register

MarineBiotech Registers (IMIS)

Additional options using the IMIS interface on the CSA MarineBiotech website:

- Report an error in this record

- Online registration form for those interested in being part of the European platform
- List of different type of Institutes

MarineBiotech Registers (IMIS)

So far…

Developmental stage

Building the architecture

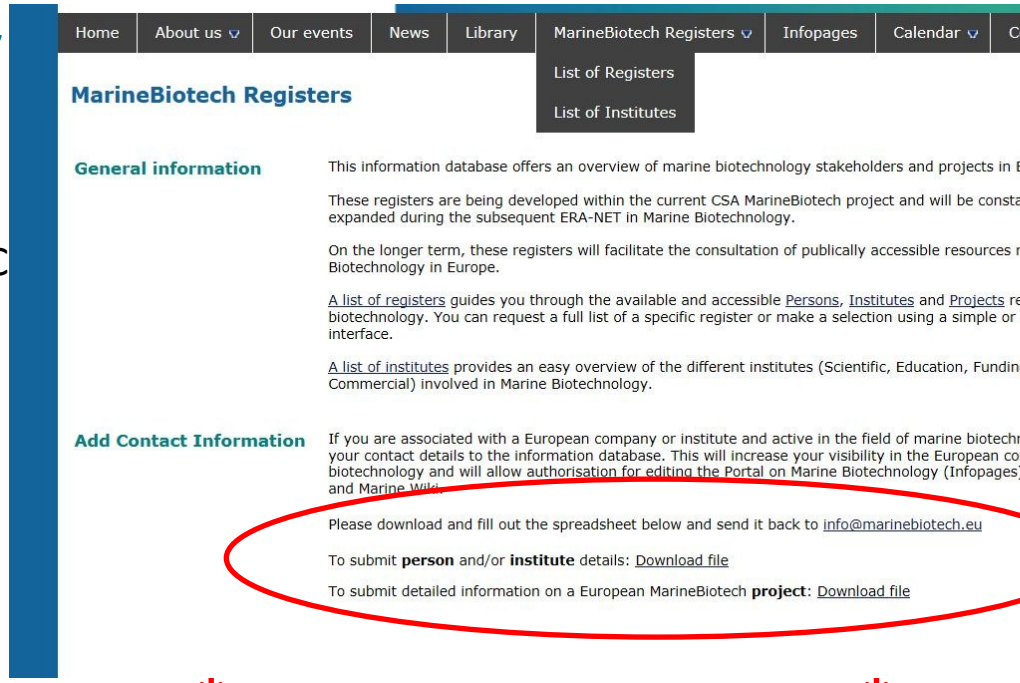
Input stage

Preliminary data entry of CSA consortium

Data entry of stakeholders and funding agencies

The way

C



2011 2012 2013 2014 2015 2016 2017

MarineBiotech

ERA-NET

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MarineBiotech Infopages (WIKI)

The Wiki concept

- software that allows users to collaboratively create, edit, link, and organize the content of a website
- online, very accessible
- easy to edit, user friendly (Wiki is Hawaiian for ‘quick, fast’)
- control changes – edit rights
- fully searchable and linked (easily indexed by Google)

MarineBiotech Infopages (WIKI)

A little history…

- First Wiki database was developed by Ward Cunningham in 1995
- MediaWiki (MySQL – PHP – Wikimarkup language)
  TWiki, Confluence
- Became world-wide known through Wikipedia (Jimmy Wales, 2001), contains currently 28.4 million Pages

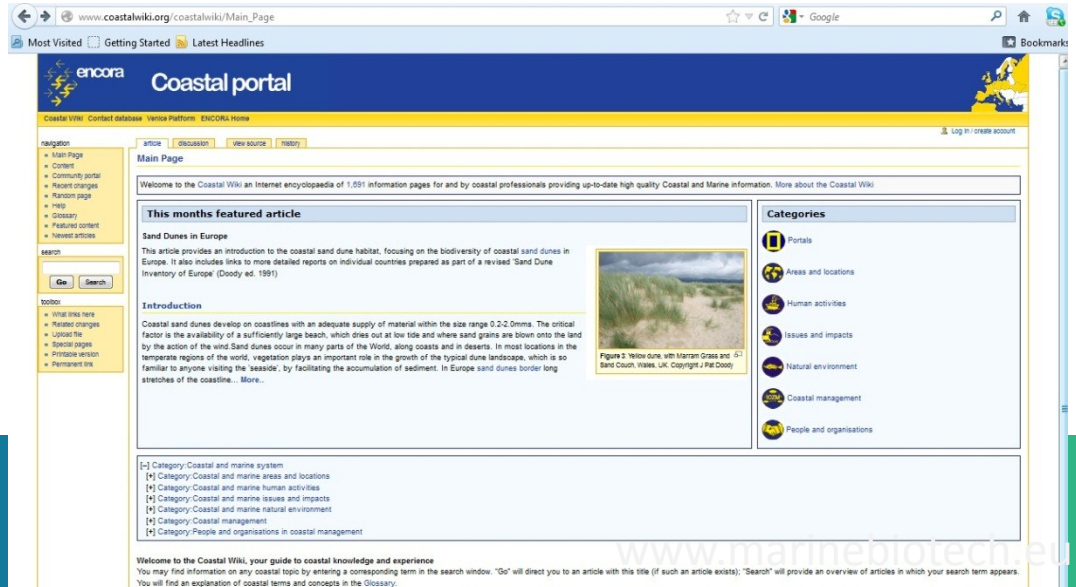
MarineBiotech Infopages (WIKI)

The Coastal and Marine Wiki

…an Internet encyclopaedia providing up-to-date high quality information for and by coastal and marine professionals…

http://www.coastalwiki.org/coastalwiki/Main_Page

- Developed within **European Network For Coastal Research**, ENCORA (2006-2009)
- 13 + 5 countries
- ++2200 members
- content focused



MarineBiotech Infopages (WIKI)

The Coastal and Marine Wiki: Objectives

- The issue -*taking better advantage of existing knowledge*-
- communicate scientific knowledge among fellow experts and to public at large (e.a. scientific publications)
- coastal and marine issues often refer to specific field situations and are published as grey literature
- Avoid that results published on project sites become inaccessible after the project has ended (e.a. FP5, FP6….)

MarineBiotech Infopages (WIKI)

The first portal within the Coastal and Marine Wiki:

- Portal on SoA European Coastal Research (ENCORA)
- Publication of European State of the Art for 10 Themes

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MarineBiotech Infopages (WIKI)

Other project-specific portals are supported by the Coastal and Marine Wiki:

- Portal on Marine Biodiversity (MarBEF NoE)
- Portal on Science - Policy Integration for Coastal System Assessment (SPICOSA)
- Portal on Marine Ecotoxicology
- Portal on Innovative technologies for safer European coasts in a changing climate (THESEUS)
- Portal on People for Ecosystem Based Governance in Assessing Sustainable Development of Ocean and Coast (PEGASO)

Impact:

- 10 million hits on Coastal and Marine Wiki in 2011
- 1 541 information pages in 2011
- 330 000 unique visitors in 2011

MarineBiotech Infopages (WIKI)

The **portal of Marine Biotechnology**

- will be part of the Coastal and Marine Wiki
- Increase the visibility of the CSA MarineBiotech
- Increase continuity after the CSA MarineBiotech is finished
- Provide a source of information visible through google searches
- Increase the effort for dynamic documents
- Interface on www.marinebiotech.eu/wiki

MarineBiotech

ERA-NET Preparatory Action in Marine Biotechnology

Portal:Marine Biotechnology

Marine Biotechnology

Marine biotechnology explores and uses marine bioresources as the target for or origin of technological applications, which are used for the production of products and services.

In the context of a global economic downturn, we are now facing complex and difficult challenges such as the sustainable supply of food and energy, climate change and environmental degradation, human health and ageing populations. Yet concurrently, the seas represent one of the most abundant sources of food and energy production on the planet, as well as containing the potential for countless innovations in drug production, industrial process development, ecosystem management and other related fields. Marine Biotechnology can make an increasingly important contribution towards meeting these societal challenges and supporting economic recovery and growth, by delivering new knowledge, products and services.

Examples of products and services developed by technological applications using marine bioresources. [1]

Estimates predict an annual growth in the sector of up to 10-12% in the coming years, revealing the huge potential and high expectations for further development of the Marine Biotechnology sector at a global scale.[2]

Show new selections

Research Area Priorities

Developments in life science technologies are one of the key drivers of Marine Biotechnology research. Previous advances in molecular biology, genomics and -omics have contributed to Marine Biotechnology developments.

There are further challenges in developing and optimising an appropriate biotechnology toolbox for innovations using marine bioresources. These include tailored -omics techniques, in situ measurement, sampling and monitoring, improvements in the cultivation of microorganisms and the use of marine model organisms. An improved and well-adapted toolbox is expected to have a large impact on future progress in marine biotechnology.

The target research and innovation areas that can address key societal challenges are listed below:

Food: Development of food products and ingredients of marine origin (algae, invertebrates, fish) with optimal nutritional properties for human health and with improved food security and safety prospects.

Energy: Development and demonstration of viable renewable energy products and processes, notably through the use of marine algae including seaweeds and microalgae.

Human Health: Discovery of new molecules and development of novel medicines, nutraceuticals and personal care products.

Industrial Products and Processes: Development of marine-derived molecules that can be used to establish green and new processes, including enzymes, biopolymers and biomaterials, and that can replace petrochemical products.

Environmental Health: Development of biotechnological approaches, mechanisms and applications to address key environmental issues including bioremediation, enhancement of waste water and integrated aquaculture systems that minimize the environmental impact of fish and shellfish farming.

Contents

What is Marine Biotechnology?
Key Marine Biotechnology application areas [show]
Examples of Marine Biotechnology successes [show]
Marine Biotechnology key tools and technologies [show]
Strategies, Policies and Programmes [show]
Glossary
Links to more general information

Purpose

MarineBiotech

This portal is developed in the FP7 Coordination and Support Action on Marine Biotechnology, CSA MARINEBIOTECH (October 2011-March 2013).

This portal is available for

- a **broad public**, to show the growing importance of the application of biological marine knowledge and cutting-edge techniques to develop products and other benefits for humans;
- **researchers**, to show outlined priorities for Marine Biotechnology contributions to key societal challenges and examples of case studies showing progress in these fields;
- the **industry** with interests in marine biotechnology and its outputs, to provide the context in which marine biotechnology innovation might take place;
- **policy makers**, to provide a discussion and clarification of national strategy documents on marine biotechnology;
- **national funding agencies** in Europe, to provide important information and insight in scoping and preparing for a future ERA-NET in marine biotechnology;
- other **technology platforms and coordination activities** dedicated to marine biotechnology, to highlight opportunities for interlinkage and collaboration.

What are Portals? | List of portals

Categories: Marine Biotechnology | Portals under construction

This page was last modified 12:01, 10 September 2012. This page has been accessed 483 times. Privacy policy About CSA MarineBiotech Wiki Disclaimers

MarineBiotech

Content edit

What is Marine Biotechnology?

Key Marine Biotechnology application areas [hide]

- Marine Biotechnology securing Food supply
- Marine Biotechnology securing alternative sources of renewable Energy
- Marine Biotechnology securing Human Health
- Marine Biotechnology securing Industrial Products and Processes
- Marine Biotechnology securing Environmental Health

Examples of Marine Biotechnology successes [hide]

- Application of Ziconotide as a painkiller

Marine Biotechnology key tools and technologies [hide]

- 'Omics' driven technologies
- Metabolic engineering and systems biology
- Model species for marine biotechnology
- High throughput tools for proteins, enzymes and biopolymers

Strategies, Policies and Programmes [show]

Glossary

Links to more general information

article | discussion | view source | history

Application of Ziconotide as a painkiller

Revision history
View logs for this page

(Latest | Earliest) View (previous 50) (next 50) (20 | 50 | 100 | 250 | 500)

Diff selection: mark the radio boxes of the versions to compare and hit enter or the button at the bottom.
Legend: (cur) = difference with current version, (last) = difference with preceding version, M = minor edit.

Compare selected versions

- (cur) (last) 09:34, 7 October 2012 Fiend (Talk | contribs) (2,609 bytes) (undo)
- (cur) (last) 09:31, 7 October 2012 Fiend (Talk | contribs) (2,601 bytes) (undo)
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- (cur) (last) 10:28, 5 October 2012 Fiend (Talk | contribs) (2,889 bytes) (undo)
- (cur) (last) 10:26, 5 October 2012 Fiend (Talk | contribs) (2,880 bytes) (undo)
- (cur) (last) 10:22, 5 October 2012 Fiend (Talk | contribs) (2,86[illegible] bytes) *(New page: Ziconotide can be extracted from the poison of cone snakes (Conus spp.), and belongs to the chemical family of the conopetides <ref name="marine">http://www.marinebiotech.org/ziconotide.ht...)*

Compare selected versions

(Latest | Earliest) View (previous 50) (next 50) (20 | 50 | 100 | 250 | 500)

article | discussion | view source | history

Application of Ziconotide as a painkiller

Ziconotide can be extracted from the poison of cone snakes (Conus spp.), and belongs to the chemical family of the conopetides, a group which has received high attention for its potential use as painkillers. The Irish Elan cooperation brought a syntheticall version of the drug on the European markets in 2005 under the brand name Prialt® [1]. The drug is intended for use by patients suffering from intense and prolonged pain caused by e.g. cancer, aids or neuropathic pain [2], who get insufficient pain relief from classical painkillers.

Contents [hide]
1 Mode of Action
2 Origin & Development
3 references

Mode of Action

Ziconotide works by blocking ion channels in neurons, effectively stopping the transmission of pain signals. More specifically, ziconotide acts in a specific region of the spinal cords where nocireceptors connect to the neurons. Contrary to classical (strong) painkillers (such as e.g. morphine) this has the advantage of keeping the rest of the nervous system fully functional, preventing side effects such as general sedation and depressed respiration. Additionally, the ziconotide is reported to be a fifty to several thousand times more powerful painkiller then morphine [1]. However, for good results, ziconotide needs to be directly injected into the spinal cord, demanding the use of specialized systems and modes of administration. This reduces the use of ziconotide the most serious cases.

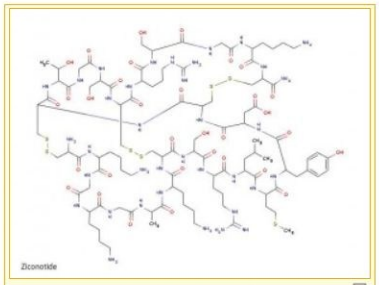

Figure 1: Chemical structure of ziconotide

- IMIS: Integrated Marine Information System -

Persons | Institutes | Projects

report an error in this record

mevr. De Raedemaecker, Fien [photo]

Institute:

VLIZ: **Vlaams Instituut voor de Zee**, more

Function: Scientific assistant, General operation and coordination

Direct contact at institute:
Phone: +32-(0)59-34 01 82
Fax: +32-(0)59-34 21 31
Email: fien.deraedemaecker@vliz.be

enus Conus. The substance
and *Conus geographus* [4], but given its relatively small size, it can easily be


Figure 3: *Conus geographus* [6]

- Link to dictionary
- Add references
- Interlink
- History
- User profiles

references

1. ↑ 1.0 1.1 Kijjoa A and P Sawangwong. 2004. Drugs and cosmetics from the sea (review paper). Mar. Drugs 2004:73-82.
2. ↑ http://www.iasp-pain.org/AM/Template.cfm?Section=Pain_Definitions
3. ↑ http://www.marinespecies.org/aphia.php?p=taxdetails&id=215429 Conus magnus
4. ↑ http://www.marinespecies.org/aphia.php?p=taxdetails&id=215499 Conus geographus
5. ↑ http://bioweb.uwlax.edu/bio203/2011/haas_kayl/Dr%20Cm.htm
6. ↑ http://www.nigms.nih.gov/news/findings/sept02/snails.html

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MarineBiotech Infopages (WIKI)

Major difference between Wikipedia and Coastal and Marine Wiki:
Quality Control

- anonymous contributions are precluded: editors part of expert contact database
- everyone registered in IMIS & applied for a WIKI account can update information
- Person editing information will become public

  ⇒Creates quality control and visibility

  ⇒Possible to return to previous version of portal page
- content checked by editorial team

MarineBiotech Infopages (WIKI)

The Way Forward…

- A separate dynamic community information portal on Marine Biotech, within Coastal and Marine Wiki, with project-specific information but linked *in depth* with exisiting information
    - » Project website will keep own identity
    - » Project Information will not be lost in time
    - » Prevent duplication of effort
- Content supplied by different stakeholders
- Editorial team for quality control

Summary

- A **long-term information management system** for Marine Biotechnology has been developed, containing a contact database and a content/knowledge management system
- **Project-specific information is integrated** with existing and more general MarineBiotech information
- Can respond effectively to **dynamic nature** of documents and contact information
- **Everyone can support** with keeping system up-to-date, with sufficient quality control

MarineBiotech

Thank you!

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turning innovation into action

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