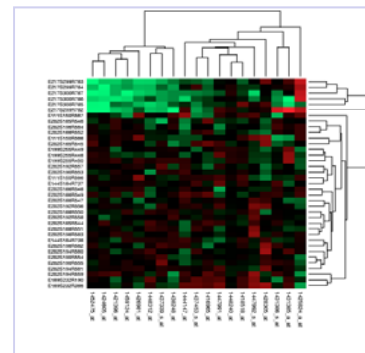
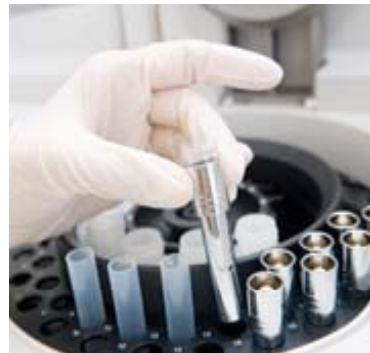




# Marine Biotechnology Ireland

*National Marine Biotechnology Programme*

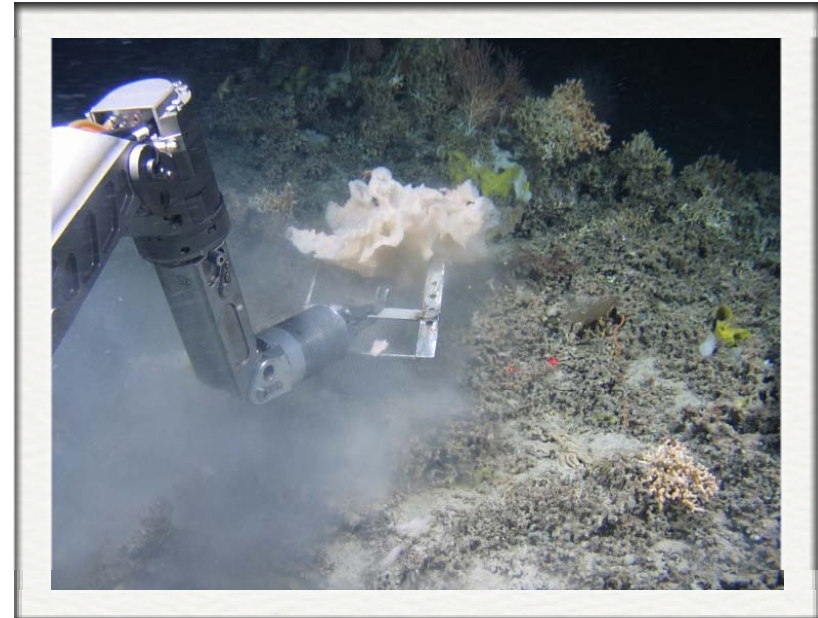


“Networks as Knowledge - Biotechnology Networks in the Atlantic Area”

NUI Galway, Galway, Ireland - 25Aug2011

## The Marine Biotech Opportunity

- BioTechnology is the driver of the next wave of industrial innovation
- The marine environment is our ocean of opportunity for new materials, new compounds and new processes for our industry and our society



..Health, ..Food, ..Energy, ..Biomaterials, ..Industrial processes, ..

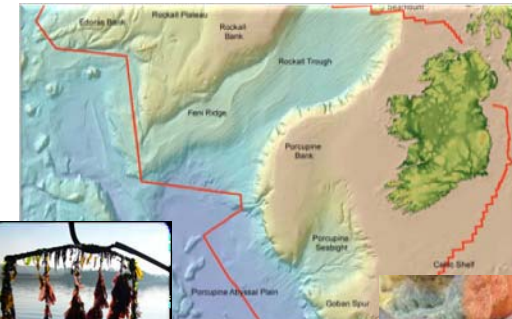
- Biotechnology is key to sustainable industrial manufacturing



# Background

## Marine Biotech Industry Could Grow by 12% Per Year in Europe

ScienceDaily (Dec. 13, 2010) — Europe can become a global leader in marine biotechnology



## Potential Cancer Drug – From Sponges

Tuesday, November 09, 2010 - Ehud Rattner  
[Home](#) >> [News](#) >> [Cancer Research](#)

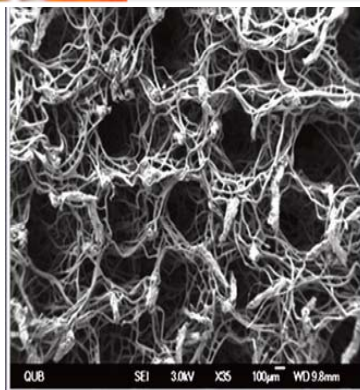


A microscope image of the deep-sea microbe that produces the new antibiotic

## Tiny treasure from the deep could beat the superbugs

By Sam Lister  
Health Correspondent

bacteria with resistance to antibiotics have emerged in recent years. The mutant self during a training run became infected. The mutant



## Policy environment

- The EU Knowledge-Based BioEconomy
- The ESF-MB “Marine Biotechnology: a new vision and strategy for Europe” (Dec. 2010)
- National Policy [National Strategy for Science, Technology and Innovation 2006-2013](#) [Sea Change: A Marine Knowledge, Research & Innovation Strategy for Ireland 2007-2013.](#)
- [Research Prioritisation exercise \(on going\) - Health and Well Being](#)
- Integrated Marine [Plan](#)



## Marine Biotechnology Ireland



- Led by Ireland's **Marine Institute**
- Committed to transform the marine sector into a knowledge-driven sector recognised for its ability to develop a range of high value added products that result from marine biotechnology research

### MBI Policy objectives

- a. Engage a large community of actors towards the sustainable use of Ireland's vast marine biological resources for innovative research and market-oriented high value added products for food, health, and industrial processes;
- b. Build on our international reputation as a significant marine biotechnology research performer, and strongly positioned in the commercialisation of marine biotechnology research outputs;
- c. Emergence of successful indigenous companies selling highly advanced products and services (medical devices, diagnostics, food, biopharma, ..).



## Marine Biotechnology Ireland - Vision 2020



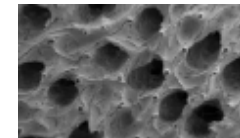
By 2020, Ireland will have a leading capability in the utilisation of marine organisms and materials for the production of drugs, advanced biomaterials and food ingredients.



## Building on strengths: Life sciences industries

Comprising multinational and indigenous firms, the sector spans the areas of food, pharmaceuticals, biotechnology, medical devices and diagnostics.

- **FOOD** - An indigenous sector worth €8.5 billion; 50,000 direct employees; increasingly research-intensive and driven by biotechnology; international reputation for mining milk.
- **PHARMACEUTICALS** - Nine of the world top ten firms in Ireland, 50 indigenous firms, €46 billion value, 25,000 employed.
- **MEDICAL DEVICES** - Eight of the world top ten firms in Ireland, 100 indigenous firms, 24,000 employees, revenue of €6.2 billion



## Building on strengths: biotechnology research capacity

### Agri-Food and Environmental

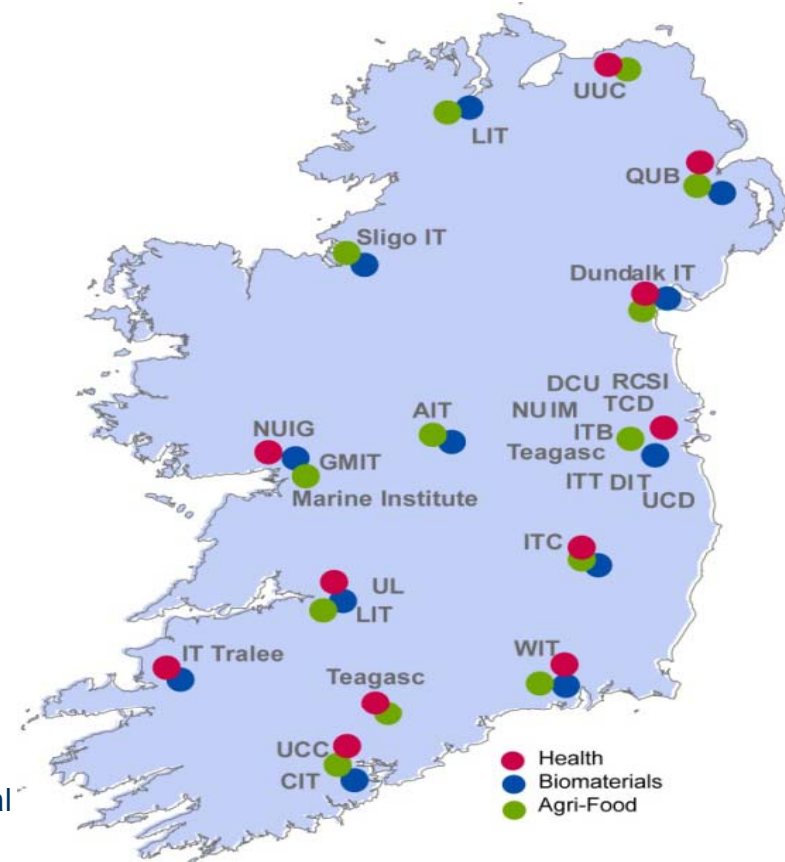
Food technology and processing, nutrition and health, environmental and health economics, planning, bioremediation, bioprocessing, industrial microbiology, plant and animal health, pathogenesis, biodiversity and conservation, molecular ecology.

### Health Care

Clinically focused research, i.e.: cancer studies, diabetes, immunology and infection, respiratory medicine and cardiology; approaches incorporate molecular and cellular biology, genomics, diagnostics, pharmacology, therapeutics, drug discovery and epidemiology.

### Biomaterial and Processes

Biocompatible, biomimetic and bioactive materials; bioengineering; visualisation; nanotechnologies; biosensors; bioinformatics; medical imaging; health informatics and the associated enabling technologies

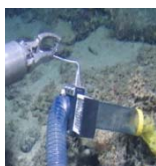


Ireland's Marine Biotechnology related Research Capacity

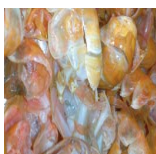


## Building on strengths: flagship marine biotechnology research projects & infrastructures

Since 2007, the Marine Institute has invested €20 million to develop Ireland's research capacity in marine biotechnology and marine biosciences.



**M.I. Beaufort Award for Marine Biodiscovery Research** New drugs and advanced bio-materials from marine organisms. 7 year research programme, €7.3 million.



**NUTRAMARA Marine Functional Foods Research Initiative** Novel food ingredients and value-added functional food products from under-utilised marine resources. €5.2 million award.



**Eircod** Supporting the development of farmed cod stocks by precise selection based on genetic traits – use of a range of biotechnology tools.



**Marine Institute Marine Biodiscovery Laboratory** Supporting marine biotechnology projects – collection, extraction, assessment, storage and sample management.





ShareBiotech



## ShareBiotech

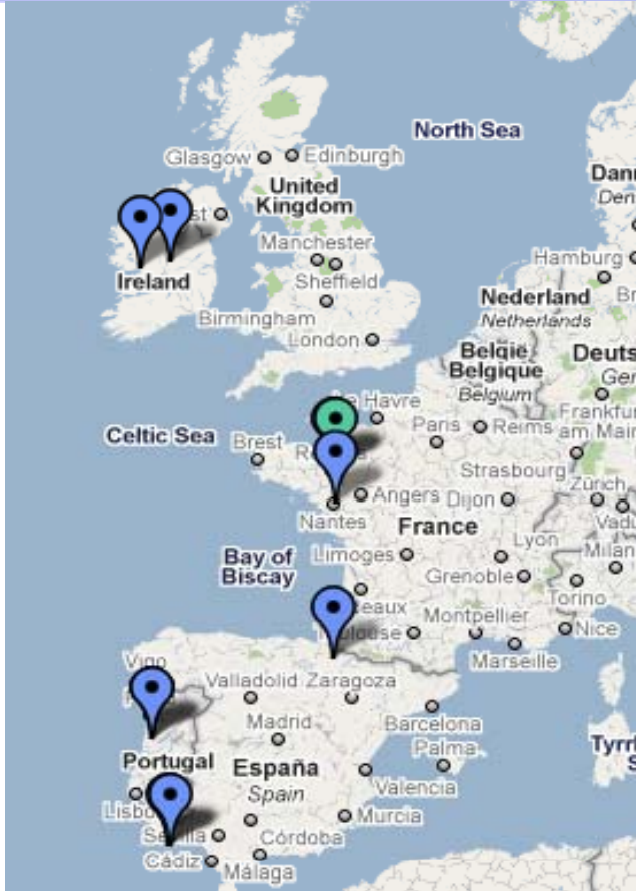
Sharing life science infrastructures and skills  
to benefit the European Atlantic Area biotechnology sector

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## EU Atlantic Area Cooperation Programme

*"Foster innovation and entrepreneurship  
through technology and knowledge transfer"*





### ShareBiotech Objectives

- Strengthen the biotechnology sector within the Atlantic Area
- Improve the service offer of technological core facilities and facilitate access
- Set up a transnational network of technological core facilities and increase technology transfer
- Increase the profile and the visibility of the biotechnology sector of the Atlantic Area, in order to make it an attractive choice for networking, cooperation and locating business

- FR - CRITT Santé Bretagne, Bretagne Innovation, Université de Nantes.
- IE - Athlone Institute of Technology, National University of Ireland, Galway.
- ES - Gobierno de Navarra.
- PT - Universidade do Algarve, Centro de ciencias do mar do Algarve, Centro interdisciplinar investigação marinha e ambiente, Biocant.



### **ShareBiotech Actions**

- Survey (completed, March 2011);
- Action plan (drafted);
- Improvement of service offer (Started July 2011);
- Foster exchanges (on going);
- Recommendations for policy makers (starting October 2011).



## Networks as Knowledge - Biotechnology Networks in the Atlantic Area

### Event Objectives

- **Communication of ShareBiotech activity:**  
“Needs and Barriers in Biotech R&D in the Atlantic area - Survey Results”
- **Launch of SEMRU-MBI Report:**  
“An Overview of the Irish Biotechnology Sector & its Position within the Atlantic Area”
- **Investigate models of technology and knowledge transfer**
- **Understand the role of networks in the development of biotech R&D**
- **Discuss potential models for a network of knowledge for the marine biotech sector**





# Marine Biotechnology Ireland

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National Coordinator: Dr. Ilaria Nardello



# ShareBiotech

Sharing life science infrastructures and skills  
to benefit the Atlantic Area biotechnology sector



**A COLLECTIVE INITIATIVE  
FOR SCIENTISTS, COMPANIES  
AND POLICY MAKERS**

[www.sharebiotech.net](http://www.sharebiotech.net)



INNOVATION NETWORKS  
REDES DE INNOVACIÓN  
RÉSEAUX D'INNOVATION  
REDES DE INOVAÇÃO



ATLANTIC AREA Transnational Programme  
ESPACIO ATLÁNTICO Programa Transnacional  
ESPAÇO ATLÂNTICO Programa Transnacional  
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