

The History of Aquaculture

SOLE FARMING:
There or thereabouts!
EAS General Assembly agenda







EU BACKS SPREADING MARINE GENOMIC SOLUTIONS

Over the next three years, an EU-funded team of scientists and knowledge management specialists will align state-of-the-art "blue" biotechnology solutions with small-and-medium enterprises (SMEs), large corporations, and environmental regulators. The project, titled MG4U ('Marine Genomics for Users') project has been funded EUR 1.12 million under the 'KBBE' Theme of the EU's Seventh Framework Programme (FP7).

France's Centre National de la Recherche Scientifique and its Station Biologique de Roscoff is collaborating with teams from Germany, Ireland, Portugal, Spain and Sweden to make marine genomic knowledge more accessible to a broad spectrum of end-users. The knowledge transfer process will involve mapping-out genomic hot-spots, raising awareness about potential applications, matching knowledge to commercial challenges, and documenting success stories.

As the project got underway in Paris last month, CNRS's Scientific Coordinator Professor Bernard Kloareg said the team is very excited about the potential of these new "blue" technologies, "marine organisms have been the source of novel genes and novel compounds for anti-cancer and anti-viral applications, enzyme processing at high temperatures for animal feed, and anti-fouling processes in oceans and we think human health and biotechnology of the future could be drawing power from advances in gene mining."

Researchers say that developments in marine genomics could help us to understand the impact of climate

change on marine fauna and flora, appreciate how marine ecosystems function, and comprehend evolution. Advances in marine genomics could be at the origin of new applications in various industrial fields like aquaculture, fisheries, biomedicine and food processing where biotechnologies are used for sustainable production of healthy products such as vitamins, antioxidants, essential oils and medicines.

Under MG4U, the team will publish online maps, rollout training programmes, and poll industry representatives. The effort will sustain the excellent work of the Marine Genomics Europe Network of Excellence, and knowledge transfer techniques used will build on those piloted in related FP7 projects, such as MarineTT and AquaInnova.

These actions will altogether lead to an uptake of marine genomic techniques, an up-skilled scientific base for public research organizations, durable relationships between scientists and industrial companies, and synergies with other marine genomic projects in Europe.

'We're at the first stage of this project and there is a long way to go, but we think our knowledge transfer activities show real promise,' professor Kloareg added.

For more information, please visit: Station Biologique de Roscoff (CNRS), http://www3.sb-roscoff.fr

For press queries, please contact: Marieke Reuver, Programme Officer, AquaTT, Dublin, Ireland Tel: +353-1-644-9008, Email: marieke@aquatt.ie, Web: www.aquatt.ie

UNLOCKING MARINE KNOWLEDGE

In line with the vision of an Innovation Union (Europe 2020) with open access to publicly funded research results to foster exploitation, particularly among the marine and maritime community (Ostend Declaration, 2010), MarineTT is a timely EC 7th Framework Programme Support Action that aims to make a real contribution to improved access to EU marine research. In view of a clear demand to show demonstrable impact from research, MarineTT is developing an improved methodology for knowledge capture and transfer. This innovative approach to unlocking marine knowledge involves a key change of focus from the promotion of research projects per se, to the singling out of 'Knowledge Outputs' that targeted end-users can adopt and/or exploit.

A broad overview of the knowledge generated by EU-funded marine research has been gained by surveying approximately 500 FP6 and FP7 marine projects, from which more than 700 'Knowledge Outputs' from almost 200 projects have been extracted, based on project coordinator responses. A significant effort has also been made to further explore, complete and cluster the information provided, which has also been reviewed by project coordinators and validated by external experts



from different sectors and backgrounds (industry, policy and research).

The preliminary results and recommendations from this knowledge analysis process have recently been presented at a showcase in Brussels (June 2011) to representatives of DG MARE, DG RTD, DG ENV, major European and national marine research institutions, as well as consultancy companies in European marine affairs. The showcase acted as a forum for key individuals at European level to provide MarineTT with feedback and insight, raising awareness at the same time. The relevance of the work being done through MarineTT was generally acknowledged by the attendees as very useful, not only to SMEs, policy makers and industry, but also to marine scientists in order to gain an understanding of what has been done in European marine research until

Continued on page 33



Benefits for aquaculture researchers

- Individual and customisable wet laboratories, with 24/7 secure site access give the privacy and flexibility not possible with communal facilities
- Specialist equipment and facilities to support a broad range of research projects
- Private, outdoor test beds

people focus on setting up and running their own businesses. Our technical support group will also provide guidance on more industry related issues and provide tenants with a valuable knowledge pool."

The facility has already attracted a significant amount of interest from the marine sciences community. Matt Slater a researcher at Newcastle University commented: "The centre fits perfectly with what we are doing at the University. Having recently launched an Aquaculture Enterprise and Technology Masters Degree we hope our students will want to move to Astec to commercialise their ideas and become the young aquaculture successes of the future."

Astec is equally suited to more established businesses looking to relocate or diversify says Mr Haddrick; "Providing fledgling businesses with the support and infrastructure they need to get up and running is vital, however it is equally important to provide developing businesses with the facilities they need to grow. We are already looking at the potential to expand the outdoor production space we have onto adjacent land to support more large scale business operations".

As well as providing a permanent base for aquaculture businesses, Astec also offers the ideal location for collaborative partners who want to use the facilities for a specific research project or on a short term basis.

Professor Grant Burgess of the Dove Marine Laboratory commented: "We have several early stage projects which we may be able to commercialise over the next 12 months. As the UK's first aquaculture incubator, Astec will draw aquaculture companies to



Private, fully equipped aqua labs.

the region, to take advantage of the fantastic facilities, year round warm seawater and nearby expertise and advice"

Mr Haddrick says: "Many people assume aquaculture is all about food production but here at Astec we realise the industry has a much greater scope than that. Research into marine plants and animals can impact in areas from medicine to engineering, sport to renewable energies. The potential for what we can do here is immense and that's a very exciting prospect."

The Astec Aquaculture Business & Science Centre is easily accessible and boasts excellent transportation and logistical links. International North Sea ports, a mainline rail station and an International airport are only 30 minutes away, giving easy access to all of the UK and Europe's important centres for aquaculture.

"We are very excited about what we have to offer here at Astec and are keen to show people round" says Mr Haddrick. For more information or to arrange a visit call +44 (0)1670 852771 or email info@ astecaquaculture.com. You can also check out the company's website at www.astecaquaculture.com.

UNLOCKING MARINE KNOWLEDGE CONTINUED FROM PAGE 21

now, and also the possible use of these research results to improve not only marine research, but also to better inform policy and facilitate knowledge transfer in all relevant marine areas such as climate change, marine renewable energy and environmental monitoring.

The next stage of MarineTT will be to profile primary end users of the 'Knowledge Outputs' deemed as having high potential impact. This exercise will pave the way for successful transfer of high potential 'Knowledge Outputs' to target audiences by using appropriate tools and mediums in order to maximise the impact of Europe's RTD efforts in the marine sector. For more information on MarineTT, please visit: www.marinett.eu. To access the Brussels showcase presentations please visit: http://www.marinett.eu/documentation/.