

AT A GLANCE

TITLE:

BYEFOULING - Low-toxic cost efficient environment-friendly antifouling materials

CONSORTIUM:

A multidisciplinary consortium of 19 partners

COORDINATOR:

Stiftelsen SINTEF, Norway

PROGRAMME:

FP7-OCEAN-2013

DURATION:

December 2013 - November 2017

TOTAL COST:

€9,969,964

EU CONTRIBUTION:

€7,447,584

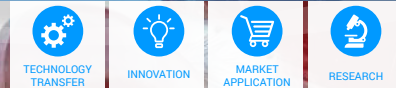
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*Low-toxic cost-efficient
environment-friendly
antifouling materials*

BYEFOULING PARTNERS

- 1 FUNDACION CIDETEC (Spain)
- 2 FRAUNHOFER-GESELLSCHAFT ZUR FÖRDERUNG DER ANGEWANDTEN FORSCHUNG E.V. (Germany)
- 3 MATERIA NOVA (Belgium)
- 4 NORSK MARINTEKNISK FORSKNINGSSINSTITUTT AS (Norway)
- 5 NATIONAL TECHNICAL UNIVERSITY OF ATHENS (Greece)
- 6 UNIVERSIDADE DE SANTIAGO DE COMPOSTELA (Spain)
- 7 CHALMERS TEKNISKA HÖGSKOLA AB (Sweden)
- 8 TEL AVIV UNIVERSITY (Israel)
- 9 THE UNIVERSITY OF LIVERPOOL (United Kingdom)
- 10 UNIVERSITE DE MONS (Belgium)
- 11 SMALLMATEK - SMALL MATERIALS AND TECHNOLOGIES LDA (Portugal)
- 12 LONZA AG (Switzerland)
- 13 ALGAENERGY SA (Spain)
- 14 OCAS - ONDERZOEKSCENTRUM VOOR AANWENDING VAN STAAL N.V. (Belgium)
- 15 JÖTUN AS (Norway)
- 16 AQUABIOTECH LIMITED (Malta)
- 17 ZUNIBAL SL (Spain)
- 18 PLASMACHEM PRODUKTIONS- UND HANDEL GMBH (Germany)



BYEFOULING: Low-toxic cost-efficient environment-friendly antifouling materials

The main vision of **BYEFOULING** is to provide the means for industrial, cost-effective and robust manufacturing of antifouling coatings in Europe, where SMEs are both coating components developers and production technology providers. A set of procedures, guidelines and fabrication tools will be developed, enabling short time to market for new coating concepts. The approach in **BYEFOULING** is to tackle the different stages of the biofouling process using innovative antifouling agents, covering surface-structured materials, protein adsorption inhibitors, quorum sensing inhibitors, natural biocides and microorganisms with antifouling properties. Encapsulation of the innovative compounds in smart nanostructured materials will be implemented to optimize coating performance and cost all along their life cycle.

- ✓ *Cost Effective Antifouling Coating*
- ✓ *Environmental Friendly Coating*
- ✓ *Innovative Antifouling Agents*
- ✓ *New Coating Development*

Objectives of BYEFOULING

- Reduce mortality of farmed fish due to biofouling accumulation and respective control measures
- Reduce fuel costs due to drag reduction in maritime transportation and fishing vessels
- Reduce volatile organic compounds (VOCs) content in coating formulations
- Reduce risks involved in spread of fouled invasive species
- Increase operation life of floating various devices (buoys)
- Obtain coatings with extended and effective lifetime
- Reduce maintenance costs of maritime operations

AT A GLANCE

TYPE:

Research SME

LOCATION:

Mosta, MALTA G. C.

CAPABILITIES:

R&D / Consultancy / Engineering

EXPERTISE:

Aquaculture / Marine Research
Blue Growth / Aquatic Environment



Who We Are

The **AquaBioTech Group** is an international research and development, engineering, technology provider and consulting company strategically located in the centre of the Mediterranean on the island of Malta, although operating globally with clients and projects in over fifty-five countries. The **AquaBioTech Group** undertakes a variety of aquaculture, fisheries, marine surveying, aquarium and aquatic environmental projects through its regional offices and partners throughout the world. The vast majority of the company's work is related to the marine or aquatic environment, encompassing aquaculture developments, market research / intelligence, through to project feasibility assessments, finance acquisition, project management, technology sourcing and technical support and training.

Our role in the Byefouling project

The **AquaBioTech Group**'s tasks within the **BYEFOULING** project include:

- Benchmark research that define the control, risk assessment, environmental impact assessment, efficacy and performance of antifouling coatings
- Research related to the antifouling performance of antifouling agents and coatings
- Dissemination of project results and participation in networking actions
- The connection of the aquaculture industry and the project objectives
- Co-ordination of the exploitation plan of the project results
- Eco-toxicity research of the new compounds developed

AquaBioTech Group Research Activities



AQUACULTURE R&D

Fish & shellfish hatchery technology
Health & disease prevention
Nutraceutical development
New species development
Aquatic nutrition research
Production techniques



MARINE RESEARCH

Environmental Impact Assessments
Geophysical investigations
Marine spatial planning
Marine engineering
Marine surveying
Baseline studies



WATER TECHNOLOGIES R&D

Recirculation Aquaculture Systems
Aquaponics / hydroponics
Wastewater treatment
Energy efficiency
Sustainability
Innovation

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AquaBioTech Group

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