Biofouling Research

ABT Innovia is an independent aquatic, aquaculture, biotechnology research facility that forms part of the **AquaBioTech Group**.

AquaBioTech Group is an international aquaculture and fisheries consulting company strategically located in the Mediterranean, on the island of Malta. It operates globally, with clients and projects in over fifty-five countries. Staff are recruited from across the globe, enabling communication with clients in thirteen languages.

AquaBioTech Group undertakes a variety of aquaculture, fisheries, marine surveying, aquatic environmental, financial, and technical projects, performed with its selected, worldwide partners.

AquaBioTech Group

Marine biological fouling, also termed as biofouling, is defined as the unwanted accumulation of microorganisms, animals, plants and algae on submerged structures. The impact of biofouling results in large costs to both the maritime and aquaculture industries.

AQUACULTURE INDUSTRY

In the aquaculture industry, biofouling accelerates corrosion and bio-deterioration, restricts water exchange in offshore cages, increases disease risk and causes deformation of cages and structures. Moreover, the high maintenance costs to control fouling growth can lead to economic losses and system failure.

ENVIRONMENTAL IMPACT

Biofouling is considered one of the main vectors for the introduction of invasive species to new ecosystems, specifically derived from fouled ship hulls and ballast water discharges. Invasive species can cause damage to local ecosystems, human economy and human health.

YACHT AND MARITIME INDUSTRY

The presence of biofouling on ships decreases manoeuvrability while increasing frictional resistance. This increase in roughness results in an increase of fuel consumption of up to 40 %, which in turn leads to an in-voyage overall cost increase of up to 77 %.

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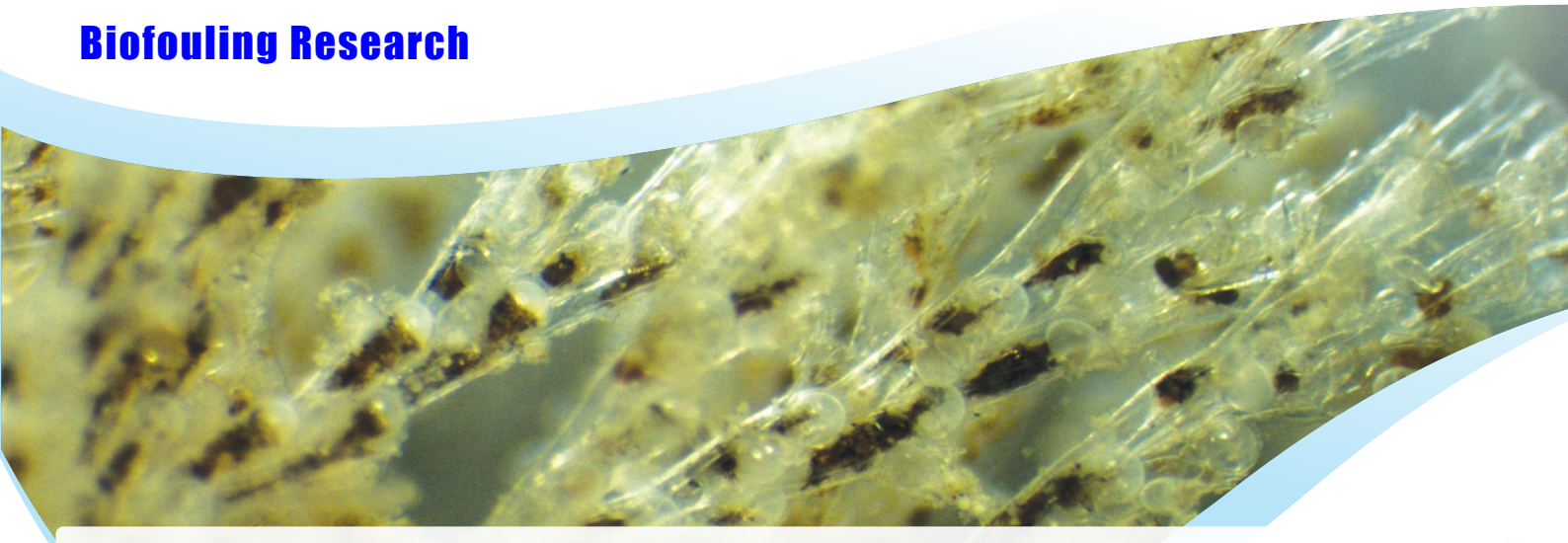
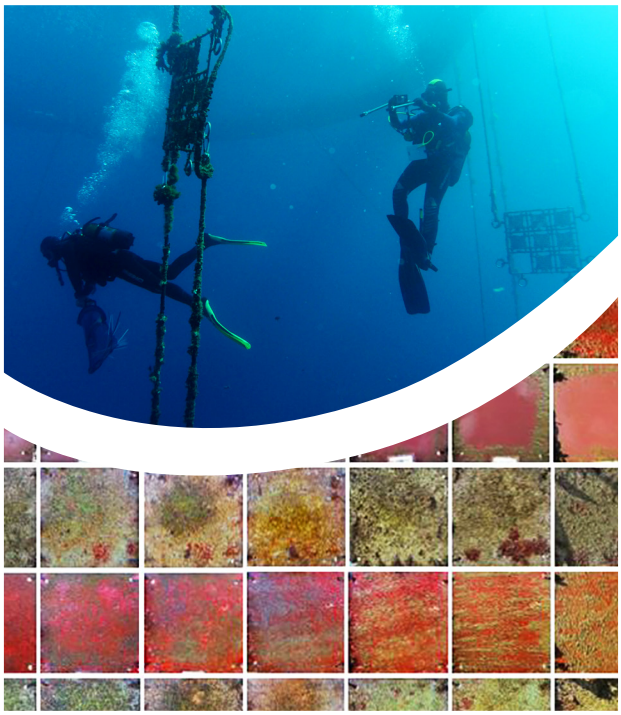


TEST FACILITIES AND CORE SERVICES

Many commercial antifouling agents are currently being used to combat fouling. However, the main concern remains to fight biofouling without environmental side effects and in a cost-effective manner. The assessment of the antifouling activity of an agent should be established at different levels. Our licensed facility provides laboratories, testing tanks and field studies to assess the antifouling activity of different products from early stage product screening to commercial stage, long-term field trials.

LABORATORY TESTS

- Leach rate potential
- Algae growth inhibition
- Biofilm growth inhibition
- Barnacle settlement assay
- Bryozoan settlement assay
- Mussel attachment inhibition assay

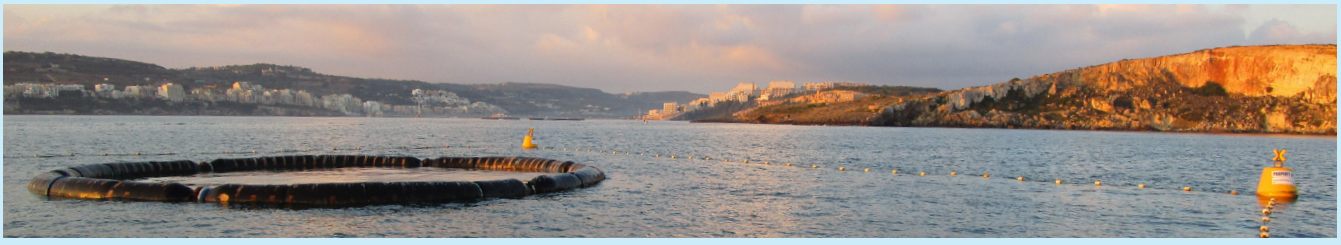


STATIC AND DYNAMIC TESTING

Static immersion testing evaluates the efficacy of antifouling agents in a heavy fouled marine environment, typically in port areas. Dynamic testing evaluates the erosion of the coatings as the ship travels through the water. Our company offers a licensed marine experimental site and vessels suitable for different types of testing.

OFFSHORE TESTING

AquaBioTech Group offers a licensed offshore marine experimental site area which is used for applied research and testing. Tests include anti-fouling performances of innovative compounds and materials, water quality monitoring equipment and other oceanographic instrumentation and research activities.



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