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SUSTAINABLE PRODUCTION OF BIOLOGICALLY ACTIVE MOLECULES OF MARINE BASED ORIGIN (BAMMBO)

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Abstract

Innovation is the most important engine of growth and jobs in knowledge-based bio-economies. The scope of BAMMBO (Biologically Active Molecules of Marine Based Origin) is ambitious. This was intentional. The BAMMBO project commenced in March 2011 with the intent to screen and identify targeted marine organisms (e.g. bacteria, fungi, sponges, microalgae, macroalgae and yeasts) from diverse global locations for their potential as sustainable producers of high-added value molecules (HVAB's). BAMMBO is set to provide innovative solutions to overcome existing bottle-necks associated with culturing marine organisms in order to sustainably produce high yields of value-added products for use in the pharmaceutical, cosmetic and industrial sectors. Our project applies conventional and non-conventional methods for the analysis, extraction, purification and enrichment of targeted bioactive compounds. A detailed life cycle analysis of the production pathways developed in the project will be undertaken to fully evaluate the sustainability of production of biologically active products from marine organisms. BAMMBO will exploit knowledge and technologies developed during the project and effectively manage their transfer to relevant stakeholders in industry and the research community, as well as to policy-makers. BAMMBO brings together a multidisciplinary consortium of 11 specialist Research and SME partners representing 8 countries. Partners from ICPC countries Russia and Brazil provide access to White Sea and Antarctic Coasts, and those from the EU member states access to Mediterranean and Atlantic coasts. In adhering to the European Strategy for Marine and Maritime Research this three year project encourages capacity-building, integration and synergies across relevant marine sectors. Innovative technologies being developed in the project will be demonstrated with the involvement of industry partners, and the results will be of interest not only to companies directly involved in the marine sector, but to other large scale industry players such as pharmaceutical companies with interest in added-value bioactive compounds. The presentation to be delivered will provide an overview of the approach being taken by BAMMBO to contribute to the development of a knowledge-based bio-economy through the synergistic collaboration of Research and SME partners.