

University of Murcia and CNR-IRBIM Strengthen Cooperation to Advance the Sustainable Blue Economy

Ancona, Italy – August 2025 – The University of Murcia (UMU) and the Consiglio Nazionale delle Ricerche – Istituto per le Risorse Biologiche e le Biotecnologie Marine (CNR-IRBIM) have laid the foundations for a new stage of collaboration in the field of Blue Biotechnology and Marine Data Science. The partnership forms part of the 2B-BLUE Project: Boosting the Blue Biotechnology community in the Mediterranean, co-financed by the Interreg Euro-MED Programme.

From 20 to 30 July 2025, Dr. Jesús E. Argente-García from UMU's Intelligent and Telematic Systems Research Group carried out a research stay at CNR-IRBIM in Ancona. The visit aimed to enhance knowledge transfer between Spanish and Italian demonstration sites (DS), focusing on bioremediation of port waters, marine microbiome studies, digitalisation of marine monitoring, and sustainable aquaculture.

Key Outcomes of the Visit

The meetings and exchanges allowed both institutions to identify shared research priorities, particularly in blue biotechnologies, environmental monitoring, AI-based fish behaviour analysis, and data-driven governance. Demonstration sites and transformative laboratories were recognized as essential platforms for joint experimentation and innovation, enabling researchers to test and refine solutions in real-world settings.

In addition, the collaboration highlighted the potential of applying innovative tools such as carbon footprint tokenization, digital twin models, and data space governance to marine and coastal management. These methodologies, combined with ongoing research on marine microbiomes, provide strong opportunities for the co-creation of scalable solutions with direct socio-economic and environmental benefits.

Looking forward, UMU and CNR agreed to design joint proposals for European funding and to develop shared training and mobility initiatives aimed at supporting the next generation of researchers. By interconnecting pilot actions in biotechnology and data science, the two institutions will contribute to strengthening cross-border innovation in the Mediterranean's sustainable Blue Economy.

Highlight Event – International Seminar

On 28 July 2025, the international seminar *“Driving a Sustainable Blue Economy: Exploring collaboration and boosting opportunities from Blue Biotechnologies to Data Science”* took place at CNR-IRBIM. Co-hosted by Dr. Grazia Marina Quero (CNR) and Dr. Jesús E. Argente García (UMU), the event gathered 49 participants from Spain, Italy, Portugal, and beyond. Discussions centred on advancing sustainable Blue Economy practices through biotechnology, data science, and digital governance.

Looking Ahead

This cooperation will begin with a joint study of microbiome in the Port of Alicante, where CNR brings expertise in microbiome research and UMU contributes on digitalisation and technological innovation. The initiative will contribute to the development of scalable solutions that combine environmental bioremediation, circular economy mechanisms, and digital tools to address Mediterranean challenges.

“This collaboration reflects the complementarity of Spanish and Italian expertise. By combining biotechnology with advanced digital tools, we are taking concrete steps towards a more sustainable and innovative Blue Economy in the Mediterranean,” said Dr. Jesús E. Argente-García.

The exchange forms part of Activity 3.2 “Implementation of the Knowledge Transferring Framework” of the 2B-BLUE project, which seeks to interconnect pilot initiatives and foster best-practice sharing among Mediterranean stakeholders.

About 2B-BLUE

2B-BLUE – Boosting the Blue Biotechnology community in the Mediterranean is an Interreg Euro-MED 2021–2027 project that supports innovation, knowledge transfer, and cross-border cooperation to strengthen sustainable Blue Economy value chains in the region.