HOSTING GROUPS FOR INTERNATIONAL MOBILITY

Biodiversity Research Group

The research group coordinated by Prof. Mirella Vazzana and Prof. Vincenzo Arizza, with the participation of Dr. Manuela Mauro, Prof. Aiti Vizzini, Prof. Claudio Luparello and Dr. Chiara Martino, is actively engaged in the assessment of animal welfare, particularly focusing on the effects of environmental stressors (e.g., acoustic, chemical, climate change) on aquatic organisms, the extraction and characterization of bioactive molecules and the evaluation of their biological activity, as well as the monitoring and analysis of biodiversity in aquatic ecosystems. The team combines cross-disciplinary expertise in cellular and molecular biology, zoology, developmental biology and ecotoxicology, employing cutting-edge methodologies such as the use of environmental DNA (eDNA), the analysis of cellular and molecular biomarkers, morphological studies during development, and the study of behavioral responses. The research activities aim to promote biodiversity knowledge and conservation, the enhancement of natural resources, and the sustainable management of aquatic environments.

Team members:

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Selected publications:

Martino, C., Savoca, D., Mauro, M., Byrne, M., Hüffer, T., Chiarelli, R., Badalamenti, R., Maccotta, A., Arizza, V., Vazzana, M. (2025) Heatwave conditions increase the toxicity of phthalates in marine organisms. Sci Total Environ. 979:179479. https://doi.org/10.1016/j.scitotenv.2025.179479

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Mauro, M., Cammilleri, G., Celi, M., Cicero, A., Arizza, V., Ferrantelli, V., & Vazzana, M. (2022). Effects of diclofenac on the gametes and embryonic development of *Arbacia lixula*. The European Zoological Journal, 89(1), 535-545. https://doi.org/10.1080/24750263.2022.2059582