Microbial biogeochemistry in the Southern European Seas: the multidisciplinary ADREX survey

Rosabruna La Ferla¹, Maurizio Azzaro¹, Gabriella Caruso¹, Renata Zaccone¹, Giovanna Maimone¹, Franco Decembrini¹, Rodolfo Panarhos², Anderson S. Cabral², Marco Pansera³, Giuseppe Civitarese⁴

¹CNR, Institute of Coastal Marine Environment, Messina, Italy. E-mail: rosabruna.laferla@iamc.cnr.it
²UFJ, Federal University of Rio de Janeiro, Rio de Janeiro, RJ, Brazil
³CNR, Institute of Marine Science, Venice, Italy
⁴OGS, Geophysical Experimental Observatory, Trieste, Italy

In the frame of PERSUS EU FP7 project, part of the multidisciplinary oceanographic campaign ADREX was dedicated to microbial biogeochemistry and its possible connection with climate change in Southern European Seas, according to the European MSFD. Within the Mediterranean, the main physical processes in the Adriatic-Ionian system are: 1) the deep water formation by both shelf processes in the northern Adriatic and open-ocean convection in the southern basin; 2) the Bormida Bbaching System mechanism that reverses the Northern Ionian Gyre circulation on decadal scale. In this context, selected stations were investigated in the Ionian and Adriatic Seas (February 2014) by means of seawater samples collection from the surface to a maximum depth of 2650 m. Microbial biogeochemistry was studied by assaying prokaryotic abundance and size (image analysis and flow cytometry), microbial enzymatic activities, chlorophyll-α and phaeopigments concentrations, viral abundance. The hydrological properties were also monitored.

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