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## **Dr. Gabriella Caruso**

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### **Biography**

- ***Born in 1966, Graduated in Biological Sciences (1988)***
  - ***Holder of a CNR research grant “Research of microorganisms through immunofluorescence and citofluorimetry” (1989-1991)***
  - ***Specialist in Applied Microbiology (1993)***
  - ***Within the Italian Society for Marine Biology (SIBM) Member of the Executive Plankton Committee (2000 to 2001; 2002 to 2003; 2010 to 2012; 2013 to 2015) as well as of the Executive Aquaculture Committee (2004 to 2006; 2016 to 2018)***
  - ***Co-tutor and Supervisor of several graduate theses at Messina University***
  - ***Member of the Teaching Commission in the PhD course "Applied Hygiene" (Dept. of Hygiene, University of Messina 2006-2011).***
  - ***Rapporteur of a PhD Thesis at the Université du Sud-Toulon (France) (2012)***
  - ***Qualified as Full Professor in Ecology (05/C1) (2014-2018)***
  - ***Reviewer for CNR for MISE-FCS research projects- for the Panel “Green economy and Environment”***
  - ***Reviewer for CINECA MIUR research projects(2013-2014)***
  - ***Editorial member of International Journals [The Open Fish Sciences and The Open Marine Biology (edited by Bentham Publishers); Journal of Ecosystem and Ecography, Oceanography: Open Access, Journal of Pollution Effects and Controls (edited by OMICS Publisher Group); Journal of Coastal Life Medicine (Hainan Province, P.R. China)].***
- Guest Editor for a Hot Topic Issue of The Open Marine Biology "New candidate species for intensive Mediterranean aquaculture: studies on reproduction, digestion, response to stress" (2011)***
- ***H-index: 17 (Google Scholar)***



## Research Interests

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### In the field of ENVIRONMENTAL MONITORING

- **Marine microbiology and microbial ecology**
  
- **Set up and application of new rapid methods for the assessment of the microbiological quality of marine and brackish waters:**
  - A) by Epifluorescence microscopy: fluorescent antibody method (FA) for the detection and enumeration of bacterial pathogens (Escherichia coli, Enterococcus faecium, Vibrio spp,) and of their physiological status (viable staining with specific fluorochromes)**
  - B) by Fluorimetric method: beta-glucuronidase activity rates (MUG assay)**
  
- **Role of microorganisms in organic matter decomposition (fluxes of Carbon and Phosphorus mediated by the extracellular enzymatic activities of microbial communities i.e. leucine aminopeptidase, beta-glucosidase and alkaline phosphatase)**
- **Spatial and temporal dynamics of microbial hydrolytic processes**

### In the field of AQUACULTURE

- **Animal Welfare and stress in fish farming, assessed through the study of:**
  - A) Parameters related to the non-specific immunity, such as Lysozyme (mucus, kidney, plasma); Spontaneous haemolytic activity (SH50); Haemagglutinating activity; Respiratory burst**
  - B) Patterns of digestive enzymes**
  - C) Antibacterial properties of fish mucus and kidney**



[http://scholar.google.it/citations?hl=it&user=hGfSyeMAAAAJ&view\\_op=list\\_works:](http://scholar.google.it/citations?hl=it&user=hGfSyeMAAAAJ&view_op=list_works:))

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