

Raffaella Casotti



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Current Position: Primo Ricercatore (ResearchScientist)

Current Affiliation:

Department of Integrated Marine Ecology, Stazione Zoologica Anton Dohrn, Napoli (Italy)

Education/Training/Experience

Institute and Location	Degree / Function	Year	Major
University of Naples Federico II	Laurea (M.Sc)	1982-1987	Marine Biology
University of Messina	PhD	1996-2000	Environmental Sciences
Woods Hole Oceanographic Institution	Post graduate Visiting Scientist	1988-1990	Flow cytometry for marine microbial ecology
Station Biologique de Roscoff (France)	Post graduate Visiting Scientist and graduate student	1991-1994	Marine microbial ecology and phytoplankton ecophysiology
Stazione Zoologica A. Dohrn, Naples	Research Contract (ex art. 23)	1994-1996	Marine microbial ecology
Stazione Zoologica Anton Dohrn, Napoli, Italy	Ricercatore	2000-present	Marine microbial ecology, flow cytometry

Appointments and awards

1987- Naval League of Agrigento (Italy) Award

1988/1989- Rotary Foundation Scholarship

1989/1990 and 1991/1992- Italian Ministry of Scientific Research Scholarship

1991- French National Center for Scientific Research (CNRS) Scholarship

1992/1993- Commission of the European Communities Scholarship
1994 /1996- Research Contract of the Zoological Station of Naples (Italy)
1997/1999- Graduate Fellowship of the Ministry of University, Research and Technology

2012- 2017 Coordinator (Dean) of the PhD Program of the SZN
Scientific Responsible for the Agreement between SZN and the National Institute of Geophysics and Volcanology (2014)
Scientific Responsible for the Agreement between SZN and the Taiwan National Research Council (2008)
ISCHIA GAS contract since 2012 (Monitoring of Posidonia beds in Ischia) (total funds 372.400 €)
IZP ME2 Contract since 2014 (Monitoring of Clostridium difficile) (total funds 4.250 €)
Scientific Responsible for the FP7 EC CSA INCOMMET (Improving National Capacities in Observation and Management of Marine Environment in Tunisia) (total funds 35.427€)
Scientific Responsible for the French ENVIMED MENAPHY project (Training in support of Turkey)
Scientific Responsible for the EC ENPI S&T Med Project (Sustainability and Tourism in the Mediterranean Area) (total funds 480.137 €)
Scientific Responsible for the project PON3 PAC00044 EMSO MED IT (total funds 2.006.180 €)
Coordinator, Project Premiale MICGEN (MICROBial Genomics - Italian funds –approx. total of 70.000 €)
Coordinator, Project “Premiale IRMA” (Implementation and Remote connection of a platform for the real time monitoring of MARine microorganisms Italian funds - total funds 388.101 €)
Coordinator of 2 Operational Units within the Italian Project RITMARE (SP3_WP2_AZ1_UO2 and SP3_WP3_AZ1_UO3 (total funds 700.000 €)

Member of the Board of the Italian Society of Cytometry (GIC) 2001-2013
Member of the Board of the Italian Association for Oceanography and Limnology since 2012
Member of the Editorial Board of the journal Marine Ecology: an evolutionary perspective since 2009
Coordinator of the Course on Environmental applications of Cytometry at the National School of the Italian Society of Cytometry 2001-2012
Outreach officer for the Research Mode Project “ROSEMEB” within the EC Network of Excellence MARBEF 2004-2009
Vice Chair of the Gordon Conference on Marine Microbes in Tilton (USA) July 2010
Chair-elected of the Gordon Research Conference in Marine Microbes, Il Ciocco (LU) 24-28 June 2012
Evaluator for the FP5, FP6, FP7 (Marie Curie, Integrated Projects e CSA)
Evaluator for the German EVAL-INCO, French ANR, the Royal Dutch Research Foundation, and the Italian CNR (shiptime requests) and MIUR (FIRB Projects)
Referee for international journals such as Journal of Plankton Research, Cytometry, Limnology and Oceanography, Marine Biology, Aquatic Toxicology, PLoS One.
Teacher for the RITMARE Project and the EMSOMEDIT Training Workpackages 2014
Scientific dissemination activities for Città della Scienza, Rotary Napoli SudOvest, Naples Schools (also as an expert for the PON 2012)
Member of the “Science and Society” Committee of SZN, 2013

Professional Memberships

American Society of Limnology and Oceanography (ASLO)
American Geophysical Union (AGU)
International Society for Analytical Cytology (ISAC)

Associazione Italiana di Limnologia e Oceanografia (AIOL)
Società Italiana di Citometria (GIC)
Marie Curie Fellowship Association (MCFA)

Students Supervision and Examination

Supervisor of 6 PhD thesis (3 Italian, 3 UK), 8 MSc thesis and of 4 PostDocs
Examiner of 2 PhD in France, 1 in China, 2 in the UK, 3 in Australia

Publications

Author of 57 publications

Bibliometric indexes (from Google Scholar on March 2018)
Total citations 2443 last 5 years: 1070
H index 26 last 5 years 19
I10 Index 35 last 5 years 30
VQR 2004-2010: 1 (top) for each product

List of publications in the last 10 years (2007-present): * as corresponding author

- Dubelaar G, **Casotti R**, Tarran G, Biegala I. (2007). Phytoplankton and their analysis by flow cytometry. In: Dolezel J, Greilhuber J, Suda J: *Flow Cytometry with Plant Cells*. Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim, pagg. 287-322
- *Ribalet F, Wichard T, Pohnert G, Ianora A, Miralto A, **Casotti R**. (2007) Age and nutrient limitation enhance polyunsaturated aldehyde production in marine diatoms. *Phytochemistry* 68: 2059-2067. 3.35
- Brunet C, **Casotti R**, Vantrepotte V, Corato F, Conversano F. (2007). Vertical variability and diel dynamics of picophytoplankton in the Strait of Sicily (Mediterranean Sea) in summer. *Marine Ecol. P.S.* 346: 15-26. IF2.62
- *Ribalet F, Berges JA, Ianora A, **Casotti R**. (2007) Growth inhibition of cultured marine phytoplankton by toxic algal-derived polyunsaturated aldehydes. *Aquatic Toxicology* 85(3): 219-227. IF3.451
- *Ribalet F, Intertaglia L, Lebaron P, **Casotti R**. (2008) Differential effect of three polyunsaturated aldehydes on the growth of thirty three marine bacterial strains. *Aquatic Toxicology* 86: 249-255. IF 3.451
- *Ianora A, **Casotti R**, Bastianini M, Brunet C, d'Ippolito G, Acri F, Fontana A, Cutignano A, Turner J, Miralto A. Low reproductive success for copepods during a bloom of the non-aldehyde producing diatom *Cerataulina pelagica* in the North Adriatic Sea. (2008) *Marine Ecology: an evolutionary perspective* 29: 399-410. IF 1.076
- Brunet C., **Casotti R.**, Vantrepotte V. (2008). Phytoplankton diel and vertical variability in photobiological responses at a coastal station in the Mediterranean Sea. (2008) *J. Plankton Research* 30(6): 645-654. IF 2.407
- D'Alelio D., Amato A., Kooistra W., Procaccini G., **Casotti R.**, and Montresor M. (2008) Internal Transcribed Spacer polymorphism in *Pseudo-nitzschia multistriata* (Bacillariophyceae) in the Gulf of Naples: recent divergence or intraspecific hybridization? *Protist* 160: 9-20. IF3.558
- *Ribalet F., Vidoudez C., Cassin, D., Pohnert G., Ianora A., Miralto A., and R **Casotti** (2009) High plasticity in the production of diatom-derived polyunsaturated aldehydes under nutrient limitation:

Physiological and ecological implications. *Protist* 160(3): 444-451 doi 10.106/j.protis.2009.01.003. IF 3.558

- Legrand C. and **Casotti R.** Climate-induced changes and Harmful Algal Blooms in the Mediterranean: perspectives on future scenarios. *In: CIESM workshop monograph series : Phytoplankton responses to Mediterranean environmental changes, Tunis (Tunisia) 7-10 October 2009, ISSN 1726-5886, no 40, 63-66*
- ***Casotti R.** La citometria a flusso per lo studio dei microorganismi planctonici. (2010) *In: Socal G., Buttino I., Cabrini M., Mangoni O., Penna A., Totti C. (eds.) Metodologie di studio del plancton marino"; Manuali e Linee Guida ISPRA SIBM Roma. Pagg. 311-325*
- *Balestra C., Alonso-Saez L., Gasol J. M., **Casotti R.** (2011) Group-specific effects on coastal bacterioplankton of polyunsaturated aldehydes produced by diatoms. *Aquatic Microbial Ecology* 63: 123-131. IF1.967
- Vidoudez C., **Casotti R.**, Bastianini M., Pohnert G. (2011) Quantification of dissolved and particulate polyunsaturated aldehydes in the Adriatic Sea. *Marine Drugs* 9: 500-513. IF2.853
- Ianora A., Bentley M.G., Caldwell G.S., **Casotti R.**, Cembella A.D., Engstrom-Ost J., Halsband C., Sonnenschein E., Legrand C., Llewellyn C.A., Paldaviciene A., Pilkaityte R., Pohnert G., Razinkovas A., Romano G., Tillmann U., Vaiciute D. (2011) The relevance of marine chemical ecology to plankton and ecosystem function: an emerging field. *Mar. Drugs* 9, 1625-1648. IF 2.853
- *Gallina A., **Casotti R.** (2011) Analisi della produzione di ossido nitrico nella diatomea marina *Skeletonema marinoi* mediante citometria a flusso e DAF-FMDA. *Lettere GIC* 20(1): 24-28
- Karsenti E., Acinas S.G., Bork P., Bowler C., De Vargas C., Raes J., Sullivan M., Arendt D, Benzoni F, Claverie JM, Follows M, Gorsky G, Hingamp P, Iudicone D, Jaillon O, Kandels-Lewis S, Krzic U, Not F, Ogata H, Pesant S, Reynaud EG, Sardet C, Sieracki ME, Speich S, Velayoudon D, Weissenbach J, Wincker P, and the Tara Oceans Consortium including **R. Casotti**. A holistic approach to marine eco-systems biology. *PLOS Biology* (2011) Oct;9(10):e1001177. doi: 10.1371/journal.pbio.1001177. Epub 2011 Oct 18. IF9.343
- Casotti R.** 2012 L'ecologia microbica: dai genomi ai biomi e le interazioni tra gli organismi mediate dai metaboliti secondari. *Biol. Mar. Medit.* 19(1): 2-5
- Pavarese G, Tranchida Lombardo V, Galesi R, D'Emérico S, **Casotti R.**, Cristaudo A, Cozzolino S (2013). When polyploidy and hybridization produce a fuzzy taxon: the complex origin of the insular neoendemic *Neotinea commutata* (Orchidaceae). *Botanical Journal of the Linnean Society* 173, Issue 4, pages 707–720. IF 2.534
- Margiotta F., Mangoni O., Santarpia I., Saggiomo M., Saggiomo V., **Casotti R.** (2013) Response of phytoplankton assemblages to terrigenous pressures in the Southern Tyrrhenian Sea. *Biol. Mar. Mediterr.* 20 (1): 214-215
- *Ribalet F., Bastianini M., Vidoudez C., Aciri F., Berges J., Ianora A., Miralto A., Pohnert G., Romano G., Wichard T, **Casotti R.** (2014). Phytoplankton Cell Lysis Associated with Polyunsaturated Aldehyde Release in the Northern Adriatic Sea. *PLoS One* 9(1): e85947. doi:10.1371/journal.pone.0085947. IF 3.234
- Sansone C., Braca A., Ercolesi E., Francone M., Romano G., Palumbo A., **Casotti R.**, Ianora A. (2014) Diatom-derived polyunsaturated aldehydes activate cell death in human cancer cell lines but not normal cells. *PLoS ONE* 9(7): e101220. doi:10.1371/journal.pone.0101220. IF 3.234
- Catalano G, Azzaro M, Bastianini M, Bellucci L, Bernardi Aubry F, Bianchi F, Burca M, Cantoni C, Caruso G, **Casotti R.**, Cozzi S, Del Negro P, Fonda-Umani S, Giani M, Kovacevic M, La Ferla R, Langone L, Luchetta A, Monticelli L, Piacentino S, Pugnetti A, Ravaioli M, Socal G, Spagnoli F, Ursella L. (2014) The Carbon budget in the northern Adriatic Sea, a winter case study. *J. Geophys. Res. Biogeosci.*, 119, doi:10.1002/2013JG002559. 3.426
- *Gallina A., Brunet C., Palumbo A., **Casotti R.** (2014) The Effect of Polyunsaturated Aldehydes on *Skeletonema marinoi* (Bacillariophyceae): The Involvement of Reactive Oxygen Species and Nitric Oxide. *Mar. Drugs* 12, 4165-4187; doi:10.3390/md12074165. IF 2.853

- Villar E., Farrant G., Follows M., Garczarek L., Speich S. Audic S., Bittner L., Blanke B., Brum J.R., Brunet C., **Casotti R.**, Chase A., Dolan J.R., d'Ortenzio F., Gattuso J-P., Nicolas Grima, Lionel Guidi, Christopher N. Hill, Oliver Jahn, Jean-Louis Jamet, Hervé Le Goff, Cyrille Lepoivre, Shruti Malviya, Eric Pelletier, Jean-Baptiste Romagnan, Simon Roux, Sébastien Santini, Eleonora Scalco, Sarah M. Schwenck, Atsuko Tanaka, Pierre Testor, Thomas Vannier, Flora Vincent, Adriana Zingone, Céline Dimier, Marc Picheral, Sarah Searson, Stefanie Kandels-Lewis, *Tara Oceans* coordinators, Silvia G. Acinas, Peer Bork¹⁷, Emmanuel Boss, Colomban de Vargas, Gabriel Gorsky, Hiroyuki Ogata, Stéphane Pesant, Matthew B. Sullivan, Shinichi Sunagawa, Patrick Wincker, Karsenti E., Bowler C., Not F., Hingamp P., Daniele Iudicone D. (2015). Environmental characteristics of Agulhas rings affect inter-ocean plankton transport. *Science* 348(6237) doi: 10.1126/science.1261447. IF33.61
- Ianora A., Bastianini M., Carotenuto Y., **Casotti R.**, Roncalli V., Miralto A., Romano G., Gerech A., Fontana A. and Turner J.T. (2015) Non-volatile oxylipins can render some diatom blooms more toxic for copepod reproduction. *HAB Journal* 44: 1-7. IF 3.874
- Clerissi C., Desdevises Y., Romac S., Audic S., de Vargas C., Acinas S., **Casotti R.**, Poulain J., Winker P., Hingamp P., Ogata H., Grimsley N. (2015) Deep sequencing of amplified Prasinovirus and host green algal genes from an Indian Ocean transect reveals interacting trophic dependencies and new genotypes. *Environmental Microbiology Reports* 7(6): 979-989. IF 3.293
- *Gallina A., Chung C-C., **Casotti R.** (2015) Expression of death-related genes and ROS production in *Skeletonema tropicum* upon exposure to the polyunsaturated aldehyde octadialenol. *Advances in Oceanography and Limnology* 6(1/2): 13-20
- Amalfitano S., **Casotti R.**, Balestra C., Papa S., Manti A., De Vita R. (2015) La citometria a flusso nella microbiologia ambientale. *Biologi Italiani* Dicembre, pagg. 58-63
- *Gallina A., Palumbo A., **Casotti R.** (2016) Oxidative pathways in response to polyunsaturated aldehydes in the marine diatom *Skeletonema marinoi* (Bacillariophyceae) *J. Phycology*;52(4):590-8. IF 2.844
- *Pepi M., Borra M., Tamburrino S., Saggiomo M., Viola A., Biffali E., Balestra C., Sprovieri M. **Casotti R.** (2016) A *Bacillus* sp. isolated from sediments of the Sarno River mouth, Gulf of Naples (Italy) produces a biofilm biosorbing Pb(II). *Science of the Total Environment* 562: 588-595. IF 4.099
- *Thiele S., Richter M., Balestra C., Glockner F-O, **Casotti R.** (2017). Taxonomic and functional diversity of a coastal planktonic bacterial community in a river-influenced marine area. *Marine Genomics* 32:61-69
- *Pepi M., Heipieper H.J., Balestra C., Borra M., Biffali E., **Casotti R.** (2017) Toxicity of diatom polyunsaturated aldehydes to marine bacterial isolates reveals their enormous potential as contact poisons *Chemosphere* 177: 258-265
- Basu S., Patil S., Mapleson D., Russo M., Vitale L., Fevola C., Maumus F., **Casotti R.**, Mock T., Caccamo M., Montresor M., Sanges R., Ferrante M.I. (2017) Finding a partner in the ocean: molecular and evolutionary bases of the response to sexual cues in a planktonic diatom. *New Phytologist* 215(1): 140-156
- * Richa K., Balestra C., Piredda R., Benes V., Borra M., Passarelli A., Margiotta F., Saggiomo M., Biffali E., Sanges R., Scanlan DJ., **Casotti R.** (2017) Distribution, community composition and potential metabolic activity of bacterioplankton in an urbanized Mediterranean Sea coastal zone. *Applied and Environmental Microbiology* 83(17):1-17 83:e00494-17.
- Sansone C., Galasso C., Ummarino R., **Casotti R.**, Romano G., Ianora A. The marine dinoflagellate *Alexandrium andersoni* induces cell death in lung and colorectal tumor cell lines. *ACCEPTED IN MARINE BIOTECHNOLOGY*