

*Raffaella Casotti*

## CURRICULUM VITAE

Born in Naples, Italy. May 8th, 1964

Single, 2 children

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### BIBLIOMETRY (as of October 28th, 2019, Google Scholar)

	All	from 2014
Citations	3035	1382
H Index	29	18
i10-index	37	32

- 1987: Laurea in Natural Sciences at the University of Naples “Federico II”, Thesis in Marine Biology, title: Phytoplankton and Primary Production in the Gulf of Naples. Taxonomical determination of species, study of their distribution as a function of physical factors.
- 1988-1990: Visiting Investigator at the Woods Hole Oceanographic Institution, Woods Hole, USA. Study of the applications of flow cytometry to the study of microphytoplankton. Focus on coccolithophorids.
- 1991-1993: Contract and Graduate Fellow at the Station Biologique de Roscoff, France. Study of the physiology of the noxious alga *Phaeocystis* and of the DNA and cell cycle of *Prochlorococcus*
- 1994-1996: Contract at the Stazione Zoologica “A. Dohrn” of Naples, Italy to set up transformation systems of marine diatoms
- 1996-2000: Doctorate in Environmental Sciences, University of Messina, Italy. Title of the thesis: Characterization and ecophysiology of ultraplankton in the Gulf of Naples and the Sicily Strait by flow cytometry. Focus on flow cytometric detection and characterization of light response on cultures and natural populations of phytoplankton.
- 2000 to date: Research Scientist (permanent position) at the Stazione Zoologica “A. Dohrn” of Naples, Italy.
- 2010- 2017 Contract Professor of the University of Naples Federico II. Course in Environmental Impact Assessment
- 2012-2014 Coordinator of the Core Facility “Management and Ecology of Temperate and Polar Coastal Areas” and the Fishery Service of the SZN
- 2012- 2017 Coordinator of the PhD Program of the SZN

### PROFESSIONAL ACTIVITIES

Expertise in microbial ecology, biological oceanography, phytoplankton ecology, physiology, ecotoxicology, flow cytometry

Outreach officer for the Research Mode Project “ROSEMEB” within the Network of Excellence MARBEF, 2009-2014

Member of the Board of the Italian Society of Cytometry (GIC) 2001-2013

Member if the Board of the Italian Association for Oceanography and Limnology 2012-2014

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 2001-2013

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

Referee for international journals such as Journal of Plankton Research, Cytometry, Limnology and Oceanography, Marine Biology, PLoS One, Aquatic Toxicology, etc.

Supervisor of 6 PhD thesis (3 Italian, 3 UK), 6 MSc thesis.

Examiner of 2 PhD in France, 1 in China, 2 in the UK, 5 in Australia

Evaluator for the European Commission in FP5, FP6, FP7 (Marie Curie, Integrated Projects e CSA), Horizon2020 (INFRAIA-RIA)

Evaluator for the German EVAL-INCO, French ANR, the Royal Dutch Research Foundation, and the Italian CNR (shiptime requests), Italian Ministry of University and Education, the Rumenian Research Agency, la "Caixa" Foundation (Spagna)

## HONORS 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

## DUTIES AND FUNCTIONS

2017 Scientific Coordinator of the Collaboration Agreement with the National Institute of Oceanography and Experimental Geophysics of Trieste (OGS), Italy

2017 Representative of the SZN in the General Assembly of the EuroMarine Association

2017 Representative of the Collaboration Agreement with the University of Urbino Carlo Bo (Italy)

2016 Member of the Examining Commission of a public competition for the permanent hiring of 1 researcher III professional level at the National Institute of Oceanography and Experimental Geophysics (OGS) of Trieste (Italy)

2010-2016 Contract Professor at the University of Naples Federico II, 2010/2011, 2011/2012, 2012/2013, 2013/2014, 2014/2015, 2015/2016. Environmental Impact Assessment Teaching (between 48 and 40 hours)

2016 Attorney of the President of the SZN Prof. Danovaro for signing ATS TOP-IN association agreement

2016 Referent of SZN for current scientific and technical projects for the Observatory of the Sea for the elaboration of joint project proposals

2015- 2019 Responsible of the Laboratory of Microbial Ecology of the SZN

2014 to date Member of the Teaching Committee of the PhD Course in Veterinary Sciences of the University of Federico II

2012- 2017 Coordinator of the PhD Program of the SZN

2014-2019. SZN Manager for the implementation of the "TERNA" Project "Implementation of the environmental monitoring plan in the marine area concerned for the construction of the 150 kV power line" New Capri-CP Torre Annunziata Centro Electrical Station ". Coordinator and responsible for sampling and subsequent analysis of nutrients (organic and inorganic), phytoplankton biomass (chlorophyll a) and total suspended solids (TSS) and subsequent reporting

2014-2016 Member of 11 Testing Commissions for SZN goods and services (10 as President)

2014-2017 Component of the Commission referred to in Article 11, points 12 and 13 of the Supplementary Contract for the allocation of compensation to the Technical Staff of the SZN

2014 and 2015 Member of 4 Tender Commissions for infrastructure acquisitions (2 as President)

2014-2017 Responsible for the Memorandum of Understanding between the SZN and the Marche Polytechnic University (Ancona, Italy)

2014 Commission Member for the selection of 8 trainees for the Advanced Training course within the PON EMSO MedIT with the functions of examiner of written and oral exams

2014 Scientific Responsible for the Scientific Collaboration Agreement for the execution of Current Research "Prevalence and molecular characterization of Clostridium difficile strains isolated from edible

lamellibranch molluscs of different origins" between SZN and Experimental Southern Zooprophylactic Institute with coordination of activities and fund management

2014 Coordinator of Program 5 of the SZN "Mechanisms that regulate biological processes and plankton ecology" with the role of scientific and administrative coordinator and Responsible of the research activity on the characterization of marine bacterial communities by flow cytometry and molecular methods, such as defined in the 2014-2016 Three Year Plan

2014 Single Process Manager for the RdO of the EMSO MedIT project with administrative-management functions for the purchase of what is foreseen in the Infrastructure Enhancement Project

2013-2016 Scientific Manager of the Memorandum of Understanding between the SZN and the National Institute of Geophysics and Volcanology (INGV) for the performance of activities related to monitoring environmental risk in the context of EMSO MedIT and IRMA projects

2013-2016 Scientific Manager of the PON EMSO-MedIT Project for the implementation of the planned infrastructure upgrade

2013-2016 Scientific Manager of the ENPI S&T Med Project and Member of the Management Committee

2013-2015 Coordinator of 2 Operational Units of the MIUR Flag Project "RITMARE" for basic research in 1) application of new continuous flow cytometry methods for marine monitoring in the Gulf of Naples and in the Northern Adriatic Sea 2) characterization of marine bacterial communities with integrated approach between flow cytometry, CARD-FISH, metagenomics and metatranscriptomics

2013 - Participant in the Task Force of the European Marine Biology Resource Center (EMBRC) of the SZN for the elaboration of project proposals

2013 Commission to represent the SZN in the "Napoli-Shanghai" event organized by the Consulate General of Italy in Shanghai (November)

2012-2015 Scientific Responsible for the ISCHIAGAS project "Ischia marine environment monitoring" and coordinator of the activities envisaged by the contract for monitoring the environmental impact of the pipeline between the mainland and the island of Ischia, in particular on the Posidonia oceanica grassland

2012-2014 Coordinator of the Functional Area "Environment Management and Coastal Ecology of the Temperate and Polar Areas", of the Fishing Service, of the Enclosure Service and of the Taxonomy and Marine Phytoplankton Identification Service "of the SZN

2012-2014 Seminar Commission Member of the SZN which deals with the evaluation and selection of speaker proposals to be invited as part of the institutional seminar program

2012-2014 Component of the Technical Structure of the SZN in the context of the Performance Plan which deals with drawing up the Institute's Performance Plan as required by law

2012-2014 Internal Contact for the management of the contract for the M / B Vettoria armament service with duties of coordinator and approval of expenses and repairs

2012 to date. Member of the Working Groups of the Italian Oceanographic Commission

2012 Member of Examination Competition Commission for Technician at T.I. at the SZN

2012 Single Process Manager for the Conference Methods in Microbial Ecology with administrative and management functions for the economic part of the International Course in Microbial Ecology "within the INCOMMET Project

2011-2016 Member of 23 Commissions for the awarding or renewal of Research Grants or Collaboration Agreements of the SZN (11 as President)

2008-2016 SZN Curator and Coordinator of the SZN-NSC Cooperation Agreement in Taipei (Taiwan)

Registered in the rolls of Expert Evaluators of the European Commission (H2020 Advisory Group) and of the French National Research Agency

Member of the Scientific Committee and of the Evaluation Committee for the admission to the List of Expert Cytometrists on the structure of the professional scientific register of the Italian Society of Cytometry (GIC) since 2014

Member of the Executive Council of the Italian Society of Cytometry (GIC) 2001-2013

Member of the Presidential Council of the Italian Association of Oceanography and Limnology 2012-2015

Member of the Editorial Board of Marine Ecology journal since 2008

Member of the Editorial Board of PloS One magazine since 2018

"ROSEMEB" Outreach Officer for the Research Mode Project under the EC Network of Excellence MARBEF 2004-2009

Vice Chair of the Gordon Research Conference "Marine Microbes" held in Tilton (USA) July 2010  
Chair of the Gordon Research Conference "Marine Microbes" held in Il Ciocco (Italy) June 2012

## **ASSESSMENT OF PROJECTS, PUBLICATIONS AND STUDENTS**

Project Evaluator for the European Commission (FP5, FP6, FP7 (Marie Curie, Integrated Projects and CSA), HORIZON2020 (RI))

Evaluator for the French Research Agency (ANR), the German one (EVAL-INCO), the Royal Dutch Research Foundation, the Romanian Research Agency (2016) and the CNR (ship requests), MIUR (PRIN projects), the "Caixa" Foundation (Spain), EuroMarine (projects)

Examiner of 2 Doctorates in France, 1 in China, 2 in the UK, 5 in Australia and a Habilitation à Diriger la Recherche in France. Panel Chair of 3 English PhD theses (Open University).

Referee for several international scientific journals such as Journal of Plankton Research, Cytometry, Limnology and Oceanography, Marine Biology, Aquatic Toxicology, PLoS One, Protist

## **ORGANIZATION OF COURSES AND CONFERENCES**

2001-2012 Coordinator of the Course on Environmental Applications of Flow Cytometry of the National School of Cytometry GIC from 2001 to 2012 with the function of organizer of courses and teacher

2001 Member of the Scientific Committee of the XVIII National Conference of Cytometry, Rome, April

2004 Organizer of the course "The Role of Flow Metrics in Marine Biodiversity and Ecosystem Functioning" funded by the "MARBEF" Network of Excellence, Naples, November 2004

2006 Member of the Scientific Committee of the Course "Chemical ecology and bioassay methods" funded by the Network of Excellence "MARBEF" Tjarno (Sweden), September 2006

2007 Organizer of the Summer Course in "Plankton Bloom Dynamics. An integrative approach using molecular and genomic tools" Barcelona (Spain) June 2007

2012 Organizer of the "International Course in Microbial Ecology" within the INCOMMET Project, Naples, November 2012

2012 Chair-elected of the Gordon Research Conference "Marine Microbes, Il Ciocco (LU) 24-28 June 2012. Responsibilities include: elaboration of the program, choice of speakers, search for external financing to Gordon, choice and invitation Moderators

2016 Chair of the Session "Agriculture, soil, forest microbiology, Environmental, marine, aquatic, Geomicrobiology" of the VI International Conference on Environmental, Industrial and Applied Microbiology, Barcelona (Spain), November 2016

## **FUNDING**

2003-2006 Agreement with ISMAR - OBASI (45,000.00 euros). Coordinator of sampling and collection of oceanographic and phytoplankton data, fund management

2010 Progetto Premiale "MICGEN" MICrobial GENomics - MIUR Funds (approximately € 10,000.00). Responsible for research on bacterial metagenomics of two sites with different trophic characteristics, fund management

2012-2015 FP7 EC CSA INCOMMET (Improving National Capacities in Observation and Management of Marine Environment in Tunisia) (total funds € 36.427). Responsible for training activities in flow cytometry and technology transfer by organizing research periods of Tunisians at the SZN. Member of the Project Control Committee. Management of funds assigned to the SZN

2012-2015 ISCHIA GAS Contract (Responsible since 2012) (Monitoring of the Posidonia prairie in Ischia) (€ 372,400). Coordination of sampling and analysis, fund management

2012-2016 EC CBC- ENPI S&T Med Project (Sustainability and Tourism in the Mediterranean Area) (total funds € 480,137). Project Manager and Scientific Manager for the SZN. Coordinator of WP7 (Sites Monitoring) whose objective is the acquisition, instaction and management of three monitoring systems (buoys) in Italy (Sardinia), Jordan (Aqaba) and Tunisia. Responsibilities include: technical and experimental design of monitoring systems, management of administrative files and funds, participation in assignment and contract tenders, formal testing and management of funds, preparation of technical specifications.

2013 Premiale MIUR "IRMA" (Implementation and Remote connection of a platform for real time monitoring of MArine microorganisms "MIUR Funds (€ 388,101.00). Responsible for the research for the experimentation of an automatic module for coloring and subsequent counting of marine heterotrophic bacteria by flow cytometry Fund management

2013-2014 SZN Project n.5 "Mechanisms that regulate biological processes and plankton ecology (87.349,00). Coordination of the Program and Project Manager on metagenomics and characterization of the bacterial communities of the Gulf of Naples. Fund management

2013-2016 PON3 PAC00044 EMSO MED IT (2.006.180,00 €). Project Manager and Scientific Manager, coordination of WP2 (design of the monitoring and management sites of the European Tenders for the acquisition of environmental monitoring systems (buoys), fund management, testing and technical specifications processing)

2013-2016 National Flag Project RITMARE (2012-2015 SP3\_WP2\_AZ1\_UO2 and SP3\_WP3\_AZ1\_UO3 (€ 200,000 85,700.00 + 114,300.00 for the first period) Responsible for 1) Acquisition, implementation and management of a high frequency flow cytometer with automatic and programmable sampler for continuous monitoring 2) Metagenomics and metatranscriptomics integrated with flow cytometry and molecular methods for the fine characterization of the baterial communities of the Gulf of Naples and the Northern Adriatic Sea.

2014-2019 TERNA contract (476,410.00 euros - SZN share) for environmental monitoring in the marine area affected by cable laying and commissioning of the 150 kV "New SE Capri - CP Torre A. Centro" power line by Terna Italia network, operator of electricity transmission networks. Coordinator and responsible for sampling and subsequent analysis of nutrients (organic and inorganic), phytoplankton biomass (chlorophyll a) and total suspended solids (TSS) and subsequent reporting

2014-2015 Research Agreement MARINE STRATEGY (100,000.00 euros). Monitoring of the Gulf of Naples aimed at filling cognitive gaps of the plankton in the area

2015 French ENVIMED MENAPHY project (Training in support of Turkey - contribution for travel expenses). Responsible for high frequency flow cytometry training in Naples

2015 Contract IZP ME2 (Zooprophylactic Institute for Southern Italy) "Prevalence and molecular characterization of Clostridium difficile strains isolated from edible lamellibranch molluscs of different origin" (€ 4,250). Coordination of sampling and analysis, management of funds

2015 - Financing of 1 Research Grant from the Regional Council of Campania (24,500 euros). Recruitment and training of the Associate (A.Chiara TRANO) on the characterization of marine bacterial communities through CARD-FISH and flow cytometry

2018- PON Project "Place" ARS01\_00891 "Conversion of Off-Shore Platforms for ecosustainable multiple uses – PlaCE". Total funds to the project euro 4.375.988,86 (700K net for the SZN). Responsible for conventional and in situ flow cytometry sampling and phytoplankton analyses.

2019-JPI Ocean Project "MicroplastiX" for the assessment and modelling of microplastics distribution in the Atlantic Ocean (150K euro requested). Member in charge of the analysis of previous data and of the microbial biofilm inhabiting microplastics.

## OCEANOGRAPHIC CRUISES

RV OCEANUS cruise 209, Woods Hole to Woods Hole, Sargasso Sea. May 15-20, 1989.

RV OCEANUS cruise 214, Woods Hole to Woods Hole, Sargasso Sea. October 14-29, 1989.

RV URANIA Civitavecchia to Siracusa, Sicily Channel, July 19-31, 1997.

RV URANIA Bari to Siracusa, April 26- May 10<sup>th</sup>, 1999

RV URANIA, Ravenna to Ravenna, May 28- June 11, 2003

RV DallaPorta, Venice to Venice, Feb 28- March 4, 2004

RV DallaPorta, Venice to Venice, March 16-20, 2006

RV URANIA, Trieste to Ancona, February 14-20, 2008

RV Urania, Napoli to Napoli, Tyrrhenian Sea, October 28-November 10th, 2010

XXVII Spedizione Italiana in Antartide 2011-2012

RV CORWITH CRAMER della SEA Education Association (Woods Hole, USA) Cadice (Spagna) - Cartagena (Spagna), August 6-11, 2014

RV DallaPorta, Ancona-Ancona, Northern Adriatic Sea, April 25 -30, 2016

RV DallaPorta, Ancona-Ancona, Northern Adriatic Sea, February 20-28, 2019

RV TARA, Porto-Cervo-Capri, Tyrrhenian Sea, September 6 to 9<sup>th</sup>, 2019

## PROFESSIONAL AFFILIATIONS

American Society of Limnology and Oceanography (ASLO)

American Geophysical Union (AGU)

Associazione Italiana di Limnologia e Oceanografia (AIOL)

Società Italiana di Citometria (GIC)

Marie Curie Fellowship Association (MCFA)

## FULL LIST OF PUBLICATIONS

- Riberá d'Alcalà' M., Carrada G.C., **Casotti R.**, Modigh M., Saggiomo V. e Vescia S. 1985- Osservazioni sulla distribuzione verticale di ossigeno e clorofilla *a* nelle acque esterne del Golfo di Napoli. *Nova Thalassia*, 3: 121-135.
- Olson R.J., Zettler E.R., **Casotti R.**, Dusenberry J.A.e Chisholm S.W. 1988- Diel Pattern in Light Scatter by Phytoplankton Cells in the Sargasso Sea. *EOS*, 71, 2: 97.
- Carrada G.C., **Casotti R.**, Modigh M. e Saggiomo V. 1991- Presence of *Gymnodinium catenatum* Graham (Dinophyceae) in a coastal Mediterranean lagoon. *Journal of Plankton Research* 13, 1: 229-238.
- Vaulot D., Partenski F. e **Casotti R.** 1993- Application of flow cytometric and microfluorometric DNA measurements to phytoplankton studies. *ICES Marine Sciences Symposia*, 197: 286.
- Marie D., **Casotti R.**, Simon N., Partensky F. e Vaulot D. 1993- Flow cytometric measurements of Prochlorococcus and bacteria cell concentration, cell scatter, pigment fluorescence and cell cycle. In: *Prochlorococcus workshop*, Station Biologique de Roscoff, 40-44.
- Rousseau V., Vaulot D., **Casotti R.**, Cariou V., Baumann M., Günkel J. e Lenz J. 1994-The life cycle of *Phaeocystis* (Prymnesiophyceae): evidence and hypotheses. *J. Marine Systems* 5: 23-39.
- Cariou V., **Casotti R.**, Birrien J.-L. and Vaulot D. 1994- The initiation of *Phaeocystis* colonies. *Journal of Plankton Research* 16, 5: 457-470.
- Vaulot,D., Birrien,J.-L., Marie,D., **Casotti R.**, Veldhuis,M., Kraay,G. and Chrétiennot-Dinet,M.-J. 1995- *Phaeocystis* spp.: DNA content, cell size and pigment composition of cultured strains. *Journal of Phycology* 30:1022-1035.
- Zingone, A., **Casotti R.**, Marino,D., Scardi,M. and Ribera d'Alcalà',M. 1995- S. Martin's Summer in the Gulf of Naples (Mediterranean Sea): Phytoplankton and Primary Production. *Journal of Plankton Research* 17, 3, 575-59.
- Brunet C., Davout D. and **Casotti R.** 1996- Physiological reactions to a change in light regime in cultured *Skeletonema costatum* (Bacillariophyta): implications for estimations of phytoplankton biomass. *Hydrobiologia* 333:87-94.
- Falciatore A., **Casotti R.** e Bowler C. 1996- Transfer of foreign genes in marine diatoms. EC-Science, Research Development: "Marine Organisms: Research Issues for Biotechnology": 31-43.
- Casotti R\***., Ribera d'Alcalà M and Bowler C. 1997- A molecular approach to the study of photoadaptation in phytoplankton. Genetic transformation of marine diatoms. Un approccio molecolare allo studio del fotoadattamento del fitoplankton. Trasformazione genica di diatomee marine. *Biologia Marina Mediterranea*. 4(1): 24-29.
- Casotti R\***., Brunet C., Aronne B. e Ribera M. 1998- Physical structures and phytoplankton: a combined study of HPLC and flow cytometry. *Oceanography* vol.11, No. 2, pag.45.
- Brunet C., **Casotti R.** e Aronne B. 1998- Physical control phytoplankton photophysiology at mesoscale in the Gulf of Naples (Italy). *Oceanography* vol.11, No. 2, pag.44-45.
- Bohm E., Buongiorno Nardelli B., Brunet C., **Casotti R.**, Conversano F., Corato F., D'Acunzo E., D'Ortenzio F., Iudicone D., Lazzara L., Mangoni O., Marcelli M., Marullo S., Massi L., Mori G., Nardello I., Nuccio C., Ribera d'Alcalà' M., Saggiomo V., Santoleri R., Scardi M., Sparnocchia S., Tozzi S., Zoffoli S. 1999- SYMPLEX Experiment: first results on oceanic mesoscale dynamics and

- related primary production from AVHRR and SeaWiFS satellite data and field experiments. SPIE Vol. 3496: 137-148.
- Falciatore A., **Casotti R.**, Leblanc C., Abrescia C e Bowler C. 1999- Transformation of a non-selectable reporter gene in marine diatoms. *Marine Biotechnology*, vol.1 n.3 pp. 239-251.
- Casotti R\***., Brunet C., Aronne B e Ribera d'Alcalà M. 2000-. Mesoscale features of phytoplankton and planktonic bacteria in a coastal area as induced by external water masses. *Mar. Ecol. P.S.* 195: 15-27.
- Casotti R\***., Brunet C. e Graziano A. 2001. Identification, counting and fluorescence of ultraplankton populations in the Gulf of Naples by flow cytometry. In: Faranda F.M., Guglielmo L., Spezie G. Eds. "Structures and processes in mediterranean ecosystems". Springer-Verlag, Berlin: 171-180.
- Jacquet S., Partensky F., Marie D., **Casotti R**, e Vaulot D. 2001. Cell cycle regulation by light in *Prochlorococcus* strains. *Appl. Environ. Microbiol.* 67(2): 782-790.
- Casotti R. 2001\***. La citometria a flusso in ecologia marina: applicazioni e prospettive. *Lette GIC* 9(3): 85-92.
- Casotti, R\***., Landolfi A., Brunet C., D'Ortenzio F., Mangoni O., Ribera d'Alcalà M. and Denis M. 2003. Composition and dynamics of the phytoplankton of the Ionian Sea (Eastern Mediterranean). *J. Geophys. Res.* 108(C9), 8116, doi: 10.1029/2002JC001541.
- Brunet C., **Casotti R.**, Aronne B. And Vantrepotte V. (2003) Measured photophysiological parameters used as tools to estimate vertical water movements in the coastal Mediterranean. *J. Plankton Research*, 25(11): 1413-1425
- Ianora, A., A. Miraldo, S.A. Poulet, Y. Carotenuto, I. Buttino, G. Romano, **R. Casotti**, G. Pohnert, T. Wichard, L. Colucci D'Amato, G. Terrazzano and V. Smetacek (2004) Aldehyde suppression of copepod recruitment in blooms of a ubiquitous planktonic diatom. *Nature* 429: 403-407.
- Casotti R,\*** Brunet C, Bastianini M, D'Ortenzio F, Mazza S, Ianora A and Miraldo A. 2004. Apoptosis and cell lysis rates during a diatom bloom in the North Adriatic Sea. *Rapp. Comm. int. Mer Médit.* 37: 329.
- Casotti R\***, Mazza S, Brunet C, Vantrepotte V, Ianora A, Miraldo A. (2005) Growth autoinhibition and genotoxicity of the diatom aldehyde 2-trans-4-trans decadienal on *Thalassiosira weissflogii* (Bacillariophyceae). *J. Phycol.* 41: 7-20.
- Paffenhöfer, G.-A., A. Ianora, A. Miraldo, J. T. Turner, G. S. Kleppel, M. Ribera d'Alcala, **R. Casotti**, G. Caldwell, G. Pohnert, A. Fontana, D. Müller-Navarra, S. Jonasdóttir, V. Armbrust, U. Bamstedt, S. Ban, M. Bentley, M. Boersma, M. Bundy, I. Buttino, A. Calbet, F. Carlotti, Y. Carotenuto, G. d'Ippolito, B. Frost, C. Guisande, W. Lampert, R. Lee, S. Mazza, M.G. Mazzocchi, J. Nejstgaard, S.A. Poulet, G. Romano, V. Smetacek, S. Uye, S. Wakeham, S. Watson, and T. Wichard (2005) Colloquium on diatom-copepod interactions. *Mar. Ecol. Prog. Ser.* 286: 293-305
- Vardi, A., F. Formiggini, **R. Casotti**, A. de Martino, F. Ribalet, A. Miraldo and C. Bowler (2006) A stress surveillance system based on calcium and nitric oxide in marine diatoms. *Public Library of Sciences – Biology* 4(3): 1-9 (e60).
- Ianora A., M. Boersma, **R. Casotti**, A. Fontana, J. Harder, F. Hoffman, H. Pavia, P. Potin, S.A. Poulet, and G. Toth. (2006). New Trends in Marine Chemical Ecology. *Estuaries and coasts* 29(4): 531-551.
- Brunet C, **Casotti R**, Vantrepotte V, Corato F, Conversano F. (2006). Picophytoplankton diversity and photoadaptation in the Strait of Sicily (Mediterranean Sea) in summer. I. Mesoscale variations. *Aquat. Microb. Ecol.* 44: 127-141
- 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, Miraldo A, **Casotti R\***. (2007) Age and nutrient limitation enhance polyunsaturated aldehyde production in marine diatoms. *Phytochemistry* 68: 2059-2067
- 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

- 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
- 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
- Ianora A, **Casotti R\***, Bastianini M, Brunet C, d'Ippolito G, Acri F, Fontana A, Cutignano A, Turner J, Miraldo A. (2008) Low reproductive success for copepods during a bloom of the non-aldehyde producing diatom Cerataulina pelagica in the North Adriatic Sea. **Marine Ecology: an evolutionary perspective** 29: 399-410
- 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
- D'Alelio D., Amato A., Kooistra W., Procaccini G., **Casotti R.**, and Montresor M. (2008) Internal Transcribed Spacer polymorphism in *Pseudo-nitzschia multiseries* (Bacillariophyceae) in the Gulf of Naples: recent divergence or intraspecific hybridization? **Protist** 160: 9-20
- Ribalet F., Vidoudez C., Cassin, D., Pohnert G., Ianora A., Miraldo A., and Raffaella **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 10.1016/j.protis.2009.01.003
- 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
- Vidoudez C., **Casotti R.**, Bastianini M., Pohnert G. (2011) Quantification of dissolved and particulate polyunsaturated aldehydes in the Adriatic Sea. **Marine Drug** 9: 500-513
- 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
- Gallina & **Casotti** (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
- Casotti R.** (2012) L'ecologia micobica: dai genomi ai biomri e le interazioni fra gli organismi mediate dai metaboliti secondari. **Biol. Mar. Mediter.** 19(1): 2-5
- Pavarese G., Tranchida-Lombardo V., Galesii R., D'Emerico S., **Casotti R.**, Cristaudo A. and 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**, 2013, DOI: 10.1111/boj.12093
- Margiotta F., Mangoni O., Santarpia I., Saggiomo M., Saggiomo V., **Casotti R.** (2013) Response of phytoplankton assemblages to terrigenous pressures in the Southern Thyrrhenian Sea. **Biol. Mar. Mediterr.** 20 (1): 214-215
- \*Ribalet F., Bastianini M., Vidoudez C., Acri F., Berges J., Ianora A., Miraldo 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., Ercole E., Francione 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., Miraldo A., Romano G., Gerecht 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., Desdevives Y., Romac S., Audic S., de Vargas C., Acinas S., **Casotti R.**, Poulaing 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 octadienal. *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.** Oxidative pathways in response to polyunsaturated aldehydes in the marine diatom *Skeletonema marinoi* (Bacillariophyceae) (2016) *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.** A *Bacillus* sp. isolated from sediments of the Sarno River mouth, Gulf of Naples (Italy) produces a biofilm biosorbing Pb(II). (2016) *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. (2018) Butanol extract of the dinoflagellate *Alexandrium andersoni* induce caspase-independent cell death in lung and colorectal tumor cell lines. *Marine Biotechnology* 20(3): 343-35
- Babić I., Mucko M., Petrić I., Bosak S., Mihanović H., Vilibić I., Dupčić R., Cetinić I., Balestra C., **Casotti R.**, Ljubešić Z. (2018) Uncovering marine bacterial diversity in a marginal sea: from surface to seabed

Mucko M., Bosak S., **Casotti R.**, Balestra C., Ljubešić Z. Winter picoplankton diversity in an oligotrophic marginal sea. (2018) *Marine Genomics* 42: 14-24

Celussi M., Zoccarato L., Bernardi Aubry F., Bastianini M. **Casotti R.**, Balestra C., Giani M., Del Negro P. Links between microbial processing of organic matter and the thermohaline and productivity features of a temperate river-influenced Mediterranean coastal area (2019). *Estuarine, Coastal and Shelf Sciences* <https://doi.org/10.1016/j.ecss.2019.106378>

## NON-IFI

Gallina & **Casotti** (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

**Casotti R.** L'ecologia microbica: dai genomi ai biompi e le interazioni tra gli organismi mediate dai metaboliti secondari. (2012) *Biol. Mar. Medit.* 19(1): 2-5

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 octadienal. *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

Centurioni, L., Braasch L., Di Lauro, E., Contestabile, P., De Leo, F., **Casotti, R.**, Franco, L., Vicinanza, D. (2017) A new strategic wave measurement station off Naples port main breakwater, *Coastal Engineering Proceedings* 1(35): 12pp

Trano A.C., Balestra C., **Casotti R.** (2017) Analisi delle variazioni temporali delle comunità mirobiche planctoniche in una zona costiera del Golfo di Napoli tramite citometria a flusso-*Lettere GIC* 26(1): 27-31

Bastianini M., Riminucci F., Capotondi L., Barra E., Pasqual S., Casotti R., Trano A.C., Van Dijk M., Celussi M., Fabbro C. (2017) Rapporto sulle attività oceanografiche, biologiche e di manutenzione della stazione MEDA S1-GB svolte durante la campagna LTER-ANOC16 (26-30 aprile 2016) con N/O DallaPorta nel Mare Adriatico Settentrionale. Rapporto Tecnico CNR-ISMAR, N° 145, pp. 1-27

Bastianini M., F. Riminucci, M. Pansera, A. Coluccelli, R. Casotti, E. Dal Passo, L. Dametto, M. Van Dijk, E. Russo, J. Titocci, J. Pazzaglia, S. Virgili (2017). Rapporto sulle attività biologiche, oceanografiche, geologiche e di manutenzione della stazione Boa E1 svolte durante la campagna INTERNOS17 (14-21 marzo 2017) con N/O Minerva Uno nel Mare Adriatico centro-settentrionale. Rapporto Tecnico CNR-ISMAR N° 146, 2017, pp. 1-37.

## REFERED ABSTRACTS

Olson R.J., Zettler E.R., **Casotti R.**, Dusenberry J.A.e Chisholm S.W. 1988- Diel Pattern in Light Scatter by Phytoplankton Cells in the Sargasso Sea. *EOS*, 71, 2: 97.

**Casotti R.**, Brunet C., Aronne B. e Ribera M. 1998- Physical structures and phytoplankton: a combined study of HPLC and flow cytometry. *Oceanography* vol.11, No. 2, pag.45.

Brunet C., **Casotti R.** e Aronne B. 1998- Physical control phytoplankton photophysiology at mesoscale in the Gulf of Naples (Italy). *Oceanography* vol.11, No. 2, pag.44-45.

- Balestra C., **Casotti R.**, Alonso-Saez L., Celussi M., Bastianini M., Gasol J.M., Ianora A. (2010). The effect of polyunsaturated aldehydes on marine phytoplankton and bacteria. *Cytometry Part A* 77(2):155
- Balestra C., Bastianini M., **Casotti R.** (2010) Winter distribution and dynamics of picoplankton in the northern Adriatic Sea. *Cytometry Part A* 77(2): 155
- Casotti R. 2011 Cytometry for early warning of environmental risks in marine coastal areas. *Cytometry Part B – Clinical Cytometry* 80(6): 395-396
- Balestra C., Celussi M., Bastianini M. and **Casotti R.** 2011. Polyunsaturated aldehydes effect on microbial community composition and dynamics in the Northern Adriatic Sea. *Cytometry Part A* 79A: 10281077, 2011- pp.1036-1037
- Gallina A., Palumbo A. and **Casotti R.** 2011. Reactive Nitrogen and Oxygen Species (RNS/ROS) production in response to polyunsaturated aldehydes in the marine diatom *Skeletonema marinoi*. *Cytometry Part A* 79A: 1038
- Balestra C. and **Casotti R.** (2013) An integrated approach to understand the microbial community structure and functioning in coastal areas. *Cytometry A* 2013; 83A: DOI: 10.1002/cyto.a.22412
- Balestra C., Galasso C., **Casotti R.** (2013) Effect of algal polyunsaturated aldehydes on a natural marine bacterial community from the Gulf of Naples *Cytometry A* 2013; 83A: DOI: 10.1002/cyto.a.22412
- Balestra C., Trano AC., **Casotti R.** (2013) Distribution and composition of natural bacterial community at a Long Term Ecological Research Station (LTER) in the Gulf of Naples. *Cytometry A* 2013; 83A: DOI: 10.1002/cyto.a.22412
- Casotti R., Balestra C, Van Dijk M, Passarelli A, Sigrist J, Hammes F . Real-Time microbial concentrations by automated on-line flow cytometry for marine coastal monitoring. Proceedings of the IMEKO TC19 International Workshop “Metrology for the Sea”, (2017) pp. 50-53
- van Dijk MA, Passarelli A, Conversano F, Casotti R. Phytoplankton dynamics by autonomous high-frequency flow cytometry from a floating buoy in the Gulf of Naples. Proceedings of the IMEKO TC-19 International Workshop on Metrology for the Sea, (2017) pp. 54-57
- Fanelli E, Aguzzi J, Casotti R, Conversano F, D'Alelio D, Iudicone D, Marini S, Stefani S. NEREA, the Naples Ecological Research for Augmented observatories: Towards an end-to-end transdisciplinary approach for the study of marine ecosystems. Proceedings of the IMEKO TC-19 International Workshop on Metrology for the Sea (2019)