




Ilaria Corsi, Ph.D.

First name	Ilaria
Family name	Corsi
Date of birth	July 1 st 1971
Place of birth	Macerata (Italy)
Nationality	Italian
Gender	Female

Present position: Permanent position as Associate Professor of Ecology, full time Lecturer/Researcher Head of the Laboratory of Ecotoxicology of emerging contaminants and nanomaterials Department of Physical, Earth and Environmental Sciences, University of Siena, Siena (Italy)

Marital status: Married, 3 daughters

Scientometry: <http://www.researcherid.com/rid/D-3795-2012>

Scopus  <http://orcid.org/0000-0002-1811-3041>

Education

2001 PhD in Environmental Biology, Faculty of Science, University of Siena (Italy). *Endocrine disruptors in fish: bioaccumulation and interaction with cytochrome P450 system.*

1995 Degree in Biology full marks *with honor*, University of Siena (Italy). *Biomarkers in toxicological risk assessment of anthropogenic contaminants in marine ecosystems: using the Mediterranean crab Carcinus aestuarii as bioindicator organism.* EC project in collaboration with the University Plymouth (UK) (EC 4FP EVCV-CT94-0398).

Employment

2004 – present November, Adjunct Professor of Ecotoxicology, Lecturer/Research. Head of the Laboratory of Ecotoxicology of emerging contaminants and nanomaterials. Department of Physical, Earth and Environmental Sciences, University of Siena (Italy).

2004 May – October. Research Assistant at the Department of Environmental Sciences “G. Sarfatti” of the University of Siena. Ministry of Research and Universities- Italian Fund for Base Research (FIRB). *Bioindicators and biomarkers for assessing environmental quality of North and Central Tyrrhenian coasts.*

2004 January-April. Research Assistant at Tethis S.p.A. *Integration of knowledge on Venice Lagoon ecosystem ICSEL study.*

2000-2003 Research Assistant at the Department of Environmental Sciences “G. Sarfatti” of the University of Siena. European Commission INTERREG program, INTERREG II Italy-Greece. *Protection of the marine environment.*

1997 July -December. Research Assistant at the Department of Environmental Biology of the University of Siena. Italian National Research Council project PRISMA2 *Biomarkers analysis in bioindicator organisms of the Adriatic Sea.*

1997 January-June. Research Assistant at Department of Environmental Biology of the University of Siena. National Research Antarctic Program (PNRA). *POPs in Antarctic marine food web.*

1996-1997. Post-graduate student training experience of 12 months at the Laboratory of Ecotoxicology of the Department of Environmental Biology of the University of Siena and at the Department of Physiology, Experimental Medicine of the University of Siena, Siena (Italy).

1996 August-December. Research Assistant at the Department of Environmental Biology of the University of Siena. Italian National Research Council- project PRISMA2 *Biomarkers analysis in bioindicator organisms of the Adriatic Sea.*

1996 May. Post-graduate European scholarship *Leonardo* by UETP (European Union Training Programme). Studies on cellular and molecular responses of invertebrates and vertebrates species to aromatic hydrocarbons and trace elements.

Research Interests

Main research interests are focused on ecological risk assessment of anthropogenic stressors by investigating biological/toxicological responses of terrestrial, freshwater and marine organisms (invertebrates and vertebrates) to environmental pollutants from classical to new emerging ones including endocrine disruptors, pharmaceutical and engineered nanomaterials including nanoplastics.

Honors and Awards

- 2017 July-August. King's College of Cambridge (UK), visiting fellow.
- 2003 – 2002. FLUBRIGHT scholar at Stanford University, Hopkins Marine Station, Pacific Grove, CA, USA. Study on cell suicide known as apoptosis in first stages of development of fish embryos: potential application of apoptosis to monitor stress in farmed species. Supervisor Prof. David Epel Fulbright Scholar Program.
- 1995 February-June. Erasmus scholarship at University of Plymouth (UK). Supervisor Prof. M. H. Depledge.
- 1994 July. King's College of Cambridge (UK), language fellow.

Teaching Activities

2004 – present.

Ecotoxicology (6CFU). Second level degree in Ecotoxicology and Environmental Sustainability, University of Siena (Italy).

Analysis of contaminants in environmental matrices (6 CFU). Second level degree in Ecotoxicology and Environmental Sustainability, University of Siena (Italy).

Laboratory of analysis of contaminant in environmental matrices (5 CFU). Second level degree in Monitoring and Management of Marine Coastal Environment, University of Siena (Italy).

2000-2004 Laboratory of Ecology (2CFU) Contract Professor. First level degree in Environmental Sciences, Natural Sciences, Biology and Geology of the University of Siena (Italy).

1996 Applied Ecology, Teaching Assistant. First level degree in Biology, University of Siena (Italy).

Academic activities

2011 – present. Member of the Board of the PhD School in Earth, Environmental and Polar Sciences. University of Siena (Italy). Head of ecotoxicology section.

2018- present. Responsible for tutoring at the Department of Physical, Earth and Environmental Sciences, University of Siena (Italy).

2013- present. Member of the Academic Scientific Board for Animal Welfare, University of Siena (Italy).

2013- present. Member of the Board for University Student Orientation at the Department of Physical, Earth and Environmental Sciences, University of Siena (Italy).

2012- present. Scientific collaboration as PhD reviewer with the School in Biosciences and Biotechnologies, Evolutionary Biology section, University of Padova (Italy).

2012- Lecturer and Scientific responsible of "Training course in Ecotoxicology and Food Quality" in the framework of CANA /CNRS and Italian Minister of Environment and Health. Training Lebanese officers and research of CNRS and other Lebanese scientific institution from 16 to 21 April 2012 at the Department of Environmental Sciences "G. Sarfatti", University of Siena Italy in collaboration with CIHEAM- Mediterranean Agronomic Institute of Bari and CoNISMa.

2008-2006. Member of the Board of the PhD School in Sciences and Technologies Applied to the Environment. University of Siena (Italy). Head of ecotoxicology section.

2011-2009. Member of the Board of the second level degree in Monitoring and Management of Marine Coastal Environment University of Siena (Italy)

2009-present. Scientific collaboration with PhD School in Environmental Sciences - Evolutionary and Environmental Sciences section of the University of Bari (Italy).

Invited speaker/ key-note International Conferences

2020 Italian Society of Ecology_Towards Lecce 2021. Round Table. Effect-based methods for ecological risk assessment of chemical mixtures. September 14.

2019 1° workshop Plastic in Polar Environments Action Group of the Scientific Committee of Antarctic Research. *From macroplastics to nanodimensions: How to assess the risks to Antarctic species*. Key-note. University of Hull (UK), October 29.

2019. STIM-REI (Mediterranean Institute for Life Sciences MedILS) Research Workshop Interdisciplinary endeavour in technology at nanoscale, water and environment. *Eco-interactions of engineered nanomaterials: a lesson to learn for their ecosafety assessment*. Split (Croatia), October 10.

2019 1° Summer School in Marine Ecotoxicology. Zoological Station Anton Dohrn of Napoli. *Eco-interactions of engineered nanomaterials: a lesson to learn for their ecosafety assessment*. Naples (Italy), July 2.

2019 7° TANIA INTERREG-Europe Exchange Event. *The NANOBOND project: objectives, testing activities and final results*. University of Lorraine, Nancy (France), May 29.

2019 Pint of Science. *Finding nanoplastics in the sea: from the Mediterranean to the Antarctic*. Siena (Italy), May 20.

2019 1° Mediterranean exhibition ECO-Med green Expo. *Nanotechnologies for the marine environment*. University of Catani (Italy), April 12.

2018 EDU4SD Pilot project for school teachers on sustainable development. Santa Chiara Lab, University of Siena, in collaboration with SDSN Mediterranean and Barilla Center for Food and Nutrition. *SDGs and environmental protection*. University of Siena (Italy), September 28.

2018 SCAR POLAR 2018 Side meeting “Plastic at the Poles”. *Nanoplastics in the Antarctic environment: an invisible threat?* Davos (Switzerland), June 17.

2016 30th Conference of the New European Society for Comparative Physiology and Biochemistry. Key-note. *Unraveling complexity: from molecules to ecosystems. Ecosafety Assessment and Design of Nanomaterials entering the Marine Environment*. Barcelona (Spain), September 4.

2011 3rd NanoImpactNet conference. *Responsible nanoparticles use to ensure eco system sustainability*. Lausanne (Switzerland), February 14.

2010 2nd NanoimpactNet conference. Fate and toxicity of engineered nanoparticles in the aquatic environment. Lausanne (Switzerland), March 10.

2009 European Commission 7FP DIPNA Workshop “Methods and simulation Tests in Nanotoxicology”. *Uptake of nanoparticles in marine organisms: bioaccumulation and biomagnification*. Scuola Superiore Sant’Anna, Pisa (Italy), October 8.

2008 7° Advanced course in Environmental: Hygiene- Environmental contaminants in food and in water resources: management and assessment of sanitary risks from exposure. *Risks of fish farming and organism welfare*. Department of Public Health, University of Florence, Florence (Italy). May 4.

2004 1° Italian-Russian Summer School on Ecology. *Safety issue and sustainable development of European aquaculture: new tools for an environmentally sound aquaculture*. University of Siena, (Italy) July 26.

2003 European Commission Workshop in European Legal Authorities role in preparedness and response to oil pollution to safeguard seafood production: state and perspectives. *The role of organisms in the environmental quality evaluation: Short-Term and Long-Term effects of Petroleum Hydrocarbons in marine organisms*. University of Bari (Italy), October 28.

2002 Workshop Italian-Australian Technological Innovations Conference & Exhibition IATICE. *Potential use of biomarkers as dynamic monitor of stress in aquaculture fish species*. Melbourne (Australia), March 25.

Invited lecturer

2019 School in 4D. Summer School for secondary level school' teachers (Scientific Degree Project). Nanomaterials and nanoplastics: which risks for the natural environment? Siena (Italy), July 17.

2019 Sustainability course, University of Siena (Italy). Sustainability and ecotoxicology. Siena (Italy), May 31.

2019 National Institute for Research and Environmental Protection (ISPRA). *Nanotechnologies for the environment*. Livorno (Italy), May 3.

2018 Accademia dei Fisiocritici, Siena. Presentation of the volume Etruria Natura (Journal of Accademia dei Fisiocritici). *Marine thermal zones: a model to study the effects of ocean acidification on natural populations*. September 20.

2018 University of Urbino Carlo Bo, PhD School Basic science and applications. *Eco-interactions of engineered nanomaterials: a lesson to learn for their ecosafety assessment*. Urbino (Italy), April 24.

2018 Politecnico di Milano, Department of Chemistry. *Ecosafe nanotechnologies for environmental applications: the role of ecotoxicology in nanoremediation*. Milano, April 19.

2017 University of Valencia. *Eco-interactions of engineered nanomaterials: a lesson to learn for their ecosafety assessment*. Valencia (Spain), October 30.

2016 British Antarctic Survey (BAS). *Ecosafety Assessment of Engineered Nanomaterials entering the Marine Environment*. Cambridge (UK), November 8.

2016 Elettra Sincrotrone. *Ecosafety assessment of nanomaterials entering the marine environment*. Trieste (Italy), October 10.

2015 CSIC (Spanish National Research Council) -IDAEA. *Ecosafety Assessment and Design of Nanomaterials Entering the Marine Environment*. Barcelona (Spain). September 17.

2014 Accademia dei Fisiocritici, Siena. Presentation of the volume Etruria Natura (Journal of Accademia dei Fisiocritici). *Dumping sites in the sea: a lost contamination*. Siena (Italy), June 18.

2013 Accademia dei Fisiocritici, Siena. Presentation of the volume Etruria Natura (Journal of Accademia dei Fisiocritici). *Engineered nanoparticles and marine environment: responsible use and sustainability*. Siena (Italy), June 26.

2012 Master (II° level). REACH and CLP. University of Bari "Aldo Moro". *Fundamentals of Ecotoxicology* Bari (Italy), June 4.

2012 Master (I° level). Integrated assessment of marine environmental quality and coastal areas, management and conservation. *Marine Nanoecotoxicology* (2CFU). University of Siena, Siena (Italy), May 3.

2011 Nanotoxicology day seminars, PhD School in Biotechnologies of stem cells. *Nanomaterials and environmental sustainability: from remediation to eco-friendly*. Faculty of Medicine, University of Siena (Italy). October 14.

2006 Master (I° level). Management of Marine Protected Areas. *Marine Protected Areas in Italy and around the world: current status and research activities*. University of Siena (Italy) June 17.

2004 IFTS Advanced Course. *Fish biology and genetic* (6CFU). Vibo Valentia (Italy), June 14-18.

2004 Master (1° level). Management and assessment of marine biological resources. University of Padoa *Mechanisms of resistance and detoxification of xenobiotics in marine organisms*. Padoa (Italy), May 14.

2003 Master (1° level). Management and Biomonitoring of marine coastal areas. *Biomonitoring methods at organism, population and community level* (2CFU). University of Siena, Siena (Italy), June 23.

2002 Stanford University, Hopkins Marine Station, Fall quarter seminars. *Stress responses in fishes: from pollution monitoring to aquaculture issue*. Pacific Grove, CA (USA), November 2.

2002 Waters S.p.A. Environmental & Agrochemical, HPLC & LC/MS Applications. *Alkylphenols by HPLC*. Florence (Italy), June 4.

Education and laboratory training

Post-doc

2004- present. Tutor of 2 post-docs; 18 PhDs, 50 master students and 27 bachelor students of the University of Siena (Italy).

2007-2010 co-tutor of 1 PhD student in Environmental Sciences: marine environment and resources PhD School of the University of Messina (Italy).

2004-2007 Co-tutor of two PhD students in Aquaculture Sciences PhD School of the University of Palermo (Italy).

2007 Co-tutor of 1 undergraduate student in second level degree in Environmental and Evolutionary Biology of the University of Bari (Italy).

Since 1997 Co-tutor of more than 20 undergraduate students in Biology, Environmental and Natural Sciences of the University of Siena (Italy).

2000 co-tutor of 1 undergraduate student in Natural Sciences of the University of Florence (Italy).

Tutor of 19 *Lifelong Learning Erasmus Programme* students (*Erasmus for traineeship former Erasmus placement*), University of Siena (Italy).

Member of Scientific Committee of International Conferences

2021 SETAC Europe 31st Annual Meeting. Global challenges. An emergency for Environmental Sciences. Seville (Spain), May 2-6.

2020 9° Giornate di Studio. *L'ecotossicologia come strumento di gestione degli ambienti acquatici e terrestri. La ricerca, controllo da parte delle Agenzie, il mondo dei privati*. ISPRA Livorno (Italy), November 25-26.

2019 1° SCAR AG PASTIC workshop *Plastic in the Polar Environment: sources, impacts and solutions*. University of Hull (UK), October 28-30.

2019 XXIX Italian Society of Ecology conference. Chair of session: Natural capital, Well-being and Stress ecology. Ferrara, September 10-12.

2019 1° Mediterranean Exhibition *ECO-Med green Expo*. Focus Monitoring and protecting the environment. Catania (Italy), April 11-13.

2018 8° Giornate di Studio. *L'ecotossicologia come strumento di gestione degli ambienti acquatici e terrestri. La ricerca, controllo da parte delle Agenzie, il mondo dei privati*. ISPRA Livorno (Italy), November 26-28.

2018 *Plastic at the Poles Side meeting* organized by SCAR Action Group (PLASTIC-AG) in the framework of the SCAR POLAR 2018 conference. Davos (Switzerland), June 17.

2016 1° International workshop *Ecofriendly nanotechnologies: state of the art, future perspectives and ecotoxicological evaluation of nanoremediation applied to contaminated sediments*. Livorno (Italy), November 24.

2016 7° Giornate di Studio *L'Ecotossicologia come strumento di gestione. La ricerca, controllo da parte delle Agenzie, il mondo dei privati*. ISPRA, Livorno (Italy), November 22-24.

2014 2nd *Marine NanoEcoSafety Workshop* in the frame of the NanoSafety Cluster of the DG Research and Innovation of the European Commission. National Research Council, Palermo (Italy), November 17-19.

2014 6° Giornate di Studio *Emergenza Ambiente: l'ecotossicologia come strumento di gestione*. ISPRA, Livorno November 11-16.

2012 1st *Marine NanoEcotox Workshop*, in the frame of the NanoSafety Cluster of the DG Research and Innovation of the European Commission. National Research Council, Palermo (Italy), November 17-19.

2011 3rd NanoImpactNet Symposium *Responsible nanoparticles use to ensure marine eco system sustainability*. Lausanne (Switzerland), February 16.

2010 2nd NanoImpactNet Symposium *Fate and toxicity of engineered nanoparticles in the aquatic environment*. Lausanne (Switzerland), March 11.

2009 International meeting *LAGUNET*. Orbetello (Italy), October 1- 3.

2007 1° International meeting *ABC transport proteins in environmental risk and toxicology*. University of Siena (Italy), October 18-21.

2006 *Italian Society of Marine Biology (SIBM)*, Annual conference. Principina (Italy), June 6-10.

2003 1° International Workshop on *Sustainable Aquaculture: Animal Welfare, Human Health and Interaction with the Environment*. University of Siena (Italy), 30 March- 1 April.

2002 International Workshop on *Ecotoxicological Tools for Environmental Management*. Sponsored by University of Siena, Italian Embassy, CSIRO Centre for Advanced Analytical Chemistry and CRC for Freshwater Ecology. Canberra (Australia), November 4-5.

1996 Summer School for a Multidisciplinary Assessment of Contaminants in the Environment and of Risks for Human Health. Certosa di Pontignano, Siena (Italy), July 2-12.

Scientific Advisory Board Member

- European Commission
 - MSCA fellowship (since 2016)
- Scientific Committee for Antarctic Research (SCAR), Member of steering Committee of the Action Group Plastics in Polar Environments (July 2018). <https://www.scar.org/science/plastic/plastic/>.
- NanoSafety Cluster of the European Commission. Chair of Marine Ecotox Focus Group since 2011 (<http://www.nanosafetycluster.eu/working-groups/2-hazard-wg/marine-ecotox.html>)
- Natural Environment Research Council (NERC, UK). (year 2019)
- French National Research Agency (Agence Nationale de la Recherche, ANR, France). Member of the Living Earth Evaluation Committee (2014-2018).
- INACH, Istituto Antartico Cileno (year 2018)
- Fonds National Suisse (Swiss National Science Foundation) (year 2018)
- Fundacao para a Ciencia e a Tecnologia (FTP, Portugal) (year 2016)
- Czech Science Foundation (Czech Republic) (year 2016)
- The Croatian Science Foundation (HRZZ) (years 2016; 2019)
- Texas Sea Grant (USA) (year 2013).

- Reviewer member of OECD Working Group of the National Coordinators of the Test Guidelines Programme (WNT): *Test Guideline on agglomeration behaviour of nanomaterials in different aquatic media* (year 2018)
- Netherland Organization for Scientific Research (NWO) (year 2017)
- Austrian Academy of Science. Member of external panel of PhD proposal reviewers (year 2017)

External Reviewer for the Italian Minister of the University and Research (MIUR)

Program FIRB Futuro in ricerca (year 2013)
 University of Varese, Insubria – post-doc project (years 2014-15)
 University of Modena and Reggio Emilia – post-doc project (year 2014)
 University of Calabria- post-doc project (year 2015)

External Examiner PhD thesis

University of Genova (2020)
 University of Cadiz (2019)
 University of Naples Parthenope (2018)
 University of Padova (2017)
 University Federico II di Napoli (2017)
 University of Cadiz (Spain)(2016)
 University of Barcelona (Spain)(2015)
 University of Basque Country (Spain)(2014)

Editor of books and journal special issues

Co-editor Book “Ecotoxicology of nanoparticles in aquatic systems”. CRC Taylor & Francis (2019)
 Guest-editor Special Issue “Do nanoplastic represent a risk for aquatic organisms? From bio-nano-interactions to possible impact at population and community level”, *Nanomaterials* (2021).
 Guest-editor Special Issue “Ecotoxicology and Risk Assessment of Engineered Nanomaterials”, *Nanomaterials* (2021).
 Guest-editor Special Issue “Nanotoxicology: challenges and solutions to safeguard human health and the environment”, *Frontiers in Bioengineering and Biotechnology* (2021).
 Guest-editor Special Issue “Plastic in Polar Regions”, *Environment International* (2021).
 Gust-editor Special Issue “Particles in the Oceans”, *Marine Environmental Research* (2015)

Scientific journal Editorial Board Appointment

PLOS ONE (since 2013)
 Toxics (MDPI) (since February 2020)
 Environmental Toxicology and Chemistry (since January 2021)
 Associate Editor of Frontiers in Marine Sciences and Environmental Sciences (since January 2021)

Reviewer for Peer Reviewed Journals

Nature Nanotechnology; Scientific Report; Environmental Toxicology and Chemistry; Nanotoxicology; Environmental Science Nano; Nanoimpact; Toxicological Sciences; Environmental Science and Technology; Aquatic Toxicology; Environmental Pollution; Environmental International; Chemosphere; Ecotoxicology and Environmental Safety; Journal of Hazardous Materials; Science of the Total Environment; Marine Pollution Bulletin; Marine Environmental Research; Ecological Indicators; Frontiers in Marine Sciences; Frontiers in Environmental Sciences; Ecotoxicology; Nanomaterials; Toxics.

Languages

English TOEFL 243/300 (advanced level).
 Good Spanish
 Good French

Affiliations/Memberships

2021 Member of the scientific committee of 31° SETAC Europe meeting “Global Challenges. An emergency for environmental sciences”, May 3-6.

Since 2018 Member of the Scientific Council of National Museum of Antarctica, Siena, Italy.

Since 2018 Member of the Scientific Council of Stazione Zoologia A. Dorhn of Naples, Italy.

Since 2016 Member SETAC Italian Branch Council.

Since 2016 Member of Accademia dei Fisiocritici di Siena.

Since 1998 Member of the SETAC Europe, Italian Society of Ecology

Advanced Courses

- 2005 Environmental risk in aquatic trophic webs. Istituto Superiore di Sanità (ISS), 23 September, Rome (Italy).
- 2004 BIORAD: PCR Real Time e Microarrays synergies in genomic research. Sesto Fiorentino, University of Florence, 8 March, Florence (Italy).
- 2002 Waters Auto purification Workshop. 2 February, Milan (Italy).
- Advanced Aquatic Toxicology Course, University of Plymouth. 29 June- 3 July, Plymouth (UK).
- 2001 Ecotoxicological investigation in coastal marine environment (D.L. 152/99). Sponsored by ISPRA (former Central Institute for Marine Scientific and Technological Research) and Italian Marine Biological Association. 6 March, Rome (Italy).
- 2000 Analysis of fish hormones by ELISA application. University of Sheffield, 4-14 February, Sheffield (UK).
- 2000 Waters HPLC seminar, 5 May, Florence (Italy).
- 2000 Advanced course on Solid Phase Extraction. Sponsored by Step-Bio, s.r.l.-Hewlett-Packard. Neonatology Laboratory, Faculty of Medicine, University of Siena, 20 February, Siena (Italy).
- 1999 Siena In Campo sustainability, sponsored by WWF, 26 April, Siena (Italy).
- 1999 Advances course Methods in statistic for ecological systems. Lecturer Jan Leps- Department of Biomathematics, Academy of Sciences, Czech Republic, Faculty of South Boemia, February, University of Siena (Italy).
- 1998 EC QUASH - Quality Assurance of Sampling and Sample Handling SMT4 CT96 2100. 30 September- 3 October, Galway (Ireland).
- Summer School for a Multidisciplinary Assessment of Contaminants in the Environment and of Risks for Human Health. 1-6 July, Certosa di Pontignano, Siena (Italy).
- 1996 Multidisciplinary course for education on development. Sponsored by UNICEF and University of Siena, June, Siena (Italy).

Research Funding

Coordinator

- European Commission Regional Funds, POR FESR 2014-2020. Tuscany Region. NANOBOND (Nanomaterials for environmental remediation associated to dewatering) **2016-2019**
- European Commission Regional Funds, POR CRO FSE 2007-2013 Tuscany Region. NanoRemEco (Testing Eco-friendly Nanoparticles for sediment and marine waters Remediation) **2013-2015**
- National Antarctic Research Program (PNRA2014). PLANET (Plastics in the Antarctic Environment) **2015-2018**

Research Unit responsible

- Italian Ministry of Economic Development (MISE). SLUDGE MINING. Raw materials recovery and new products development from sewage sludge. **2020-2023**
- POR FESR 2014-2020. Tuscany Region. 2017: Progetti Strategici Ricerca e Sviluppo. SLUDGE 4.0 Circular economy for the treatment and transformation of biological sludge in biofertilizers. **2018-2020**
- Actions on ecosystem in the Environmental Crisis Area of Taranto. Task A6- ecotoxicology. *Commissario Straordinario per gli interventi urgenti di bonifica e riqualificazione di Taranto.* **2017-2018**
- Marine Strategy Framework Directive-MSFD. WP 5: Chemical contaminants in fish and shellfish **2015-2017**

- National Antarctic Research Program. PenguinERA: Ecology, Reproduction and Adaptation for a climate change sentinel **2018-2020**
- National Antarctic Research Program. NANOPANTA (Polymeric nanoparticles in Antarctic marine environment and organisms) **2018-2020**
- Apulia Region Progetto Jonico Salentino (*PJS*). Assessment of environmental quality by using bioindicator species **2015-2017**
- National Antarctic Research Program. Conservation of mesopredator sensitive to environmental changes **2014-2016**
- RITMARE (ISMAR CNR). Welfare and safety of farmed products **2012-2016**

Since 1993

European Commission

- 1994 Use of biomarkers for evaluating the presence and effects of pentachlorophenol in the Biobio river basin (4FP)
- 1996 Use of biomarkers for evaluating coastal pollution in target organisms. (4FP)
- 1999 ACAB (Dumped chemical weapons and benthos) (4FP)
- 2001 INTERREG II Italy-Greece. Asse III Misura 3.1. Protection of the marine environment. Bioindicators and biomarkers. (5FP)
- 2003 REDCOD (Research on Environmental Damage caused by Chemical Ordnance Dumped at Sea) (5FP)
- 2007 INTERREG III Italy-Albania Asse III – Economic development and occupation. Misura 3.1 – Development and quality of agriculture and sea (6FP)

Regional Funds

POR Sicily (FESR)

- 2000-2006 SFOP-Asse IV, Misura 4.17 – Action to sustain fishery and aquaculture (SFOP). Sottomisura 4.17b – 2007 Assessment of impact of environmental contaminants in fishery resources: an innovative model for protecting marine ecosystem.

POR Apulia (FESR)

2005Asse IV – Misura 4.13. Sottomisura E “Innovative actions”.

- Pilot study for reducing risk factors in fish farming by the use of physiological telemetry.
- Pilot study for diversification of mariculture production and reducing the environmental impact.

MIUR (Italian Ministry of University and Research)

- 2001 *PRIN* Role of xenobiotics in cell and tissue pathology with particular regard to hormonal regulation in target cells by steroid hormones. Faculty of Medicine, University of Siena.
- 2001 *PRIN* Biodiversity and environmental disturbance in brackish waters.
- 2003 Development of an expert system to define the level of stress in a bioindicator organisms (*Mytilus sp.*) based on a multimarker approach.
- 2007 *PRIN* Emerging contaminants in aquatic environment: eco-physiological study for evaluating the effects of synthetic musks in fish. Funded in 2009.
- 2009 *PRIN* Marine ecotoxicology of nanomaterials: toxicity and bioaccumulation of nano titanium dioxide in edible species in the presence of metals and dioxin. Funded in 2011.
- 2003 *FIRB* - Bioindicators and biomarkers in environmental risk assessment of coastal waters in Nord and Central Tyrrhenian coasts.
- 2005 *FISR* - Innovation model for integrative management of fish farming for safety and quality of products and the environment (Allittima)

MIPAF (Italian Ministry of Agricultural Policies and Forestry)

IV, V e VI Triennial Plan for Fishery and Aquaculture (Law 41/82)

- 2004 Quality of fishery and farmed products: quality of waters destined to aquaculture and quality assessment of farmed products and on the environment.
- 2005 Sustainable aquaculture on new fish species: ecotoxicological studies in bluefin tuna.
- 2005 Restocking lagoon and coastal waters by using fish and crustaceans based on conduct code for responsible fisheries (FAO 95).

- 2006 Multidisciplinary approach for bluefin tuna farming (*Thunnus thynnus*). Fish welfare and diet
- 2007 Quality in aquaculture: strategic innovations and competitiveness: economical and technical indicators and guidelines.

CoNISMa- InterUniversity National Consortium for Marine Sciences

- 2013-present RITMARE (ISMAR CNR) 2012. Welfare and safety of farmed products: validation of a testing protocol for the assessment of the biological responses of farmed organisms to the exposure of toxicant accidentally present in diet. Scientific responsible and head of local research unit.
- 2001 Afrodite: marine protected areas
- 2001 Pilot study for characterization of marine areas at risk (SPICAMAR).

National and International collaborations

University College Dublin, Center for BioNano Interactions (CNBI), Dublino (Irlanda), Prof. Kenneth Dawson.

University of Plymouth, School of Biological and Marine Sciences, Plymouth (UK), Prof. Awadesh Jha.

British Antarctic Survey, Cambridge (UK). Ecosystem Group, Dott.sse Claire Waluda e Clara Manno.

Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung (AWI), Polar Biological Oceanography, Dott.ssa Ilka Peeken.

Consejo Superior de Investigaciones Científica (CSIC), Instituto de Ciencias Marinas de Andalucía (ICMAN), Department of Ecology and Coastal Management, Cadice (Spagna), Dott. Julian Blasco.

Consejo Superior de Investigaciones Científica (CSIC) IDAEA Barcellona (Spagna), Dott.ssa Cinta Porte Visa.

UFZ - Helmholtz-Centre for Environmental Research, Department of Bioanalytical Ecotoxicology, Lipsia (Germania), Dott. Till Luckenbach

Wageningen University (Olanda), Department of Environmental Sciences, Prof. A.A. Koelmans.

University of Castilla-La Mancha, Environmental Sciences Department, Toledo (Spagna), Prof. Juan Carlos Sanchez-Hernandez.

Universidade São Paulo, Instituto de Ciências Biomédicas I, Departamento de Histologia e Embriologia CEMEF, Cidade Universitária (Brasile), Prof. José Roberto Machado Cunha da Silva.

Univerdidade Federal de Paraiba, Department of Molecular Biology, Joao Pessoa (Brazil), Prof. Luis Fernando Marques-Santos.

Instituto Antártico Chileno (INACH), Laboratorio de Biorecursos Antárticos, Departamento Científico, Punta Arenas (Cile), Dott. Marcelo González-Aravena.

INSTM. Consorzio Nazionale per la Scienze e Tecnologia dei Materiali (Firenze) (www.instm.it)

CoNISMa. Consorzio Nazionale Interuniversitario per le Scienze del Mare (Roma)

(<http://www.conisma.it/it.html>)

Consiglio nazionale delle Ricerche

- Istituto Polare, sede di Messina (Dott. Massimiliano Azzaro, Dott.ssa Gabriella Caruso)

- Istituto per le Risorse Biologiche e le Biotecnologie (IRBIM) sede di Messina (Dott. Simone Cappello)

- Istituto di Biofisica sede di Pisa (Dott.sse Elisabetta Morelli, Edi Gabellieri)

ISPRA – Istituto Superiore per la Protezione dell’Ambiente e del Territorio (Dott. David Pellegrini)

(<http://www.isprambiente.gov.it/it>)

Elettra Sincrotrone Trieste (Dott.ssa Lisa Vaccari)

Stazione Zoologica Anton Dohrn Napoli (Dott.ssa Anna Palumbo, Antonietta Spagnuolo, Elisabetta Tosti, Maria Cristina Gambi, Valerio Zupo)