

## PERSONAL INFORMATION


### Chiara Lauritano



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Sex F | Date of birth 06/05/1984 | Nationality Italian

## WORK EXPERIENCE

1<sup>st</sup> February 2013- now

### Post-doc Stazione Zoologica Anton Dohrn

My research interests are in marine biology, biotechnology and molecular biology. I am currently studying chemical ecology, bioactivity and gene expression in marine organisms within the framework of the EU FP7 project PharmaSea (<http://www.pharma-sea.eu/>). I am also working on marine organism responses to biotic and abiotic stressors (e.g. ocean acidification, nutrient starvation or enrichment, exposure to microalgal secondary metabolites).

Within the PharmaSea project, I am responsible for microalgae sampling, genotyping, culturing, bioactivity screening and molecular analyses (e.g. gene expression and transcriptomes). I am studying microalgae physiology in order to find the best culturing conditions and identify stressful situations (e.g. low pH and nutrient starvation) that may alter microalgae metabolism. I test bioactivity of microalgae pellets for possible anti-inflammatory, antioxidant, anti-diabetes, antibacterial, anti-biofilm and anticancer activities in order to isolate and characterise biologically active compounds for human health. In addition, I am responsible for preparing and analysing the transcriptomes of active microalgae in order to study metabolic changes induced by stressful culturing conditions and to identify enzymes/metabolic pathways involved in the synthesis of secondary metabolites with potential biotechnological interest.

Sector Marine Biology and Biotechnology

9<sup>th</sup> of December 2015 to the 3<sup>rd</sup> of  
January 2016

### Post-doc Scientist Oceanographic cruise on board of the vessel "HESPERIDES" for sampling in Sub-Antarctic waters as part of a H2020 EUROFLEET2 project PharmaDeep

Expedition to the South Shetland Trench in Antarctica as part of a H2020 EUROFLEET2 project called "PHARMADEEP, Drug discovery from the deep Antarctic waters". During this cruise, I was responsible for the planning and sampling of planktonic species, and support for deep bacteria sampling. Experiments consisted in the study of phytoplankton abundance, copepod fitness (egg production, hatching success, nauplii viability and teratogenesis, adult behaviour and survival), gene expression analyses for both zooplanktonic and phytoplanktonic species (RT-qPCR and transcriptomes) and analyses of microalgae secondary metabolites. In addition, microalgal pellets have been used for chemical extraction and bioactivity screenings for possible anti-inflammatory, antioxidant, anti-diabetes, antibacterial, anti-biofilm and anticancer activities.

Sector Marine Biology and Biotechnology

17<sup>th</sup> February 2015-17<sup>th</sup> April 2015

### Post-doc Scientist University of Tromsø, Norway

I was responsible for microalgae culturing and bioactivity testing for anti-inflammatory, antioxidant, anti-diabetes, antibacterial, anti-biofilm and anticancer activities, and HPLC analyses within the EU PharmaSea project.

Sector Marine Biology and Biotechnology

23<sup>rd</sup> May- 3<sup>rd</sup> June 2011

Scientist

Göteborg University, Sven Lovén Centre for Marine Sciences, Kristineberg (Sweden)

**EU FP7 Project ASSEMBLE** (Association of European Marine Biological Laboratories) Transnational Access (Access to "Tjarno and Kristineberg" 3<sup>rd</sup> call). I was responsible for experiments on the effects of diatom secondary metabolites on different copepod populations, both at physiological and molecular level. Experiments included analyses of copepod fitness (egg production, hatching success, nauplii viability and teratogenesis, adult behaviour and survival), gene expression for both zooplanktonic and phytoplanktonic species (RT-qPCR and transcriptomes) and analyses of microalgae secondary metabolites.

**Sector** Marine Biology and Chemical Ecology

7<sup>th</sup> of April 2011-14<sup>th</sup> of April 2011

Scientist

Oceanographic cruise on board of the vessel "URANIA"

I was responsible for *in-situ* experiments during a natural diatom bloom and the study of phytoplankton abundance, copepod fitness (egg production, hatching success, nauplii viability and teratogenesis, adult behaviour and survival), gene expression analyses for both zooplanktonic and phytoplanktonic species (RT-qPCR and transcriptomes) and analyses of microalgae secondary metabolites.

**Sector** Marine Biology and Chemical Ecology

17<sup>th</sup> – 29<sup>th</sup> May 2010

Scientist

Station Biologique de Roscoff, Roscoff (France)

**EU FP7 Project ASSEMBLE** (Association of European Marine Biological Laboratories) Transnational Access (Access to "Roscoff" 1<sup>st</sup> call). I was responsible for experiments on copepod-diatom interactions. In addition to diatoms, other microalgae have been tested and studied, i.e. two dinoflagellate species. Experiments included analyses of copepod fitness (egg production, hatching success, nauplii viability and teratogenesis, adult behaviour and survival), gene expression for both zooplanktonic and phytoplanktonic species (RT-qPCR and transcriptomes) and analyses of microalgae secondary metabolites.

**Sector** Marine Biology and Chemical Ecology

7<sup>th</sup> January 2009- 14<sup>th</sup> December 2011

PhD student

Stazione Zoologica Anton Dohrn

The aim of the thesis was to study the interactions between copepods (e.g. *Calanus helgolandicus* and *Calanus sinicus*) and different microalgae, both diatoms and flagellates. I was responsible for the following analyses/investigations:

- Toxic algal diet effects on copepod fitness (egg production, hatching success, nauplii viability and teratogenesis, adult behaviour and survival) and gene expression (RT-qPCR and transcriptomic approaches).
- Stress response in different copepod populations and identification of key stress gene markers.
- Analyses of microalgae secondary metabolites and their possible bioactivities.

**Sector** Marine Biology and Chemical Ecology

January 2008 – December 2008

Training

University Federico II of Napoli, Italy, Faculty of Veterinary Medicine

During the training, I acquired expertise in cellular treatments, and gene and protein analyses in rat cells.

**Sector** Cellular and Molecular Biology

May 2007-May 2008 **Training**  
**University Federico II of Napoli, Italy, Department of Experimental Pharmacology**  
 During the training, I acquired expertise in *in vitro* and *in vivo* studies, molecular biology and pharmacological techniques.

**Sector** Cellular and Molecular Biology

2005-2006 (1 Year) **Training (“Internato”)**  
**University Federico II of Napoli, Italy, Faculty of Veterinary Medicine**  
 During the training, I studied anticancer drug effects on rat cardiocytes. I acquired expertise in *in vitro* and *in vivo* studies, molecular biology and pharmacological techniques.

**Sector** Cellular and Molecular Biology

## EDUCATION

7<sup>th</sup> January 2009 - 14<sup>th</sup> December 2011 **PhD in Animal Biology**  
**University of Calabria, Italy and Stazione Zoologica Anton Dohrn, Italy**

The aim of the thesis was to study the effects of toxic diets in the copepod *Calanus helgolandicus* at gene level. The genes of interest were analysed in various experimental conditions, ascopepods exposed to algae (both dinoflagellates and diatoms) which produce or not toxic metabolites, during field or laboratory experiments. In addition, the effects of the oxylipin producing diatom *Skeletonema marinoi* have been tested on three different *C. helgolandicus* populations. Gene expression level patterns in the different experimental conditions tested may help to understand the copepod defence systems and stress response.

I was responsible for the genotyping of both microalgae and copepod species, microalgae maintenance and culturing, and molecular analyses (e.g. RNA and DNA extraction, gene expression and sequence analyses, transcriptomes).

**M.Sc. in Pharmaceutical Biotechnologies** **110/110 cum laude**  
**University Federico II of Napoli, Italy, Faculty of Biotechnology**

Study of the inflammatory process.  
 Thesis: ODN DECOY for NF-kappaB released by PLGA microspheres in rat chronic inflammation

2003-2006 (Thesis discussion 19<sup>th</sup> December 2006) **B.Sc. in Biotechnology** **110/110 cum laude**  
**University Federico II of Napoli, Italy, Faculty of Biotechnology**

Study of the inflammatory process.  
 Thesis: Pro- and anti-apoptotic protein analyses in rat chronic inflammation

## PERSONAL SKILLS

**Mother tongue** Italian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2.2	B2.2	B2.2	B2.2	B2.2
	Certificate American study center, Sequoia school				
French	A2	A2	A2	A2	A2
	Attestation de réussite, Institut Français de Naples, Le Grenoble				

#### Communication skills

- Good communication skills acquired thanks to the participation in several national and international conferences.
- Talk/poster presenter in several national and international conferences.

#### Organisational / managerial skills

- Coordinating the research activities of the Italian team from Stazione Zoologica Anton Dohrn of Naples (Italy) on plankton ecology and biotechnology within the PharmaDeep project.
- Good organisational skills acquired in various laboratories, in Italy and abroad.
- These skills include both laboratory organisation (e.g. material, products, instrumentations) and planning of team laboratory work (max 4 people).

#### Job-related skills

- Excellent technical expertise in DNA and RNA extraction from cell cultures (microalgae and human/mice cells) and plant/animal tissues and successive nucleic acid quantification/quality assessment using the Nanodrop and Bioanalyzer; Good expertise in protein extraction from cell culture and Western Blot analysis.
- Excellent technical expertise in the retro-transcription, primer design, DNA/cDNA amplification protocols, electrophoresis analysis, Real-time PCR, PCR products purification from gel and sequence analysis.
- Excellent expertise in cloning techniques, Plasmid DNA extraction, DNA restriction digestion.
- Excellent expertise in RNA sequencing approach, mapping, gene annotation and genome analysis.
- Excellent expertise in organism genotyping, through single gene amplification or microsatellite analyses.
- Excellent technical expertise in microalgal culturing (i.e. from the preparation of the specific media for the optimal microalgal growth to the induction of stressful conditions in order to influence primary and secondary metabolite production).
- Excellent expertise in testing bioactivity of natural compounds or new synthesis molecules using various assays: Antiproliferative (MTT assay, Trypan blue), Anti-inflammatory (Combined with ELISA), Antioxidant (CAA, CLPAA), Anti-Diabetes and Antibacterial (BIOFILM, MIC) assays.
- Excellent expertise in nitrite/nitrate determination (Griess reagent), human/mice cell culture maintenance, medium preparation and cellular treatment.
- Principal cell lines investigated: hepatocellular carcinoma (HepG2), monocytic cell line derived from a leukemia patient (THP-1), human melanoma (A2058), human fetal lung fibroblast (MRC-5), human colon carcinoma (CACO2), human breast adenocarcinoma (MCF-7), cystic fibrosis (CF), human lung carcinoma (A549), human bone osteosarcoma (Saos2), human histiocytic lymphoma (U937), mouse macrophage from reticulum cell sarcoma (J774) and rat glioma (C6).
- Good expertise in chemical extraction from microalgae.
- Basic knowledge of HPLC, UPLC and mass spectrometry.

#### Informatic/Bioinformatic

- Windows and Linux operative systems
- Software for reference genes assessment (e.g. NormFinder, GeNorm and Bestkeeper)
- RT-qPCR data analysis (e.g. different versions of the REST software, qBase and manual analyses)
- RNAseq data analysis (e.g. TRINITY, R, Blast2GO)
- Experience in genome annotation and gene mining
- Sequence and microsatellite analyses (e.g. Bioedit, Sequence Scanner, ChromasLite, Pick Scanner)
- Primer design (e.g. GeneRunner, Primer 3)
- Phylogenetic studies and tree construction (e.g. MEGA 4: Molecular Evolutionary Genetics Analysis).

#### Statistical analyses

- GraphPad Prism (various versions)
- Past software
- R packages
- Pair Wise Fixed Reallocation Randomization Test (REST software)

Scuba diver ▪ OPEN WATER DIVER PADI

Driving licence B

## ADDITIONAL INFORMATION

### Grants

1. **EU FP7 ASSEMBLE Project:** Grant by ASSEMBLE EU Project to perform the project “Molecular investigations of the stress response induced by diatom oxylipins in the copepod *Calanus helgolandicus*” at the Station Biologique de Roscoff, France, from 17<sup>th</sup> to 29<sup>th</sup> May 2010. Experiments included analyses on copepod fitness (egg production, hatching success, nauplii viability and teratogenesis, adult behaviour and survival), gene expression for both zooplanktonic and phytoplanktonic species (RT-qPCR and transcriptomes) and analyses of microalgae secondary metabolites.

2. **EU FP7 ASSEMBLE Project:** Grant by ASSEMBLE EU Project to perform the project “Stress response in the copepods *Calanus helgolandicus* and *Calanus finmarchicus* after feeding on the oxylipin-producing diatom *Skeletonema marinoi*” at the Sven Lovén Centre for Marine Sciences, Kristineberg, Sweden, from 23<sup>rd</sup> May 2011 to 3<sup>rd</sup> June 2011. Experiments included analyses on copepod fitness (egg production, hatching success, nauplii viability and teratogenesis, adult behaviour and survival), gene expression for both zooplanktonic and phytoplanktonic species (RT-qPCR and transcriptomes) and analyses of microalgae secondary metabolites.

3. **Grant by COST** (European Cooperation in Science and Technology) to participate in COST Action ES0906: Seagrass productivity: from genes to ecosystem management, performed in Vulcano (Aeolian Island, Italy) on 6-11 May 2013. During this action I was responsible of seagrass sampling and physiological and molecular investigations/analyses.

4. **H2020 EUROLLEET2** project called “PHARMADEEP, Drug discovery from the deep Antarctic waters”. The project consisted in an oceanographic cruise on board of the vessel “HESPERIDES” for sampling in Sub-Antarctic between 9<sup>th</sup> December 2015 and 3<sup>rd</sup> January 2016. Grant agreement n° 312762. I was responsible for the planning and sampling of planktonic species, support for deep bacteria sampling, study of physiology and molecular biology of planktonic species. In addition, microalgal pellets have been used for chemical extraction and bioactivity screenings for possible anti-inflammatory, antioxidant, anti-diabetes, antibacterial, anti-biofilm and anticancer activities.

### Publications: ISI Papers

1. **Lauritano C.**, Borra M., Carotenuto Y., Biffali E., Miralto A., Procaccini G., Ianora A. (2011) First molecular evidence of diatom effects in the copepod *Calanus helgolandicus*. **Journal of Experimental Marine Biology and Ecology**, 404(1-2):79-86.
2. **Lauritano C.**, Borra M., Carotenuto Y., Biffali E., Miralto A., Procaccini G. and Ianora A. (2011) Molecular evidence of the toxic effects of diatom diets on gene expression patterns in copepods. **PLoS One**, 6(10):e26850.
3. **Lauritano C.**, Procaccini G. and Ianora A. (2012) Gene Expression Patterns and Stress Response in Marine Copepods. **Marine Environmental Research**, 76:22-31.
4. Serra I.A.\*, **Lauritano C.\***, Dattolo E., Puoti A., Nicastro S., Innocenti A.M., Procaccini G. (2012) Reference genes assessment for the seagrass *Posidonia oceanica* in different salinity, pH and light conditions. **Marine Ecology**. DOI 10.1007/s00227-012-1907-8 \***First two authors share equal responsibility.**
5. Carotenuto Y., Esposito F., Pisano F., **Lauritano C.**, Perna M., Miralto A., Ianora A. (2012) Multi-generation cultivation of the copepod *Calanus helgolandicus* in a re-circulating system. **Journal of Experimental Marine Biology and Ecology**, 418-419 (2012) 46–58.
6. **Lauritano C.**, Carotenuto Y., Procaccini G., Miralto A. and Ianora A. (2012) Copepod population-specific response to a toxic diatom diet. **PLoS One**, 7(10): e47262.
7. **Lauritano C.**, Carotenuto Y, Procaccini G, Turner JT, Ianora A. (2013) Changes in expression of stress genes in copepods feeding upon a non-brevetoxin-producing strain of the dinoflagellate *Karenia brevis*. **Harmful Algae**, 28:23-30.

8. Carotenuto Y., Dattolo E., **Lauritano C.**, Pisano F., Sanges R., Miralto A., Procaccini G. and Ianora A. (2014) Insights into the transcriptome of the marine copepod *Calanus helgolandicus* feeding on the oxylipin-producing diatom *Skeletonema marinoi*. **Harmful Algae**, 31:153–162.
9. Dattolo E., Ruocco M., Brunet C., Lorenti M., **Lauritano C.**, D'Esposito D., De Luca P., Sanges R., Mazzuca S., Procaccini G. (2014) Response of the seagrass *Posidonia oceanica* to different light environments: Insights from a combined molecular and photo-physiological study. **Marine Environmental Research**, 101:225-36.
10. Asai S., Ianora A., **Lauritano C.** and Carotenuto Y. (2015) High-quality RNA Extraction from Copepods for Next Generation Sequencing: A Comparative Study. **Marine genomics**. 24:115-118. doi: 10.1016/j.margen.2014.12.004.
11. **Lauritano C.**, Carotenuto Y., Vitiello V., Buttino I., Romano G. Hwang J.S. and Ianora A. (2015) Effects of the oxylipin-producing diatom *Skeletonema marinoi* on gene expression levels in the calanoid copepod *Calanus sinicus*. **Marine Genomics**. pii: S1874-7787(15)00008-2. doi: 10.1016/j.margen.2015.01.007.
12. **Lauritano C.**, Orefice I., Procaccini G., Romano G., Ianora A. (2015) Key Genes as Stress Indicators in the Ubiquitous Diatom *Skeletonema marinoi*. **BMC Genomics**, 16:411.
13. Orefice I., **Lauritano C.**, Procaccini G., Romano G., Ianora A. (2015) Insights in possible cell-death markers in the diatom *Skeletonema marinoi* in response to senescence and silica starvation. **Marine Genomics**, 24:81-88.
14. **Lauritano C.**, Ruocco M., Dattolo E., Buia M.C., Silva J., Santos R., Olivé I., Costa M.M., Procaccini G. (2015) Response of key stress-related genes of the seagrass *Posidonia oceanica* in the vicinity of submarine volcanic vents, **Biogeosciences**, 12:4185–4194.
15. Jeanine L. Olsen, Pierre Rouzé, Bram Verhelst, Yao-Cheng Lin, Till Bayer, Jonas Collen, Emanuela Dattolo, Emanuele De Paoli, Simon Dittami, Florian Maumus, Gurvan Michel, Anna Kersting, **Chiara Lauritano**, Rolf Lohaus, Mats Töpel, Thierry Tonon, Kevin Vanneste, Mojgan Amirebrahimi, Janina Brakel, Christoffer Boström, Mansi Chovatia, Jane Grimwood, Jerry W. Jenkins, Alexander Jüterbock, Amy Mraz, Wytze T. Stam, Hope Tice, Erich Bomberg-Bauer, Pamela J. Green, Gareth A. Pearson, Gabriele Procaccini, Carlos M. Duarte, Jeremy Schmutz, Thorsten B. H. Reusch, & Yves van de Peer. (2016) The genome of the seagrass *Zostera marina* reveals angiosperm adaptation to the sea, **Nature**, 530, 331–335. doi:10.1038/nature16548.
16. **Lauritano C.**, Romano G., Roncalli V., Amoresano A., Fontanarosa C., Bastianini M., Braga F., Carotenuto Y., Ianora A. (2016) New oxylipins produced at the end of a diatom bloom and their effects on copepod reproductive success and gene expression levels. **Harmful Algae**. 55: 221–229.
17. Romano G., Costantini M., Sansone C., **Lauritano C.**, Ruocco N., Ianora A. (2016) Marine microorganisms as a promising and sustainable source of bioactive molecules. **Marine Environmental Research**. In press
18. **Lauritano C.**, Ianora A. (2016) Marine Organisms with Anti-diabetes properties. **Marine Drugs**. In press
19. **Lauritano C.**, Andersen J.H., Hansen E., Albrigtsen M., Escalera L., Esposito F., Helland K., Hanssen K.Ø., Romano G., Ianora A. (2016) Bioactivity screening of microalgae for antioxidant, anti-inflammatory, anticancer, anti-diabetes and antibacterial activities. **Frontiers in Marine Science** (ISI in 1 year). 3, 68. doi: 10.3389/fmars.2016.00068.
20. Olivé I., Silva J., **Lauritano C.**, Costa M.M., Ruocco M., Procaccini G., Santos R. (2017) Linking gene expression to productivity to unravel long- and short-term responses of seagrasses to CO<sub>2</sub> in volcanic vents. **Scientific Reports**. In press
21. Procaccini G., Ruocco M., Marin-Guirao L., Dattolo E., Brunet C., D'Esposito D., **Lauritano C.**, Mazzuca S., Serra I., et al. Depth-specific fluctuations of gene expression and protein abundance modulate the photophysiology in the seagrass *Posidonia oceanica*. **Scientific Reports**. In press

#### Non-ISI Papers:

1. **Lauritano C.**, Carotenuto Y., Procaccini G., Ianora A.. "Changes in the molecular response to the same toxic diatom diet among different *Calanus helgolandicus* populations" **Biol. Mar. Mediterr.** (2012), 19 (1): 16-19
2. Ruocco M., Brunet C., Lorenti M., **Lauritano C.**, D'Esposito D., Riccio M., Procaccini G. "Posidonia oceanica photoadaptation to the depth gradient" **Biol. Mar. Mediterr.** (2012), 19 (1): 63-64
3. **Lauritano C.**, Bulleri F., Ravaglioli C., Tamburello L., Buia M. C., Procaccini G. Antioxidant and stress-related genes in the seagrass *Posidonia oceanica* in the vicinity of natural CO2 vents at different nutrient conditions. **PeerJ Journal**. <https://dx.doi.org/10.7287/peerj.preprints.1060v1>. May 2015.
4. Dattolo E., **Lauritano C.**, Ruocco M., Procaccini G. Circadian fluctuation of gene expression along a bathymetric cline in the marine angiosperm *Posidonia oceanica*. **PeerJ Journal**. <https://dx.doi.org/10.7287/peerj.preprints.1058v1>. May 2015.
5. Procaccini G., Dattolo E., **Lauritano C.**, Ruocco M., Marín-Guirao L.. *Posidonia oceanica* molecular adaptation to the light environment. **PeerJ Journal**. <https://dx.doi.org/10.7287/peerj.preprints.1056v1>. May 2015.
6. **Lauritano C.**, Andersen J.H., Hansen E., Albrigtsen M., Escalera L., Esposito F., Helland K., Hanssen K.Ø., Romano G., Ianora A. (2016) Bioactivity screening of microalgae for antioxidant, anti-inflammatory, anticancer, anti-diabetes and antibacterial activities. **Frontiers in Marine Science**. (ISI in 1 year) 3, 68.

#### Submitted Papers:

1. **Lauritano C.** and Ianora A. Grand Challenges in Marine Biotechnology, Chapter Abstract. **Springer**.
2. Rasmusson L.M.; **Lauritano C.**; Procaccini G.; Gullström M.; Buapet P.; Björk M. Respiratory oxygen consumption in the seagrass *Zostera marina* varies on a diel basis and is partly affected by light. **Marine Biology**
3. Ravaglioli C., **Lauritano C.** et al. Nutrient Enrichment Offsets Negative Effects Of Ocean Acidification In Seagrass Meadow. **Global change biology**

#### ISI Papers In preparation:

1. **Lauritano C.**, Minio A., Avanzato C., Romano G., Esposito F., Ianora A. De novo transcriptome of the cosmopolitan dinoflagellate *Amphidinium carterae* reveals new strategies to nutrient starvation responses.
2. **Lauritano C.**, Grohmann T., Miroslav G., Pretsch A., Tabudravu J.N., Jaspars M., Minio A., Avanzato C., Romano G., Esposito F., Ianora A. Biotechnological potential of the cosmopolitan dinoflagellate *Amphidinium carterae* Hulburt.
3. **Lauritano C.**, Théo Brillatz, Maxime Jacmin, Supitcha Khamma, Alexander D. Crawford, Emerson Ferreira Queiroz, Jean-Luc Wolfender, Giovanna Romano, Ianora A. Anti-epileptic properties of the marine diatom *Skeletonema marinoi*.

**Participation to EU projects:**

1<sup>st</sup> February 2013-now:

**EU FP7 project PharmaSea:** I am responsible for microalgae culturing, genotyping, bioactivity testing, gene expression and transcriptome analyses.

9<sup>th</sup> of December 2015 to the 3<sup>rd</sup> of January 2016:

**H2020 EUROLLEET2 project PharmaDeep:** I was responsible for the planning and sampling of planktonic species, and support for deep bacteria sampling. I was also responsible of the study of phytoplankton abundance, copepod fitness (egg production, hatching success, nauplii viability and teratogenesis, adult behaviour and survival), gene expression analyses for both zooplanktonic and phytoplanktonic species (RT-qPCR and transcriptomes) and analyses of microalgae secondary metabolites. In addition, microalgal pellets have been used for chemical extraction and bioactivity screenings for possible anti-inflammatory, antioxidant, anti-diabetes, antibacterial, anti-biofilm and anticancer activities.

15<sup>th</sup> March 2012 – 14<sup>th</sup> March 2014:

**COST Action ES0906:** I was responsible for seagrass sampling, physiological and molecular investigations/analyses.

23<sup>rd</sup> May 2011- 3<sup>rd</sup> June 2011:  
(At the Sven Lovén Centre for Marine Sciences, Kristineberg, Sweden)

**EU FP7 project ASSEMBLE 3<sup>rd</sup> call:** I was responsible for experiments on the effects of diatom secondary metabolites on their predators and oxylin effects on different copepod populations. Experiments included the study of phytoplankton abundance, copepod fitness (egg production, hatching success, nauplii viability and teratogenesis, adult behaviour and survival), gene expression analyses for both zooplanktonic and phytoplanktonic species (RT-qPCR and transcriptomes) and analyses of microalgae secondary metabolites.

17<sup>th</sup> – 29<sup>th</sup> May 2010:  
(At the Station Biologique de Roscoff, France)

**EU FP7 project ASSEMBLE 1<sup>st</sup> call:** I was responsible for experiments on copepod-diatom interactions. In addition to diatoms, other microalgae have been tested and studied, i.e. two dinoflagellate species. Experiments included the study of phytoplankton abundance, copepod fitness (egg production, hatching success, nauplii viability and teratogenesis, adult behaviour and survival), gene expression analyses for both zooplanktonic and phytoplanktonic species (RT-qPCR and transcriptomes) and analyses of microalgae secondary metabolites.

**Participation to National projects:**

Involvement in the National project “ExPO- Exploring the biotechnological Potential of marine Organisms” (Protocol document n°21490 attached).

Editorial board member:

Editorial board member of:

- SM Journal of Environmental Toxicology
- Journal of Coastal Life Medicine (JCLM)
- Jacobs Journal of Physiology
- Austin Endocrinology & Diabetes Case Reports
- Insights in Genetics and Genomics
- Current Updates in Aging
- EC Pharmacology and Toxicology

Referee for the following journals:

PloS One, Marine Genomics, Marine Ecology, Marine drugs, Scientific Reports, Harmful Algae, Journal of Plankton Research, Environmental Toxicology and Pharmacology, Gene Reports, African Journal of Biotechnology, Limnology and Oceanography, Limnology and Oceanography methods, African Journal of Microbiology Research, Journal of Toxicology and Environmental Health, Aquaculture Reports, Endocrinology & Diabetes Case Reports.



1. Abstract presentation at “Giornate scientifiche del polo”. Title: Attività enzimatiche influenzate dal trattamento con antineoplastici: Effetto del medrossiprogesterone acetato. Published in “Atti delle giornate scientifiche del polo delle scienze e delle tecnologie per la vita” Pag. 222, **2004**.
2. Abstract presentation at “I Riunione dei farmacologi campani”. Title: Modificazioni indotte da farmaci antineoplastici nel cardiocita di ratto. Pag. 33, **2004**.
3. Abstract presentation at “Giornate Scientifiche interpolo – polo delle scienze e delle tecnologie per la vita”. Title: Effetti, in vivo, dell'idrocortisone sul tessuto cardiaco di ratto. Pag. 274, **2005**.
4. Workshop on Population genetics and Phylogeny in Marine systems held at the Stazione Zoologica Anton Dohrn, Naples, Italy, 5-8 October **2009**.
5. Training session on Aquaculture Science & Fisheries Abstracts (ASFA) and Zoological Record Plus, Stazione Zoologica Anton Dohrn, Naples, Italy, 9 June **2010**.
6. Workshop on Next Generation Sequencing (Solid) Data Analysis held at Institute of Genetics and Biophysics IGB, Naples, Italy, 27 October **2010**.
7. Workshop on Browing Genomes with Ensembl, held at the Stazione Zoologica Anton Dohrn, Naples, Italy, 9-10 December 2010.
8. COST Workshop on “Linking ecophysiology and ecogenomics in seagrass systems” held at the Stazione Zoologica Anton Dohrn, Naples, Italy, 1-2 March **2011**.
9. Workshop on Evolutionary Biology and Phylogenetics held at the Stazione Zoologica Anton Dohrn, Naples, Italy, 7-9 February **2012**.
10. Meeting “Illumina Next Generation Sequencing Technology A Revolutionary approach to study microbial genetics. Stazione Zoologica Anton Dohrn, Napoli, 28 June **2012**.
11. Ocean Sciences Meeting, ASLO, Salt lake City **2012**, with a poster “Impact Of Non-Volatile Diatom Oxylipins On The Reproductive Success Of The Copepod Temora Styliifera”; Ianora, A.; Roncalli, V.; Carotenuto, Y.; Romano, G.; Lauritano, C.; Miralto, A.
12. COST Action ES0906: Seagrass productivity: from genes to ecosystem management, Training school on the “Effects of CO<sub>2</sub>/Ocean Acidification on Seagrass meadows”, Vulcano (Aeolian Islands, Italy), 6-11 May **2013**.
13. Congress “The molecular life of diatoms” which took place at the College de France, Paris, 25-28 June **2013** (EMBO Workshop), with the presentation of the posters entitled “Stress genes in the ubiquitous diatom Skeletonema marinoi” and “Lipoxygenases in marine diatoms: gene identification and functional studies”.
14. XIV Congress of the European Society for Evolutionary Biology in **2013** - Lisbon, Portugal, with the poster “Circadian fluctuation of gene expression along the bathymetric cline in the marine angiosperm Posidonia oceanica”.
15. EUR-OCEANS hot topics conference - A changing ocean (6-8 November **2013**, PLOCAN, Gran Canaria, Spain) with the abstracts “Stress genes in the ubiquitous diatom Skeletonema marinoi” and “Insights on adaptation and plasticity of Posidonia oceanica along a bathymetric gradient”.
16. Congress Seagrasses in Europe: Threats, Responses and Management (4-6 March, **2014**, Olhão, Portugal) with the abstracts: “Stress genes in the seagrass Posidonia oceanica” by Lauritano Chiara et al.; “Insights on adaptation and plasticity of Posidonia oceanica along a bathymetric gradient” by Gabriele Procaccini et al. and “Daily variation in gene-expression along a depth-related gradient of light availability in Posidonia oceanica” by Ruocco Miriam et al.; Poster presented: “Stress genes in the seagrass Posidonia oceanica”.

Continue Congress/Workshop  
Participation:

17. The 11th International Seagrass Biology Workshop, China, November **2014**. Poster: Diel oxygen consumption patterns of *Zostera marina* based on gas exchange measurements and changes in gene expressions changes.
18. ASLO Aquatic Sciences Meeting **2015**. Abstract: Seagrass photosynthetic responses to a natural high-CO<sub>2</sub> environment: physiology meets gene expression. João Silva, Monya M. Costa, Irene Olivé, Isabel Barrote, Miriam Ruocco, Chiara Lauritano, Gabriele Procaccini, Rui Santos.
19. 9th European Conference on Marine Natural Products. 30 August-2 September **2015**, Glasgow, Scotland. Abstract and Poster: "Microalgal natural products with bioactivities relevant for human health" by Lauritano et al.
20. Training school "Chromatin, epigenome and drug discovery" 21-23 March **2016** at Seconda Università di Napoli, Naples, Italy.
21. Poster presentation at the EUROMARINE conference "Exploitation and Legal Aspects on Marine Genetic and Chemical Resources" 4-5 April **2016** at Institute of Protein Biochemistry, CNR, Naples, Italy.
22. Workshop "RNA-SEQ DATA ANALYSIS" 6-10 June **2016** at Università di Napoli Federico II, Naples, Italy.
23. General Assembly of the European Project EMBRIC (European Marine Biological Research Infrastructure Cluster to promote the Blue Bioeconomy) 13<sup>th</sup> September 2016 at Stazione Zoologica Anton Dohrn, Napoli, Italy.

Talk presentations:

1. EST-COST High-Level Research Conference: Marine Biotechnology: Future Challenges, held at Acquafredda di Maratea, Italy, 20-25 June **2010**, with a talk entitled "Deleterious effects of the oxylipin-producing diatom *Skeletonema marinoi* on target gene expression in *Calanus helgolandicus* (Crustacea: Copepoda)" and a poster entitled "Stress genes in the copepod *Calanus helgolandicus*".
2. S.I.B.M. (Italian society of Marine Biology) congress, Marina di Camerota (SA), Italy, 4-8 June **2012** with a talk entitled "Changes in the molecular response to the same toxic diatom diet among different *Calanus helgolandicus* populations" and a poster entitled "*Posidonia oceanica* photoadaptation to the depth gradient".
3. Talk presentation on "Microalgae: Ecology and Biotechnological applications" at the General Assembly PharmaSea meeting, 12-13 September **2013**, held at Isla de Toja, Vigo, Spain.
4. Talk presentation on "Marine microalgae as sources of bioactive compounds" at the General Assembly PharmaSea meeting, 7-9 September **2014**, held at Stazione Zoologica Anton Dohrn, Napoli, Italy.
5. The 7th International conference on Marine BioProspecting BIOPROSP\_15 (18-20 February **2015**, Tromsø, Norway) giving a talk and presenting a poster on Marine microalgae as sources of bioactive compounds within the EU project PharmaSea (available at <http://bioprosp.com/posters/2015/marine-microalgae-sources-bioactive-compounds-within-eu-project-pharmasea%20A0>).
6. Talk presentation on "Microalgal natural products with bioactivities relevant for human health" at the General Assembly PharmaSea meeting, 4-5 September **2015**, held at University of Glasgow, Scotland, UK.

Tutte le dichiarazioni rese e sottoscritte nel presente CV hanno valore di autocertificazione ai sensi dell'art. 46 del D.P.R. 445/2000.

Napoli, 24/01/2017