

PERSONAL  
INFORMATION



## Ylenia Carotenuto

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Skype carotylene

ORCID ID: [orcid.org/0000-0002-7188-9279](https://orcid.org/0000-0002-7188-9279)

Nationality Italian

WORK EXPERIENCE

1<sup>st</sup> June 2010 - present

### Researcher

Stazione Zoologica Anton Dohrn, Villa Comunale, 80121, Naples, Italy  
(Integrative Marine Ecology Department)

My research interests are on plankton biology and ecology, with special attention on phytoplankton-zooplankton interactions, copepod population dynamics, chemical ecology, molecular ecology, gene expression and transcriptome analysis to understand the functioning of planktonic ecosystems. My research activity investigates the impacts of phytoplankton in terms of species diversity, biological traits and production of info-chemicals (toxins and oxylipins), on life-history responses, molecular responses and population dynamics of their consumer copepods. In recent years, I am also investigating the impact of classical and emerging anthropogenic contaminants on reproduction and gene expression of copepods.

Specific activities and responsibilities:

- Planning and coordination of scientific experiments
- Zooplankton collection, copepod sorting and incubation experiments
- Measurements of copepod life-history parameters (reproduction, embryo viability, larval growth, feeding rates) in relation to phytoplankton, as well as to anthropogenic toxicants
- Copepod cultivation in small-scale and large-scale re-circulated water system
- RNA extraction, PCR and agarose gel electrophoresis
- Measurement of quantitative gene expression by RT-qPCR
- Procedure for Next Generation Sequencing of copepod transcriptome
- Bioinformatic analysis of copepod DNA and cDNA sequences, transcriptome annotation
- Bio-Statistical analysis of experimental results and datasets
- PhD and Master students tutoring and coordination
- Public engagement activity
- Networking activity
- Project writing and coordination

Sector Marine biology, Marine ecology, Molecular ecology, Functional genomics, Biological oceanography, Ecotoxicology

6<sup>th</sup> - 23<sup>rd</sup> June 2016

### Researcher

### Stazione Zoologica Anton Dohrn, Naples, Italy

Mesocosm experiment carried out in the Gulf of Naples within the **Flagship SZN Research Project "INPUT-Integrative Pelagic Ecosystem Responses to nutrients fertilization and microplastics addition"**. My goal was to investigate the impact of an induced phytoplankton bloom in presence of microplastics on copepod fitness and gene expression. I was responsible for planning and coordination of zooplankton sampling and sorting, water filtering for chemical analysis of oxylipins in phytoplankton samples, measurement of *in situ* copepod egg production, faecal pellet production and hatching success, analysis of copepod gene expression by RT-qPCR.

**Sector** Marine biology, Marine ecology, Molecular ecology, Chemical ecology

23<sup>rd</sup> - 27<sup>th</sup> May 2016

### Visiting researcher

University of Gothenburg, Sven Lovén Centre for Marine Infrastructure Tjärnö, SE 452 96 Strömstad, Sweden

Laboratory experiments carried out during the framework of the Workshop 'Signals in the Sea', on aquatic signaling in the open ocean, funded by the Royal Swedish Academy of Sciences (KVA), Sweden. My goal was to understand the effect of algal-derived and fish-derived infochemicals on planktonic and parasitic copepods. I was responsible for planning and coordination of zooplankton sampling and copepod sorting, evaluation of copepod reproductive parameters and behavioral bioassays in relation to algal and fish infochemicals.

**Sector** Marine biology, Marine ecology, Chemical ecology

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

### Visiting researcher

University of Gothenburg, Sven Lovén Centre for Marine Sciences Kristineberg, Kristineberg 566, SE-451 78 Fiskebäckskil, Sweden

**EU FP7 ASSEMBLE** (Association of European Marine Biological Laboratories) Transnational Access Call 3, granted to the Project "Stress response in the copepods *Calanus helgolandicus* and *Calanus finmarchicus* after feeding on the oxylipin-producing diatom *Skeletonema marinoi*". I was co-applicant of the Project and was responsible for planning and coordination of research activities. Experiments included measurements of copepod fitness (egg production, hatching success, nauplii viability and teratogenesis, adult survival) and gene expression by RT-qPCR, in relation to phytoplankton diets and algal infochemicals. Results published in Lauritano, Carotenuto et al. 2012.

**Sector** Marine ecology, Molecular ecology, Functional genomics, Chemical ecology

24<sup>th</sup> - 29<sup>th</sup> May 2010

### Visiting researcher

CNRS UPMC Station Biologique de Roscoff, Place Georges Teissier – 29680, Roscoff, France

**EU FP7 ASSEMBLE** (Association of European Marine Biological Laboratories) Transnational Access Call 1, granted to the Project "Molecular investigations of the stress response induced by diatom oxylipins in the copepod *Calanus helgolandicus*". I was co-applicant of the Project and was responsible for planning and coordination of research activities. Experiments included analyses of copepod fitness (egg production, hatching success, nauplii viability) and gene expression by RT-qPCR, in relation to phytoplankton diets and algal infochemicals. Results published in Lauritano, Carotenuto et al. 2012.

1<sup>st</sup> November 2009  
- 30<sup>th</sup> May 2010

**Sector** Marine ecology, Molecular biology, Functional genomics, Chemical ecology

### Research Fellowship (Assegno di ricerca)

#### Stazione Zoologica Anton Dohrn, Naples, Italy

My research activity was mainly focused on the ecological role of diatoms and their secondary metabolites on copepod development. Specifically, I carried out multifactorial laboratory cultivation experiments to discriminate between larval and maternal diet effects on copepod larval development and survival. I also started to acquire theoretical and practical expertise on molecular biology techniques applied to copepods.

Specific activities and responsibilities:

- Planning of scientific experiments
- Zooplankton collection and copepod sorting
- Cultivation of microalgae
- Copepod reproductive experiments
- Copepod mass cultivation in a re-circulated water system
- Bio-Statistical analysis of experimental results and data
- Procedure for copepod RNA extraction, PCR and agarose gel electrophoresis
- Project writing
- Master student tutoring

**Sector** Marine biology, Marine ecology, Chemical ecology, Molecular ecology, Functional genomics

1<sup>st</sup> – 30<sup>th</sup> April 2008

### Visiting researcher

#### University of Bergen, P.O. Box 7800 - 5020 Bergen, Norway

**EU FP6 Project EUR-OCEANS** Network of Excellence, Integration Project, granting funding to the project "Research integration by sharing facilities and cooperative development of new approaches: what does it take to create specific diatom blooms and quantify the effects on pelagic ecosystems in mesocosms?". I took part to an International Mesocosm experiment set-up at the Large-Scale Mesocosm Facility of the University of Bergen in Espesland, Marine Biological Field Station, Raunefjord, Norway. I was responsible for zooplankton collection and copepod sorting, measurement of *in situ* copepod egg production, faecal pellet production and hatching success, evaluation of copepod apoptosis by TUNEL techniques, collection of phytoplankton sample for later chemical analysis.

Results published in Gerech, Carotenuto et al. 2013.

**Sector** Marine ecology, in-situ mesocosm experiments, Chemical ecology

1<sup>st</sup> October 2006  
- 30<sup>th</sup> September 2009

### Contract Researcher (Ricercatore Tempo Determinato)

#### Stazione Zoologica Anton Dohrn, Naples, Italy

My research activity was focused on the ecological role of diatoms and their secondary metabolites on copepod biology and ecology (food selection, reproduction, and population dynamics at sea), throughout a combination of laboratory and field approaches. In particular, in co-operation with colleagues from the Department of Pharmaceutical and Toxicological Chemistry, University of Studies of Naples, "Federico II", we designed *ad-hoc* 'giant liposomes' to associate copepod ingestion rates of algal metabolites with corresponding effects on reproduction. I also investigated the seasonal dynamics of a key copepod species in the Gulf of Naples and applied a modelling approach in co-operation with Dr. M. G. Mazzocchi (SZN), ENEA (La Spezia) and CNR-IMATI (Milan), to characterize the copepod population development at sea in relation to natural food conditions.

Main activities and responsibilities:

- Planning of scientific experiments
- Zooplankton collection and copepod sorting
- Cultivation of microalgae
- Copepod reproductive experiments
- Assessment of copepod ingestion rates using <sup>3</sup>H-cholesterol-labelled liposomes
- Seasonal analysis of copepod fitness and abundance at sea
- Project writing
- Master student tutoring

**Sector** Marine biology, Marine ecology, Chemical ecology, Biological oceanography

1<sup>st</sup> May - 30<sup>th</sup> June 2005

Visiting researcher

University of Bergen, Department of Biology, P.O. Box 7800 - 5020 Bergen, Norway

Within the framework of the **EU Project CARBOOCEAN** entitled "PeECE, Pelagic Ecosystem CO<sub>2</sub> Enrichment mesocosm experiment", I took part to an International Mesocosm experiment set-up at the Large-Scale Mesocosm Facility of the University of Bergen in Espesgrend, Marine Biological Field Station, Raunefjord, Norway. My stay was funded by the MARS Travel Award Grant for Young Scientists 2004. My activities involved planning and coordination of scientific experiments, set-up of mesocosm installations, mesocosm water sampling, zooplankton collection and copepod sorting, measurement of copepod egg production, faecal pellet production and hatching success, experimental procedure for quantifying copepod feeding by means of RT-qPCR.

Results published in Carotenuto et al. 2007 and Suffrian et al. 2008.

**Sector** Marine biology, Marine ecology, in-situ mesocosm experiments, Molecular ecology

1<sup>st</sup> September 2003  
- 31<sup>th</sup> August 2006

Contract Researcher (Ricercatore Tempo Determinato)

Stazione Zoologica Anton Dohrn, Naples, Italy

I investigated the ecological role of microalgae (diatoms and dinoflagellates) and their secondary metabolites on copepod biology and ecology (food selection, reproduction, larval development and population dynamics at sea), throughout a combination of laboratory and field approaches. I was especially interested on understanding the importance of different maternal and larval diets on post-embryonic development and larval recruitment of copepods. To address this topic, multifactorial laboratory feeding experiments and *in situ* incubation experiments during bloom and non-bloom conditions in the North Adriatic Sea, were carried out in order to measure copepod fecundity, hatching success and larval development in relation to phytoplankton species diversity.

Main activities and responsibilities:

- Planning of scientific experiments
- Zooplankton collection and copepod sorting
- Cultivation of microalgae
- Copepod reproductive and larval experiments
- *In situ* measurement of copepod secondary production and recruitment
- Project writing

**Sector** Marine biology, Marine ecology, Biological oceanography, Chemical ecology

1<sup>st</sup> March 2002  
- 31<sup>th</sup> July 2003

## Research Fellowship

Fellowship of the Max Planck Society for the Advance of Science  
Max Planck Institute for Limnology, August-Thienemann-Strasse, 2 - D-24306  
Plön, Germany

My project was on biochemical defenses of freshwater diatoms against grazing and population growth of the cladoceran *Daphnia pulicaria*, and represented a unique opportunity to compare the effects of microalgae and their secondary metabolites in freshwater and marine trophic interactions. During this period I investigated individual life-history responses (ingestion rates, fecundity, hatching success, larval growth) and population responses (instantaneous population growth rate) of *D. pulicaria* in relation to diatom species diversity and chemical composition, in co-operation with Dr. G. Pohnert, Max Planck Institute for Chemical Ecology, Jena, Germany.

Main activities and responsibilities:

- Planning and set-up of scientific experiments related to the topic "Biochemical defenses of freshwater diatoms against grazing by the cladoceran *Daphnia pulicaria*"
- *Daphnia* sampling and establishment of long-term laboratory cultivation
- Measurement of *Daphnia* fecundity and embryo viability
- *In vitro* assays of *Daphnia* embryo viability
- Assessment of juvenile growth rates
- Quantification of daphnids ingestion and assimilation rates using the radiotracer approach (14C)
- Bio-Statistical analysis of experimental results and data
- Writing of scientific reports
- Presentation of results at institutional meeting

**Sector** Ecology, Chemical ecology

March - April 2001

## PhD student internship

University of Vigo, Department of Ecology and Animal Biology, as Lagoas,  
Marcosende - 36310 Vigo, Spain

Main activities and responsibilities:

- Set-up of scientific experiments related to the topic “Fate of dinoflagellate toxins ingested by copepods and effects on reproduction”
- Measurements of copepod fecundity and hatching success
- Assessment of copepod ingestion rates using the food-removal method

**Sector** Marine biology, Marine ecology, Chemical ecology, Confocal microscopy

October 1998 -  
January 2002

### PhD student training

#### Stazione Zoologica Anton Dohrn, Naples, Italy

During my PhD project I investigated the effect of different diatom species on copepod larval development and morphology throughout laboratory-based cultivation experiments and confocal microscopy approaches. I also carried out an *in-situ* survey of copepod life-history parameters (fecundity, hatching success and larval survival) and copepod abundance in the Gulf of Naples, to investigate the relationship between phytoplankton species composition and copepod recruitment at sea.

Title of the thesis: “Effect of diatoms on copepod larval development. The paradox of diatom-copepod interactions”.

**Sector** Marine biology, Marine ecology, Chemical ecology, Biological oceanography

March 1997 - July 1998

### Postgraduate (M. Sc.) Training (tirocinio post-laurea)

#### University of Studies of Naples “Federico II”, Faculty of Sciences MM. FF. NN., Naples, Italy and Stazione Zoologica Anton Dohrn, Naples, Italy

During the training I acquired expertise in copepod species identification and sorting, reproductive experiments and whole-mount fluorescence staining of copepod larvae.

**Sector** Marine biology, Marine ecology, Microscopy

May 1995 - December 1996

### Master student training (M. Sc.)

#### Stazione Zoologica Anton Dohrn, Naples, Italy

During my Master thesis I studied the feeding behaviour of *Octopus vulgaris* in relation to individual age and nervous system development. I carried out food-choice experiments coupled with histological dissection and morphological analysis of *O. vulgaris* brains at the confocal laser scanning microscopy.

Title of the thesis “Behavioural ontogenesis in *Octopus vulgaris* (Mollusca, Cephalopoda): behavioral adaptation and plasticity”

**Sector** Marine biology, Biology, Neurobiology

### FIELD WORK EXPERIENCE/SCIENTIFIC CAMPAIGNS

June-July 2021

### Researcher

#### Stazione Zoologica Anton Dohrn, Naples, Italy

Planning and coordination of research activity related to zooplankton sampling in the Tyrrhenian Sea, copepod sorting and experimental assessment of copepod secondary production within the framework of the PO FEAMP CAMPANIA 2014-2020, Misura 2.51. WP4 Analisi e cartografia dell’oceanografia fisica, chimica e biologica e della meteorologia -Azione 4.1 - Oceanografia

September-October 2020

**Researcher**  
**Stazione Zoologica Anton Dohrn, Naples, Italy**

Planning and coordination of research activity related to zooplankton sampling, copepod sorting and experimental assessment of copepod secondary production within the framework of the PO FEAMP CAMPANIA 2014-2020, Misura 2.51. WP4 Analisi e cartografia dell'oceanografia fisica, chimica e biologica e della meteorologia -Azione 4.1 - Oceanografia chimica, fisica e biologica e modellistica oceanografica, in the sampling area of Gaeta, Garigliano, Volturno, Gulf of Naples and Gulf of Salerno

Two weeks during March 2011  
 One week during February 2013  
 One week during March 2013  
 One week during April 2013  
 One week during February 2014  
 Two weeks during March 2014  
 One week during April 2014  
 One week during May 2014

**Researcher**  
**Stazione Zoologica Anton Dohrn, Naples, Italy**

Planning and coordination of phytoplankton and zooplankton sampling in the North Adriatic Sea, in collaboration with the Istituto Superiore per la Protezione e la Ricerca Ambientale (ISPRA) - Chioggia and Società Cooperativa Vi.S. MA. (Chioggia).  
 Results published in Carotenuto et al. 2012; Lauritano et al. 2013; Carotenuto et al., 2014

 1<sup>st</sup> – 30<sup>th</sup> April 2008

**Visiting Researcher**

**University of Bergen, P.O. Box 7800 - 5020 Bergen, Norway**

**EU FP6 Project EUR-OCEANS** Network of Excellence, Integration Project, granting funding to the project "Research integration by sharing facilities and cooperative development of new approaches: what does it take to create specific diatom blooms and quantify the effects on pelagic ecosystems in mesocosms?". International Mesocosm experiment set-up at the Large-Scale Mesocosm Facility of the University of Bergen in Espesgrend, Marine Biological Field Station, Raunefjord, Norway. I was responsible for zooplankton collection and copepod sorting, measurement of *in situ* copepod egg production, faecal pellet production and hatching success, evaluation of copepod apoptosis by TUNEL techniques, collection of phytoplankton sample for later chemical analysis.  
 Results published in Gerech et al. 2013

**Sector** Marine ecology, in-situ mesocosm experiments, Chemical ecology

 16<sup>th</sup> - 21<sup>st</sup> March 2006

**Researcher**

**Oceanographic cruise on board of the R/V "G. Dallaporta" (North Adriatic Sea)**

Main activities and responsibilities:

- Planning and coordination of zooplankton sampling across the field stations
- Zooplankton and phytoplankton collection
- Set-up and coordination of *in-situ* incubation experiments (copepod sorting, reproduction and feeding experiments)

**Sector** Marine biology, Marine ecology, Chemical ecology, Biological oceanography

 1<sup>st</sup> May - 30<sup>th</sup> June 2005

**Visiting Researcher**

**University of Bergen, Department of Biology, P.O. Box 7800 - 5020 Bergen, Norway**

Within the framework of the **EU Project CARBOOCEAN** entitled "PeECE, Pelagic Ecosystem CO<sub>2</sub> Enrichment mesocosm experiment", I took part to an International Mesocosm experiment set-up at the Large-Scale Mesocosm Facility of the University of Bergen in Espesgrend, Marine

Biological Field Station, Raunefjord, Norway. My stay was funded by the MARS Travel Award Grant for Young Scientists 2004. My activities involved planning and coordination of scientific experiments, set-up of mesocosm installations, mesocosm water sampling, zooplankton collection and copepod sorting, measurement of copepod egg production, faecal pellet production and hatching success, experimental procedure for quantifying copepod feeding by means of RT-qPCR.

Results published in Carotenuto et al. 2007; Suffrian et al. 2008.

**Sector** Marine biology, Marine ecology, in-situ mesocosm experiments, Molecular ecology

8<sup>th</sup> - 16<sup>th</sup> March 2005

**Researcher**

### Oceanographic cruise on board of the R/V “URANIA” (North Adriatic Sea)

Main activities and responsibilities:

- Planning and coordination of zooplankton sampling across the field stations
- Zooplankton and phytoplankton collection

Set-up and coordination of *in-situ* incubation experiments (copepod sorting, reproduction and feeding experiments)

**Sector** Marine biology, Marine ecology, Chemical ecology, Biological oceanography

26<sup>th</sup> February - 5<sup>th</sup> March  
2004

**Researcher**

### Oceanographic cruise on board of the R/V “G. Dallaporta” (North Adriatic Sea)

Main activities and responsibilities:

- Planning and coordination of zooplankton sampling across the field stations
- Zooplankton and phytoplankton collection

Set-up and coordination of in-situ incubation experiments (copepod sorting, reproduction and feeding experiments)

**Sector** Marine biology, Marine ecology, Chemical ecology, Biological oceanography

## EDUCATION

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24<sup>th</sup> November 2014

**National Scientific Habilitation (Abilitazione Scientifica Nazionale) II Fascia in Ecology (05/C1), Call 2013 (DD n. 161/2013)**

**Ministero dell’Istruzione, dell’Università e della Ricerca, Italy**

1998 - 2001  
(Thesis discussion  
21<sup>st</sup> February 2002)

**PhD in Environmental Sciences – Marine Environment and Resources**

**University of Study of Messina, Messina, Italy**

Title of the thesis “Effect of diatoms on copepod larval development. The paradox of diatom-copepod interactions”.

Subjects

- Marine ecology



- Marine biology
- Chemical ecology
- Light and fluorescence microscopy

Skills

- Zooplankton collection and copepod species identification and sorting
- Cultivation of microalgae
- Copepod reproductive experiments
- Copepod rearing experiments
- Measurements of copepod fecundity, embryo viability and larval growth
- Estimation of in-situ copepod abundance
- Procedure for fluorescence staining of copepod larvae
- Analysis of copepod morphology at the Confocal Laser Scanning Fluorescence Microscope

2000 National habilitation as High School teacher (Abilitazione all'insegnamento nella scuola secondaria superiore) in Natural sciences, chemistry and microbiology

Ministero dell'Istruzione, Italy

1998 National habilitation as Biologist (Diploma di abilitazione all'esercizio della Professione di Biologo)

Ministero dell'Università e della Ricerca Scientifica e Tecnologica, Italy

- Biology

1989 - 1997  
(Thesis discussion 13<sup>th</sup>  
March 1997)

Master degree (M. Sc.) in Biological Sciences

**110/110 cum  
laude**

University of Studies of Naples "Federico II", Faculty of Sciences MM. FF. NN., Naples, Italy

Title of the thesis " Behavioural ontogenesis in *Octopus vulgaris* (Mollusca, Cephalopoda): behavioral adaptation and plasticity"

Subjects

- Biological sciences, curriculum Biology and ecology

Skills

- *Octopus vulgaris* maintenance
- Set-up of behavioural experiments
- Preparation of histological sections
- Operational procedure at the Confocal Laser Scanning Microscope

PERSONAL SKILLS

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Mother tongue

Italian

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Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2
Certificate St. Peter's English Language Centre - Riviera di Chiaia, 124 – Napoli Certificate Intermediate, Europe '93 - Monastero di S. Chiara – Napoli, by appointment of EuroAccents of London					
Spanish	A2	A2	A2	A2	A1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user  
[Common European Framework of Reference for Languages](#)

Communication skills

- Excellent team working skills and capability to interact with people having different cultural backgrounds, positions and personalities, acquired as researcher in Italy and as post-doc/visiting scientist in numerous research institutes abroad
- Good communication skills gained through the participation to national and international conferences/workshops

Organisational / managerial skills

- Excellent organizational skills of laboratory and field activity gained as researcher in various laboratories and field stations in Italy and abroad
- Good coordination skills gained as tutor of PhD and Master students

Job-related skills

Excellent technical skills/expertise in:

- zooplankton and phytoplankton sampling, copepod species identification/sorting and abundance estimation
- estimation of copepod life-history parameters (fecundity, egg hatching success, naupliar mortality and larval growth) in laboratory and in the field
- copepod cultivation (small- and large-scale volumes)
- evaluation of copepod ingestion rates (food-removal method, radiotracer approach)
- standardized acute and chronic copepod ecotoxicology bioassays
- DNA and RNA extraction from algae and copepods and quantification/quality assessment using the Nanodrop spectrophotometer and Bioanalyzer
- RNA retrotranscription, PCR electrophoresis on agarose gel, PCR products purification, Real-Time quantitative PCR (RT-qPCR)
- Suppression Subtractive Hybridization, cloning, plasmid DNA sequencing, generation of Expressed Sequence Tags (ESTs) libraries and Next Generation Sequencing of copepod transcriptomes
- bioinformatics analysis of assembled copepod transcriptomes
- whole-mount fluorescence staining of copepod larvae and Confocal Laser Scanning Fluorescence Microscopy
- microalgae cultivation
- data analysis using bio-statistical methods

Digital and data analysis skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Independent user	Independent user	Basic user

Levels: Basic user - Independent user - Proficient user  
[Digital competences - Self-assessment grid](#)

Excellent command of:

- Windows Office package (Word, Excel, PowerPoint)
- Statistical packages software for bio-statistical data analysis (GraphPad Prism, SYSTAT, PROBIT)
- Oceanographic data software (Ocean Data View)
- Gene sequence analysis software (GenBank sequence database, Bioedit, Sequence Scanner, Primer 3, GeneRunner)
- RT-qPCR software (Applied Biosystem ViiA7, REST, NormFinder, GeNorm, Bestkeeper, ReffFinder, QGene)
- RNAseq data analysis software (BLAST, Blast2GO, OmicsBox)

Other skills

DRIVING LICENCE B

SCUBA DIVER

PADI Open Water Diving License

VOLUNTARY ASSOCIATION WORK

President of the cultural association CRAL Stazione Zoologica Anton Dohrn during 2016-2018, promoting recreational, cultural and social activities for SZN registered members

TUTORING/TEACHING  
ACTIVITY

Since 2010 I was appointed as Mini Viva Assessor for several Open University-SZN PhD students

PHD STUDENT EXAMINATION

17<sup>th</sup> December 2021

Appointed as Exam Panel Chair for the PhD viva examination of Hung Manh Nguyen, Open University PhD Course - XX Cycle (2018-2021), Stazione Zoologica Anton Dohrn. PhD Viva successfully defended on 17<sup>th</sup> December 2021

7<sup>th</sup> December 2021

Appointed as Exam Panel Chair for the PhD viva examination of Loïuse Merquiol, Open University PhD Course - XX Cycle (2018-2021), Stazione Zoologica Anton Dohrn. PhD Viva successfully defended on 7<sup>th</sup> December 2021

7<sup>th</sup> May 2020

Appointed as Exam Panel Chair for the PhD viva examination of Anna Chiara Trano, Open University PhD Course - XIX Cycle (2017-2020), Stazione Zoologica Anton Dohrn. PhD Viva successfully defended on 7<sup>th</sup> May 2020

8<sup>th</sup> November 2018

Appointed as Exam Panel Chair for the PhD viva examination of Alfonsina Milito, Open University PhD Course - XVII Cycle (2015-2018), Stazione Zoologica Anton Dohrn. PhD Viva successfully defended on 8<sup>th</sup> November 2018

PHD STUDENT TUTORING

1<sup>st</sup> October 2022 - present

Advisor of Gianluca Liguori, Open University PhD Course - XXIV Cycle (2022-2025), Stazione Zoologica Anton Dohrn  
Project title "Ichthyoplankton assemblages and fish early life stages dispersal pathways in the South-Central Tyrrhenian Sea"

1<sup>st</sup> October 2021 - present

Internal Supervisor of Sebastiano Scibelli, Open University PhD Course - XXIII Cycle (2021-2024), Stazione Zoologica Anton Dohrn  
Project title "Prostaglandin Pathway Based Functional Studies To Unveil Plankton Communication Networks"

November 2022 - present	Third Party Monitor of Alessandra Mussi, Open University PhD course - XXIV Cycle (2022-2025) Stazione Zoologica Anton Dohm
November 2022 - present	Third Party Monitor of Andrea Broccoli, Open University PhD course - XXIV Cycle (2022-2025) Stazione Zoologica Anton Dohm
February 2020 - present	Third Party Monitor of Luigi Pistelli, Open University PhD course - XXI Cycle (2019-2022) Stazione Zoologica Anton Dohm
1 <sup>st</sup> October 2019 – 30 <sup>th</sup> September 2022	Director of study of Flavio Rotolo, Open University PhD Course - XXI Cycle (2019-2022), Stazione Zoologica Anton Dohm Project title "Copepods as model organisms to evaluate the toxicity of emerging contaminants: an ecotoxicogenomic approach". PhD degree successfully awarded on 20 <sup>th</sup> March 2023
1 <sup>st</sup> October 2016 – 26 <sup>th</sup> November 2019	Director of study of Ennio Russo, Open University PhD Course - XVIII Cycle (2016-2019), Stazione Zoologica Anton Dohm Project title "Targeted metabolomics of phytoplankton blooms in the Gulf of Naples and effects of algal oxylipins on the reproduction and gene expression of the copepod <i>Temora stylifera</i> ". PhD degree successfully awarded on 19 <sup>th</sup> November 2019
1 <sup>st</sup> February 2012 - 31 <sup>st</sup> January 2015	Director of study of Sneha Asai, Open University PhD Course - XIII Cycle (2011-2014), Stazione Zoologica Anton Dohm Project title "Molecular effects of diatom oxylipins on the copepod <i>Calanus helgolandicus</i> ". PhD degree successfully awarded on 8 <sup>th</sup> April 2015
2011 - 2014	Co-Supervisor of Gauri A. Mahadik, Open University PhD Course - XII Cycle (2010-2013), Stazione Zoologica Anton Dohm Project title "The role of copepod grazing in phytoplankton blooms dynamics: a species-based approach. PhD degree successfully awarded on May 2014

#### MASTER STUDENT EVALUATION

June 2019	Evaluator for the Interuniversity Master Program 'International Master of Science in Marine Biological Resources – IMBRSea', within the Framework Erasmus Mundus Master Joint Master Degrees, ( <a href="http://www.imbrsea.eu">http://www.imbrsea.eu</a> ), of the master student Ali Murat Elagoz for the project entitled: "Identification of transcripts encoding enzymes putatively involved in the synthesis of anti-inflammatory compounds in the diatom <i>Cylindrotheca closterium</i> ".
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#### MASTER STUDENT TUTORING

2018 - 2019	Co-supervisor (Correlatore) of Alfonso Petti, Master student (M. Sc.) in Biological Sciences (Scuola Politecnica e delle Scienze di Base, Area Didattica MM. FF. NN.), University of studies of Naples "Federico II" Thesis project on the ADP-ribosylating system in the copepod <i>Acartia tonsa</i> exposed to toxic algae. Master degree successfully awarded on December 2019
2017 - 2018	Co-supervisor (Correlatore) of Natalia Ciaramella, Master student (M. Sc.) in Biological Sciences (Scuola Politecnica e delle Scienze di Base, Area Didattica MM. FF. NN.), University of studies of Naples "Federico II" Thesis title "Characterization of ADP-ribosylating system and effect of two different diets in <i>Temora stylifera</i> ". Master degree successfully awarded on July 2018
2015 - 2016	Supervisor of Claudia Esposito, Master student (M. Sc.) in Marine biology, University of studies of Pisa Thesis title "A molecular method for quantify algal ingestion rates in the copepod <i>Calanus helgolandicus</i> ". Master degree successfully awarded on June 2016

2009 - 2011	<p>Supervisor of Fabio Pisano, Master student (M. Sc.) in Medical Biotechnologies, University of studies of Naples "Federico II"</p> <p>Thesis title "Intensive cultivation of the copepod <i>Calanus helgolandicus</i> for biomolecular applications". Master degree successfully awarded on October 2011</p>
<u>POST-GRADUATE/MASTER STUDENT TRAINING/TUTORING</u>	
15 <sup>th</sup> December 2022 - 15 <sup>th</sup> June 2023	<p>Supervisor of Flavio Rotolo for the Post-Graduate Research Fellowship on the project entitled: Analisi di mortalità, riproduzione ed espressione genica in crostacei copepodi esposti a sostanze tossiche</p>
1 <sup>st</sup> June 2022 - present	<p>Supervisor of Jessica Vannini for the Post-Graduate Research Fellowship on the project CRIMAC_CALYPSO entitled: Diversità del mesozooplankton con approcci di tassonomia morfologica e molecolare, tassi riproduzione e risposte fisiologiche di specie chiave di copepodi, con approcci molecolari.</p>
1 <sup>st</sup> November 2020 - 30 <sup>th</sup> April 2022	<p>Supervisor of Jessica Vannini for the Post-Graduate Research Fellowship on the project PO FEAMP CAMPANIA 2014-2020, Misura 2.51. WP4 Analisi e cartografia dell'oceanografia fisica, chimica e biologica e della meteorologia -Azione 4.1 - Oceanografia chimica, fisica e biologica e modellistica oceanografica</p>
1 <sup>st</sup> March - 31 <sup>st</sup> August 2019	<p>Supervisor of Flavio Rotolo for the Post-Graduate Research Fellowship on the project entitled: Physiological and molecular responses of plankton (diatoms and copepods) exposed to toxic sediments from the Bagnoli-Coroglio bay</p>
6 <sup>th</sup> May – 23 <sup>rd</sup> June 2019	<p>Training of the IMBRsea master student Francesco Golin on algal cultivation, zooplankton sorting and copepod cultivation experiments</p>
10 <sup>th</sup> April - 20 <sup>th</sup> May 2019	<p>Training of the IMBRsea master student Jordan Moss on algal cultivation, zooplankton sorting and copepod cultivation experiments</p>
3 <sup>rd</sup> - 14 <sup>th</sup> June 2013	<p>Training of the M.Sc. student Malika Moncer from the Institut National des Sciences et Technologies de la Mer, Carthage Salambô, Tunisia, within the framework of the EU FP7 INCOMMET Project, Support Action "Improving National Capacities in Observation and Management of Marine Environment in Tunisia"</p>
28 <sup>th</sup> March - 7 <sup>th</sup> April 2014 and 26 <sup>th</sup> May - 13 <sup>th</sup> June 2014	<p>Training of the M.Sc. student Boutheina Ziadi from the Institut National des Sciences et Technologies de la Mer, Carthage Salambô, Tunisia, within the framework of the EU FP7 INCOMMET Project, Support Action "Improving National Capacities in Observation and Management of Marine Environment in Tunisia"</p>
	<p>Other students:</p> <p>Chao Zhou, PhD student, ISPRA Livorno/China</p> <p>Chiara Lauritano, PhD Open University, Stazione Zoologica Anton Dohrn</p> <p>Valentina Vitiello, Master student (M. Sc.), University of studies of Naples</p> <p>Vittoria Roncalli, Master student (M. Sc.), University of studies of Naples</p>
<u>UNDERGRADUATE STUDENT TRAINING</u>	
29 <sup>th</sup> March 2019	<p>Responsible for practical activities on plankton ecology to undergraduate students from ISIS "G. Caselli", Naples</p>
15 <sup>th</sup> March 2018	<p>Responsible for practical activities on plankton ecology to undergraduate students from ISIS "G. Caselli", Naples</p>

22<sup>th</sup> March 2017

Responsible for practical activities on plankton ecology to undergraduate students from “Liceo Vittorini”, Naples

 AWARDS/  
ACKNOWLEDGMENTS

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- 2023 Prize “Giuseppe Morabito” to Jessica Vannini for the best poster at the XXVII AIOL conference “Noi siamo acqua. Conoscere gli ecosistemi acquatici per riconnettersi alla natura”, Naples, 26-30 June 2023, entitled: Copepod Assemblage, ecology, and PhySiology in the AmendOlara region (Ionian Sea) - CALYPSO: preliminary results. Authors Jessica Vannini, Iole di Capua and **Ylenia Carotenuto**
- 2021 The publication “Russo, E., d’Ippolito, G., Fontana, A., Sarno, D., D’Alelio, D., Busseni, G., Ianora, A., von Elert, E., **Carotenuto, Y. 2020**. Density-dependent oxylipin production in natural diatom communities: possible implications for plankton dynamics. *The ISME Journal*, 14:164-177. doi.org/10.1038/s41396-019-0518-5. WOS:000502553200014” (**Y.C corresponding author**), has been awarded the SZN “Premio Fasolo for Young Researchers”
- 2021 Letter of acknowledgement for the high-quality publication record during 2020, signed by the President of Stazione Zoologica Anton Dohm, Prof. Roberto Danovaro
- 2020 Letter of acknowledgement for the high-quality publication record during 2019, signed by the President of Stazione Zoologica Anton Dohm, Prof. Roberto Danovaro
- 2010 Award of the General Consulate of Germany in Naples in recognition of the dedication to the scientific cooperation between Italy and Germany in the field of Marine biology
- 2008 International Award “Sebetia – Ter” for Marine biology, awarded to the Ecophysiology group of Stazione Zoologica Anton Dohm (A. Miralto, A. Ianora, G. Romano, I. Buttino, R. Casotti and Y. Carotenuto), for their scientific commitments in the field of Marine ecology
- 2004 Winner of the MARS (The European Marine Research Stations Network) Travel Award for Young Scientists. I was granted the award of 2.000 Euro for a two-months research visit at the University of Bergen (Norway) for cooperation on the project “A collaborative breakthrough: Molecular quantification of zooplankton feeding in complex marine ecosystems”
- 2002 - 2003 Post-doc Fellowship - Max Planck Society for the Advance of Science (Max Planck Gesellschaft) - Germany

 NATIONAL AND  
INTERNATIONAL GRANTS  
(AS PRINCIPAL  
INVESTIGATOR)

- 
- 2021-2023 MUR Project call 2020 CRIMAC “Centro Ricerche ed Infrastrutture Marine Avanzate in Calabria” of the Stazione Zoologica Anton Dohm (CUP: C64I20000320001), to the Grant CALYPSO – Copepod Assemblage, Ecology and Physiology in the Amendolara Region (Ionian Sea), PI Ylenia Carotenuto (Delibera CdA n. 127 of 14/06/2021)
- 2017 - 2019 Premiali MIUR 2016 SZN “EXPO-Exploring the biotechnological Potential of marine Organisms”. Co-PI of WP1 - Biological Resources
- 2017 - 2018 Flagship SZN Research Project “MARCAN-Marine Biotechnology for New Cosmeceuticals and

	Nutraceuticals". PI of WP3 – Bio-resources harvesting and stocking – other marine organisms
2017 - 2018	Flagship SZN Research Project "MODRES-New model organisms for the scientific research: culture, ecology, physiology and genomic characterization". PI of WP4 - Copepod models: reproductive and molecular responses to environmental stressors
2011	EU FP7 ASSEMBLE Transnational Access Grant (Call 3) (grant agreement no. 227799) to the project "Stress response in the copepods <i>Calanus helgolandicus</i> and <i>Calanus finmarchicus</i> after feeding on the oxylipin-producing diatom <i>Skeletonema marinoi</i> ". Co-PI of the Project
2010	EU FP7 ASSEMBLE Transnational Access Grant (Call 1) to the project "Molecular investigations of the stress response induced by diatom oxylipins in the copepod <i>Calanus helgolandicus</i> ". Co-PI of the Project
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COORDINATION-PARTICIPATION TO NATIONAL AND INTERNATIONAL PROJECTS: FUNDED	
2023-2025	MUR PRIN - PROGETTI DI RICERCA DI RILEVANTE INTERESSE NAZIONALE – Bando 2022, (Prot. 20222F3HFE). Project PIRATES – Pseudodiatomus marinus bio-ecological traits through multidisciplinary approaches. PI Marco Uttieri
2021-2023	MUR Project call 2020 CRIMAC "Centro Ricerche ed Infrastrutture Marine Avanzate in Calabria" of the Stazione Zoologica Anton Dohrn (CUP: C64I20000320001), to the Grant CALYPSO – Copepod Assemblage, Ecology and Physiology in the Amendolara Region (Ionian Sea), PI Ylenia Carotenuto (Delibera CdA n. 127 of 14/06/2021)
2019 - 2021	Progetto Operativo PO FEAMP CAMPANIA 2014-2020, Misura 2.51. WP4 Analisi e cartografia dell'oceanografia fisica, chimica e biologica e della meteorologia -Azione 4.1 - Oceanografia chimica, fisica e biologica e modellistica oceanografica. My contribution is on the coordination of copepod sampling and experimental activity focused on the assessment of copepod secondary production during seasonal campaigns in the Tyrrhenian Sea
2018 - 2021	MIUR-Fondo Integrativo Speciale per la Ricerca (FISR) (CIPE-GU n. 227 27/11/2017): "CRIMA - Centro Ricerche ed Infrastrutture Marine Avanzate". Re-functionalization and reconversion of ex Turtle Point and Centro Esposizione del Mare in Bagnoli into a Marine Farm and Factory. My contribution is on the planning of dedicated research space, experimental activities and instrument allocation, related to the creation of a marine infrastructure for maintenance, cultivation and provision of marine biological resources for biological, biomedical and industrial research
2017 - 2021	EU H2020-INFRAIA-1-2016-2017-Integrating Activities for Advanced Communities: "Assemble Plus (Association of European Marine Biological Laboratories Expanded)". Grant Agreement no. 730984. Involved in WP10-JRA4 Instrumentation: 'Development and standardization of on-site instrumentation for experimental marine biology and ecology'. My task is a collaborative research and development to improve experimental systems for copepod cultivation
2017 - 2020	MIUR-Fondo Integrativo Speciale per la Ricerca (FISR) (CIPE-GU n. 56 8/3/2017): "ABBACO-Restauro Ambientale e Balneabilità del SIN Bagnoli-Coroglio". WP4 'Holistic approach to the study of multiple stress and risk reduction'. My research activities investigate the biological and molecular responses of copepods exposed to polluted matrices from the site Bagnoli-Coroglio
2017 - 2019	Premiali MIUR 2016 SZN "EXPO-Exploring the biotechnological Potential of marine Organisms". Co-Principal Investigator of WP1 'Biological Resources'
2017 - 2018	Flagship SZN Research Project "MARCAN-Marine Biotechnology for New Cosmeceuticals and Nutraceuticals". PI of WP3 - 'Bioresources harvesting and stocking – other marine organisms'

- 2017 - 2018 Flagship SZN Research Project "MODRES-New model organisms for the scientific research: culture, ecology, physiology and genomic characterization". PI of WP4 - Copepod models: reproductive and molecular responses to environmental stressors
- 2016 - 2017 Flagship SZN Research Project "INPUT-Integrative Pelagic Ecosystem Responses to nutrients fertilization and microplastics addition". WP4 - Ecosystem Functioning during a phytoplankton bloom and potential effects of microplastics. During the mesocosm experiment carried out in the Gulf of Naples on 6<sup>th</sup> - 23<sup>rd</sup> June 2016, I was responsible for experiments investigating the copepod responses to the phytoplankton bloom in presence of microplastics
- 2016 - 2017 Premiali MIUR 2015 SZN "NEMO-Next generation Marine Observatories: Per un approccio integrato allo studio della risposta degli ecosistemi marini alle forzanti antropogeniche e climatiche". Involved in WP BIOINTO\_2 'Analisi funzionale della risposta a gradienti ambientali in condizioni controllate'
- 2011 - 2014 Programma Operativo Nazionale (PON) Ricerca e Competitività 2007-2013- PON01\_02093 "Study of new technologies and technological platforms for the improvement of production processes of active pharmaceutical ingredients of industrial interest and search for new bioactive molecules from natural sources (Studio di nuove tecnologie e piattaforme tecnologiche per il miglioramento di processi produttivi di principi attivi farmaceutici di interesse industriale e ricerca di nuove molecole bioattive da sorgenti naturali)" Coordinated by Sanofi-Aventis S.p.A. (Protocol document n° 748, 07/03/2014)
- 2011 EU FP7 ASSEMBLE Transnational Access Grant (Call 3) (grant agreement no. 227799) to the project "Stress response in the copepods *Calanus helgolandicus* and *Calanus finmarchicus* after feeding on the oxylipin-producing diatom *Skeletonema marino*". Sven Lovén Centre for Marine Sciences, Kristineberg, Sweden, 23<sup>rd</sup> May 2011 - 3<sup>rd</sup> June 2011. Co-PI of the Project
- 2010 EU FP7 ASSEMBLE Transnational Access Grant (Call 1) to the project "Molecular investigations of the stress response induced by diatom oxylipins in the copepod *Calanus helgolandicus*". Station Biologique de Roscoff, France, 17<sup>th</sup> - 29<sup>th</sup> May 2010. Co-PI of the Project
- 2006 - 2009 MIUR-Fondo Integrativo Speciale per la Ricerca Bando 2001 "Vulnerabilità delle coste e degli ecosistemi marini italiani ai cambiamenti climatici e loro ruolo nei cicli del carbonio mediterraneo-VECTOR". Linea 4 DIVCOST- Effetti dei cambiamenti climatici sulla biodiversità, produttività primaria e secondaria dei sistemi costieri selezionati (Golfo di Napoli, Golfo di Salerno e Nord Adriatico). My goal was to investigate the functioning of the above mentioned planktonic systems through measurements of seasonal changes in copepod secondary production and recruitment

COORDINATION-  
PARTICIPATION TO  
NATIONAL AND  
INTERNATIONAL  
PROJECTS: SUBMITTED

- 2021 EU LIFE-2021-SAP-ENV-ENVIRONMENT call, Type of action: LIFE-PJG, Proposal number: 101074626, Proposal acronym: NOM MatterS IN LIFE - NOM (Natural Organic MATTER) characterization, its complex interaction with pollutantS and Impact oN marine LIFE. Participation in WP3: Evaluating the toxicity of NOM/Co complexes on different marine organisms and natural communities under controlled conditions, and analyzing their impact on human health
- 2020 MUR PRIN - PROGETTI DI RICERCA DI RILEVANTE INTERESSE NAZIONALE – Bando 2020, Project DECODER - Diatom-copEpod interaCtions: Organism-Dna- and protEin-level Responses (Prot. 2020NZFPYJ). PI Ylenia Carotenuto. Ranked as number 34 with 91 points in sector LS8 (DD n. 2668 LS8 - Allegato A)
- 2020 EU H2020-SC5-2018-2019-2020 call, Topic: CE-SC5-30-2020, Type of action: RIA, Proposal



number SEP-210652956, Proposal acronym: Plastic-DUTIES, Understanding the Source, Transport, Distribution and Impact of Plastic in the Environment. Participation in WP1: UNDERSTAND & ENHANCE – Improve the Understanding of the Sources, Transport, Distribution and Impact of Plastics Pollution

2017 MUR PRIN - PROGETTI DI RICERCA DI RILEVANTE INTERESSE NAZIONALE – Bando 2017, Project ESODUS: Ecology, invaSiveness and lipidOmics of the copepod PseudoDiaptomus marinUS (prot. 2017AEFWF3). PI Ylenia Carotenuto

2015 EU LIFE2015 Call for proposals for LIFE ACTION GRANTS, Climate Action, Environment. Project BREATHE - Building Responsibilities at Emission Agreement Towards Healthy Environment LIFE - LIFE15ENV/IT/000306. PI Ylenia Carotenuto for Action B.3: Toxicogenomic and ecotoxicological tests on marine organisms of new bio lubricants/hydraulic oils/greases

## ASSIGNMENTS

Since 2010 I was appointed as President and Component of several SZN Commissions for Research Fellowships and Research Contracts

October 2020 - present

Member of the Commissione Oneri Sociali SZN

January - March 2017 and  
September - December  
2017

Member of the SZN Commission “Progetto per la funzionalizzazione del Turtle Point di Bagnoli e la riconversione in una Marine Farm and Factory – Project for the functionalization and reconversion of the Turtle Point of Bagnoli into a Marine Farm and Factory” (Protocol document n° 562, 24/01/2017 and Protocol document n° 4440, 08/09/2017)

14<sup>th</sup> March 2016

President of the SZN Commission for the assignment of the SZN-Lyons Club Napoli “Megaride” Fellowship ‘Paolo Brancaccio’ (Determina n. 70, 14/03/2016)

5<sup>th</sup> May 2014

Member of the SZN Commission for the assignment of custody and exercise of function of the M/N Vettoria (Protocol n. 3522, 05/09/2014)

## PUBLIC ENGAGEMENT

- The scientific activity in the field of chemical signals shaping aquatic systems published in Russo et al., 2020 The SME Journal, had received attention by international scientific media: <https://naturemicrobiologycommunity.nature.com/posts/54906-what-makes-the-difference>
- Futuro Remoto, XXX Edition, Piazza del Plebiscito, Naples, 7-10 October 2016
- Futuro Remoto, The Frontiers, Piazza del Plebiscito, Naples, 16-19 October 2015
- Organization of the meeting “Il suono: onde, parole e musica”, within the framework of the SZN Outreach Activity ‘Science and Society’, Stazione Zoologica Anton Dohrn, Naples, 8<sup>th</sup> October 2013
- GENDER day, La scienza per le donne, la scienza delle donne, Città della Scienza, Naples, 8-10 March 2011

## EDITORIAL/REVIEWER ACTIVITY

- Editorial Board member of the ISI journal Frontiers in Marine Science, specialty sections Marine Molecular Biology and Ecology
- Guest Editor of the Special Issue ‘Ecology of Marine Zooplankton’ for Journal of Marine Science and Engineering (MDPI) [https://www.mdpi.com/journal/jmse/special\\_issues/Tian\\_Ecology\\_Marine\\_Zooplankton](https://www.mdpi.com/journal/jmse/special_issues/Tian_Ecology_Marine_Zooplankton)

- Guest Editor of the Special Issue ‘Lipid-derived secondary metabolites from phytoplankton: chemical and functional diversity’, for Marine Drugs (MDPI) ([https://www.mdpi.com/journal/marinedrugs/special\\_issues/Lipid-derived\\_Secondary\\_Metabolites](https://www.mdpi.com/journal/marinedrugs/special_issues/Lipid-derived_Secondary_Metabolites))
- Reviewer for the following ISI Journals:

Animals, Aquaculture, Bulletin of Marine Science, Chemosphere, Diversity, Environmental Pollution, Frontiers, Hydrobiologia, International Aquatic Research, Journal of Experimental Zoology Part A, Journal of Geophysical Research, Journal of Oceanology and Limnology, Journal of Plankton Research, Journal of the Royal Society Interface, Journal of Sea Research, Limnology and Oceanography, Marine Biology, Marine Chemistry, Marine Drugs, Marine Ecology, Marine Ecology Progress Series, Marine Environmental Research, Marine Genomics, Molecular Ecology, Molecular Ecology Resources, PLoS One, Science of the Total Environment, Scientia Marina, Scientific Report,

- Reviewer of three NSF’ Proposals during 2008-2009

## NETWORKING ACTIVITY

- Member of Associazione Italiana of Oceanologia e Limnologia (AIOL)
- Member of the ICES (International Council for the Exploration of the Sea) Working Group “Towards an EUROpean OBServatory of the invasive calanoid copepod *Pseudodiaptomus marinus*” (WGEUROBUS). Leader of the Term of Reference (ToR) b on ‘Identification of key ecological, biological and behavioural traits of *P. marinus*’
- Member of the Mediterranean Zooplankton Ecology Working Group “MedZoo” ([www.medzoo.bio](http://www.medzoo.bio)), supported by the UNEP/MAP United Nations Environment Programme/Mediterranean Action Plan
- Member of REPRISE (Register of Expert Peer Reviewers for Italian Scientific Evaluation)-MIUR, for Basic research

## CONFERENCES/ WORKSHOPS

ISC-SCOR, WG157, MetaZooGene, SCOR Annual Report 2020-2021, 27<sup>th</sup> October **2021** (on-line), Integrated diversity assessment of zooplankton in the Gulf of Naples, I. Di Capua, R., D’Angiolo, M. Uttieri, Y. Carotenuto

Annual ICES WGEUROBUS meeting “Towards a European observatory of the invasive calanoid copepod *Pseudodiaptomus marinus*”, Bilbao, Spain, (on-line) 26 October **2021**. Chair of session ToR b (Identification of key ecological, biological and behavioural traits of *Pseudodiaptomus marinus*).

EVOLMAR - Marine Evolution, 1° Congresso Italiano di Evoluzione Marina, Napoli (on-line), 23-25 November **2020**. Poster ‘Molecular and morphological identification of *Pseudodiaptomus marinus* strains from Italian waters’, Di Capua I, D’Angiolo R, Camatti E, **Carotenuto Y**, Goruppi A, de Olazabal A, Pansera M, Percopo I, Tirelli V, Zagami G, Uttieri M

Annual ICES WGEUROBUS meeting “Towards a European observatory of the invasive calanoid copepod *Pseudodiaptomus marinus*”, Plymouth, UK, (on-line) 28-29 October **2020**. Chair of session ToR b (Identification of key ecological, biological and behavioural traits of *Pseudodiaptomus marinus*). Oral communication 1): Reproductive strategy of *Pseudodiaptomus marinus* Sato, 1913 (Calanoida: Pseudodiaptomidae) – adaptability in changing temperature conditions, A. Khanaychenko, L. Aganesova, **Y. Carotenuto**. Oral communication 2): ‘Multigeneration cultivation of *Pseudodiaptomus marinus*, **Y. Carotenuto**, I. Di Capua, M. Uttieri

Workshop ‘Genomics for a Blue Economy’, Stazione Zoologica Anton Dohrn, Naples, 11-12 December **2019**

Annual ICES WGEUROBUS meeting “Towards a European observatory of the invasive calanoid copepod *Pseudodiaptomus marinus*”, Peniche, Portugal, 13-16 October **2019**. Oral communication ‘Multigeneration cultivation of *P. marinus*’, **Y. Carotenuto**, I. Di Capua, M. Uttieri

2° Meeting “Ecotossicologia e Salute”, Roma, 25-26 March **2019**

8° Edition of Giornate di studio ‘Ricerca e applicazione di metodologie ecotossicologiche in ambienti acquatici e matrici contaminate: l’Ecotossicologia come strumento di gestione degli ambienti acquatici e terrestri’, Livorno, 26-28 November **2018**. Oral communication ‘Comparison between *Acartia tonsa* and *A. clausi* bioassays: the case study of SIN Bagnoli-Coroglio’, **Y. Carotenuto**, V. Valentina Vitiello, I. Buttino

Gordon Research Conference “Elucidating Microbial Processes Across Spatial and Temporal Scales”, Barga, Lucca, 1-6 July **2018**. Poster “Non-volatile oxylipins in the Gulf of Naples: relations with diatom community and effects on reproduction of the copepod *Temora stylifera*”, E. Russo, G. d’Ippolito, D. Samo, A. Fontana, E. von Elert and **Y. Carotenuto**

Workshop “Towards a European observatory of the invasive calanoid copepod *Pseudodiaptomus marinus* (WGEUROBUS), of the International Council for the Exploration of the Sea (ICES), Stazione Zoologica Anton Dohrn, Naples, 29-30 January **2018**

ASSEMBLE Plus Kick-off Meeting, Université Pierre et Marie Curie (UPMC), Jussieu campus, Paris, France, 19-20 October **2017**

14<sup>th</sup> ICIRD International Congress on Invertebrate Reproduction and Development “Rhythms of Life and their Alterations”, Naples, 29-30 August and Florence, 1-2 September **2017**. Presentation by V. Zupo entitled “Effect of cyanobacteria on various model invertebrates and their possible biotechnological value to control salmon sea lice in aquaculture practices”, V. Zupo, M. Mutalipassi, V. Mazzella, **Y. Carotenuto**, G. Romano, L. Porzio and P. Fink.; poster entitled “Effects of ocean acidification on reproduction and development of invertebrates: an overview of research at the Stazione Zoologica of Naples”, M.C. Gambi, R. Boni, **Y. Carotenuto**, M. Costantini, A. Gallo, V. Mazzella, O. Migliaccio, M. Munari, M. Mutalipassi, L. Nunez-Pons, A. Palumbo, N. Teixido, E. Tosti, G. Valvassori, V. Zupo

ELIXIR-IIB Training Course on “Best practices for RNA-Seq data analysis”, University of Salerno, Salerno, 27-29 September **2017**

Workshop “Signals in the Sea”, University of Gothenburg, Sven Lovén Centre for Marine Infrastructure Tjärnö, Sweden, 23-27 May **2016**. Oral communication ‘Chemically-mediated diatom-copepod interactions’, **Y. Carotenuto**

EuroMarine Foresight Workshop “Chemical ecology of marine interactions - the chemical language that shapes future marine health”, University of Essex, Colchester, UK, 28-31 August **2015**. Oral communication “Roundtrip from plankton interactions to genes”, **Y. Carotenuto**

Giornate di studio “Ricerca e applicazione di metodologie in ambienti acquatici e matrici contaminate”, Livorno, 7-9 November **2012**. Oral communication “Insights into the transcriptome of the copepod *Calanus helgolandicus* feeding on the toxic diatom *Skeletonema marinoi*”, **Y. Carotenuto**

Symposium “Illumina Next Generation Sequencing Technology. A revolutionary approach to study microbial genetics”, Stazione Zoologica Anton Dohrn, Naples, 28<sup>th</sup> June **2012**

ASLO Ocean Sciences Meeting, Salt lake City, USA, **2012**. Poster “Impact of non-volatile diatom oxylipins on the reproductive success of the copepod *Temora stylifera*”, A. Ianora, V. Roncalli, **Y. Carotenuto**, G. Romano, C. Lauritano, A. Miralto

EUR-OCEANS Foresight Workshop “Ocean Science meets –omics”, Stazione Zoologica Anton Dohrn, 7-9 November **2010**. Oral communication “Regulation of copepod life cycles by marine

diatoms”, **Y. Carotenuto**

Vector Final Workshop, Rome 18-19 October **2010**. Poster “Copepod grazing and reproduction in the Gulf of Naples, M.G. Mazzocchi, D. Sarnom A. Zingone, **Y. Carotenuto** and I. Di Capua

Conference “Marine Biotechnology: future challenges”, Acquafredda di Maratea, 20-25 June **2010**. Poster “Stress genes in the copepod *Calanus helgolandicus*”, Lauritano, C., Borra, M., **Carotenuto, Y.**, Biffali, E., Miralto, A., Procaccini, G., Ianora, A.

ASLO Aquatic Sciences Meeting, Nice, France, 25-30 January **2009**. Poster “Effects of nutrient limitation on diatom oxylipin production and copepod reproduction”, **Y. Carotenuto**

EUR-OCEANS Data and Synthesis Meeting, Danish Institute for Fisheries Research, Copenhagen, 25-26 September **2008**, to present results obtained during the EU FP6 Project EUR-OCEANS: “Research integration by sharing facilities and cooperative development of new approaches: what does it take to create specific diatom blooms and quantify the effects on pelagic ecosystems in mesocosms?”

XX Simposio A.D.R.I.T.E.L.F.. p. 118, Catania (Italia), 4-7 Ottobre **2006**. Oral communication “Liposomi per la veicolazione di molecole bioattive in biologia marina”, De Rosa G, Quaglia F, Ungaro F, Mazzella M, Buttino I, **Carotenuto Y**, Ianora A, La Rotonda MI.

9<sup>th</sup> International Conference on Copepoda, Hammamet, Tunisia, 11-15 July **2005**. Oral communication “Trans-generational effect of diatoms on copepod recruitment”, **Y. Carotenuto**

Conference on “Gestione e Tutela dell’Ambiente Marino-Costiero in Campania. Progetto Si.Di.Mar”. Organized by ARPAC, Regione Campania, Assessorato Politiche Ambientali e Stazione Zoologica Anton Dohrn, Naples, 6<sup>th</sup> July **2005**

Workshop “Interactions between Diatoms and Zooplankton”, Stazione Zoologica Anton Dohrn, Villa Dohrn, Ischia, 3-6 November **2002**

31° Congresso Società Italiana Biologia Marina (SIBM), Sharm El Sheikh, Egypt, 13-20 May **2000**. Oral communication “Sviluppo e sopravvivenza degli stadi larvali di *Temora stylifera* (Copepoda: Calanoida) in due condizioni sperimentali di alimentazione”, **Y. Carotenuto**

Symposium “Biological Sciences: Challenges for the XXI Century”, Stazione Zoologica Anton Dohrn, Naples, 8-11 November **2000**

“Workshop with hands on LSM 510”. Organized by Carl Zeiss S.p.A. at Stazione Zoologica Anton Dohrn, Naples, 12-13 June **1997**

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## SEMINARS/TEACHING

Invited Keynote Speaker at the 25th International Symposium on Plant Lipids, 10-15 July **2022**, Grenoble, France.

Invited Special Lecturer at the 24th International Symposium on Plant Lipids, 5-10 July **2020**, Grenoble, France (Symposium Cancelled due to Covid-19 pandemic).

Invited Lecturer at the 1st International Summer School on Marine Ecotoxicology, Stazione Zoologica Anton Dohrn, Naples, 1-5 July **2019**.

Invited Lecturer at the Institute for Zoology, Cologne University, Cologne (Germany), on 19<sup>th</sup> October **2016**, with a talk entitled “Plankton Chemical Ecology: Roles and impacts of algal infochemicals in diatom-copepod interactions”

Invited Lecturer at the Sven Lovén Centre for Marine Sciences, Kristineberg, Sweden, 27<sup>th</sup> May **2011**, with a talk entitled “Ecological role of diatom secondary metabolites on copepod recruitment”

## SCIENTIFIC PRODUCTION

### a. Publications: ISI Papers with IF after peer review

- 53 Rotolo, F., Roncalli, Cieslak, M., Gallo, A., Buttino, I., **Carotenuto, Y. 2023**. Transcriptomic analysis reveals responses to a polluted sediment in the Mediterranean copepod *Acartia clausi*. *Environmental Pollution*, 335, 122284. doi:10.1016/j.envpol.2023.122284 (**Y.C. corresponding author**). **IF=8.9**
- 52 Uttieri, M., Anadoli, O., Banchi, E., Battuello, M., Beşiktepe, Ş., **Carotenuto, Y.**, . . . Wootton, M. **2023**. The Distribution of Pseudodiaptomus marinus in European and Neighbouring Waters: A Rolling Review. *Journal of Marine Science and Engineering*, 11(6), 1238. doi:10.3390/jmse11061238. **IF=2.9**
- 51 Roncalli, V., Uttieri, M., & **Carotenuto, Y. 2023**. The Distribution of Ferritins in Marine Copepods. *Journal of Marine Science and Engineering*, 11(6), 1187. doi:10.3390/jmse11061187 (**Y.C. last author**). **IF=2.9**
- 50 Di Capua, I., Piredda, R., D'Angiolo, R., Minucci, C., Montalbano, A., Boero, F., **Carotenuto, Y.**, Uttieri, M., **2023**. Is integrated taxonomy useful to study diversity and ecology? An example from crustacean zooplankton at the Long-Term ecological research site MareChiara (LTER-MC). *Marine Ecology*, 44, e12752. doi:10.1111/maec.12752. **IF=1.1**
- 49 **Carotenuto, Y.**, Di Capua, I., Di Pinto, M., Palumbo, F., Percopo, I., Uttieri, M., Miralto, A., Mazzocchi, M.G., Ianora, A., **2023**. Twenty-year trends of *Centropages typicus* (Copepoda, Calanoida) reproduction, feeding, population abundance and structure in the Gulf of Naples (Western Mediterranean Sea). *Marine Ecology*, 44, e12739. doi:10.1111/maec.12739. **IF=1.1**
- 48 Roncalli V, Uttieri M, Di Capua I, Lauritano C, **Carotenuto Y, 2022**. Chemosensory-Related Genes in Marine Copepods. *Marine Drugs*, 20, 681. doi:10.3390/md20110681. WOS:000882648000001. (**Y.C. last author**). **IF=6.1, Q1**
- 47 Di Capua I, D'angiolo R, Piredda R, Minucci C, Boero F, Uttieri M, and **Carotenuto Y, 2022**. From phenotypes to genotypes and back: towards an integrated evaluation of biodiversity in calanoid copepods. *Frontiers in Marine Science* 9: 833089. doi:10.3389/fmars.2022.833089. WOS:000770718000001. (**Y.C. last author**). **IF=4.91, Q1**
- 46 Roncalli V, Lauritano C, **Carotenuto Y, 2021**. First Report of OvoA Gene in Marine Arthropods: A New Candidate Stress Biomarker in Copepods. *Marine Drugs* 19(11), 647. doi:10.3390/md19110647. WOS:000726701600001. (**Y.C. last author**). **IF=6.1, Q1**
- 45 Lauritano C, **Carotenuto Y**, Roncalli V, **2021**. Glutathione S-Transferases in Marine Copepods. *Journal of Marine Science and Engineering* 9(9), 1025. doi:10.3390/jmse9091025. WOS:000699816800001 (**Y.C. co-last author**). **IF=2.9, Q1**
- 44 Rotolo F, Vitiello V, Pellegrini D, **Carotenuto Y**, Buttino I, **2021**. Historical control data in ecotoxicology: Eight years of tests with the copepod *Acartia tonsa*. *Environmental Pollution* 284:117468. doi:10.1016/j.envpol.2021.117468. WOS:000672534700003 (**Y.C. co-last author**). **IF=8.9, Q1**

43. Russo E, Campos A.M, d'Ippolito G, Manzo E, **Carotenuto Y**, Fontana A, Nuzzo G, **2021**. Implementation in lipid extraction and analysis from phytoplankton: *Skeletonema marinoi* as case study. *Marine Chemistry* 232(103964), doi: 10.1016/j.marchem.2021.103964. WOS:000652070800007. **IF=3.81, Q1**
42. Russo E, Lauritano C, d'Ippolito G, Fontana A, Sarno D, von Elert E, Ianora A, **Carotenuto Y**, **2020**. RNA-Seq and differential gene expression analysis in *Temora stylifera* copepod females with contrasting non-feeding nauplii survival rates: an environmental transcriptomics study. *BMC Genomics*, 21:693. doi:10.1186/s12864-020-07112-w. WOS:000578428200005. **(Y.C corresponding author). IF=3.97, Q1**
41. Asai S, Sanges R, Lauritano C, Lindeque PK, Esposito F, Ianora A, **Carotenuto Y**, **2020**. De Novo transcriptome assembly and gene expression profiling of the copepod *Calanus helgolandicus* feeding on the PUA-producing diatom *Skeletonema marinoi*. *Marine Drugs*, 18:392. doi:10.3390/md18080392. WOS:000564060700001. **(Y.C corresponding author). IF=6.1, Q1**
40. **Carotenuto Y**, Vitiello V., Gallo A., Libralato G., Trifuoggi M., Toscanesi M., Lofrano G., Esposito F., Buttino I., **2020**. Assessment of the relative sensitivity of the copepods *Acartia tonsa* and *Acartia clausi* exposed to sediment-derived elutriates from the Bagnoli-Coroglio industrial area. *Marine Environmental Research*, 155: 104878. doi.org/10.1016/j.marenvres.2020.104878. WOS:000520610400006. **(Y.C corresponding author). IF=3.13, Q1**
39. Uttieri M., Aguzzi L., Aiese Cigliano R., Amato A., Bojanić N., Brunetta M., Camatti E., **Carotenuto Y**., Damjanović T., Delpy F., de Olazabal A., Di Capua I., Falcão J., Fernandez de Puellas M. L., Foti G., Garbazey O., Goruppi A., Gubanova A., Hubareva E., Iriarte A., Khanaychenko A., Lučić D., Marques S. C., Mazzocchi M. G., Mikuš J., Minutoli R., Pagano M. Pansera M., Percopo I., Primo A. L., Svetlichny L., Rožić, S., Tirelli V., Uriarte I., Vidjak O., Villate F., Wootton M., Zagami G., Zervoudaki S., **2020**. WGEUROBUS – Working Group “Towards a EURopean OBservatory of the nonindigenous calanoid copepod *Pseudodiaptomus marinUS*”, *Biological Invasions*, 22:885-906. doi.org/10.1007/s10530-019-02174-8. WOS:000515002900004. **IF=3.13, Q1**
38. Russo, E., d'Ippolito, G., Fontana, A., Sarno, D., D'Alelio, D., Busseni, G., Ianora, A., von Elert, E., **Carotenuto, Y. 2020**. Density-dependent oxylipin production in natural diatom communities: possible implications for plankton dynamics. *The ISME Journal*, 14:164-177. doi.org/10.1038/s41396-019-0518-5. WOS:000502553200014. **(Y.C corresponding author). IF=10.30, Q1**
- The publication has been awarded the SZN “Premio Fasolo for Young Researchers”
37. Saha, M., Berdalet, E., **Carotenuto, Y.**, Fink, P. Harder, T., John, U., Not, F., Pohnert, G., Potin, P., Selander, E., Vyverman, W., Wichard, T., Zupo, V., Steinke, M. **2019**. Using chemical language to shape future marine health. *Frontiers in Ecology and the Environment*, 17(9):530-537. doi:10.1002/fee.2113. WOS:000488416500001, **IF=11.12, Q1**
36. Nuzzo, G., Gallo, C., D'Ippolito, G., Manzo, E., Ruocco, N., Russo, E., **Carotenuto, Y.**, Costantini, M., Zupo, V., Sardo, A., Fontana, A. **2019**. UPLC–MS/MS Identification of Sterol Sulfates in Marine Diatoms. *Marine Drugs*, 17: 1-10. doi:10.3390/md17010010. WOS:000458053200010. **IF=6.1, Q1**
35. Russo, E., Ianora, A. and **Carotenuto, Y. 2019**. Re-shaping marine plankton communities: effects of diatom oxylipins on copepods and beyond. *Marine Biology* 166, 9: 1-12. doi:10.1007/s00227-018-3456-2. WOS:000453383000002. **(Y.C corresponding author). IF=2.57, Q2**
34. Zhou, C., **Carotenuto, Y.**, Vitiello, V., Wu, C., Zhang, J., Buttino, I. **2018**. *De novo* transcriptome assembly and differential gene expression analysis of the calanoid copepod *Acartia tonsa* exposed to nickel nanoparticles. *Chemosphere*, 209: 163-172. doi:10.1016/j.chemosphere.2018.06.096 WOS:000442714400020. **(Y.C. co-last author). IF=7.09, Q1**
33. 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. doi:10.1016/j.hal.2016.03.015. WOS:000377323300021. **IF=4.27, Q1**

32. Ianora, A., Bastianini, M., **Carotenuto, Y.**, Casotti, R., Roncalli, V., Miralto, A., Romano, G., Gerecht, A., Fontana, A., Turner, J.T. **2015**. Non-volatile oxylipins can render some diatom blooms more toxic for copepod reproduction. *Harmful Algae*, 44: 1-7. doi:10.1016/j.hal.2015.02.003. WOS:000353735000001. **IF=4.27, Q1**
31. Lauritano, C., **Carotenuto, Y.**, Vitiello, V., Buttino, I., Romano, G., Hwang, J-S., Ianora, A. **2015**. Effects of the oxylipin-producing diatom *Skeletonema marinoi* on gene expression levels of the calanoid copepod *Calanus sinicus*. *Marine Genomics*, 24: 89-94. doi:10.1016/j.margen.2015.01.007. WOS:000367774900011. **(Y.C. co-first author). IF=1.71, Q4**
30. Asai, S., Ianora, A., Lauritano, C., Lindeque, P.K., **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. WOS:000367774900014. **(Y.C. corresponding author). IF=1.71, Q4**
29. **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. doi:10.1016/j.hal.2013.11.002. WOS:000330497500017. **(Y.C. corresponding author). IF=4.27, Q1**
28. Kâ S., **Carotenuto, Y.**, Romano, G., Hwang, J.S., Buttino, I., Ianora, A. **2014**. Impact of the diatom-derived polyunsaturated aldehyde 2-trans,4-trans decadienal on the feeding, survivorship and reproductive success of the calanoid copepod *Temora stylifera*. *Marine Environmental Research*, 93: 31-37. doi:10.1016/j.marenvres.2013.07.009. WOS:000330919000005. **IF=3.13, Q1**
27. Lauritano, C., **Carotenuto, Y.**, Procaccini, G., Turner, J.T., 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. doi:10.1016/j.hal.2013.05.004. WOS:000323866800003. **IF=4.27, Q1**
26. Gerecht, A., **Carotenuto, Y.**, Ianora, A, Romano, G., Fontana, A., d'Ippolito, G., Jakobsen, H.H., Nejstgaard, J.C. **2013**. Oxylipin production during a mesocosm bloom of *Skeletonema marinoi*. *Journal of Experimental Marine Biology and Ecology* 446: 159-165. doi:10.1016/j.jembe.2013.05.014. WOS:000323139200021. **IF=2.17, Q2**
25. Lauritano, C., **Carotenuto, Y.**, Miralto, A., Procaccini, G., Ianora, A. **2012**. Copepod Population-Specific Response to a Toxic Diatom Diet. *PLoS ONE*, 7(10): e47262. doi:10.1371/journal.pone.0047262. WOS:000309831500149. **IF=3.24, Q2**
24. **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, 46-58. doi:10.1016/j.jembe.2012.03.014. WOS:000304796700006. **(Y.C. corresponding author). IF=2.17, Q2**
23. Turner, J. T., Roncalli, V., Ciminiello, P., Dell'Aversano, C., Fattorusso, E., Tartaglione, L., **Carotenuto, Y.**, Romano, R., Esposito, F., Miralto, A., Ianora, A. **2012**. Biogeographic effects of the Gulf of Mexico red tide dinoflagellate *Karenia brevis* on Mediterranean copepods. *Harmful Algae*, 16: 63-73. doi:10.1016/j.hal.2012.01.006. WOS:000303298600008. **IF=4.27, Q1**
22. Lauritano, C., Borra, M., **Carotenuto, Y.**, Biffali, E., Miralto, A., Procaccini, G., Ianora, A. **2011b**. Molecular evidence of the toxic effects of diatom diets on gene expression patterns in copepods. *PLOS One* 6 (10), e26850. doi:10.1371/journal.pone.0026850. WOS:000299081800050. **IF=3.24, Q2**
21. Lauritano, C., Borra, M., **Carotenuto, Y.**, Biffali, E., Miralto, A., Procaccini, G., Ianora, A. **2011a**. First molecular evidence of diatom effects in the copepod *Calanus helgolandicus*. *Journal of Experimental Marine Biology and Ecology*, 404 (1), 79-86. doi:10.1016/j.jembe.2011.05.009. WOS:000293049000011. **IF=2.17, Q2**

20. Ianora, A., Romano, G., **Carotenuto, Y.**, Esposito, F., Roncalli, V., Buttino, I., Miralto, A. **2011**. Impact of the diatom oxylipin 15S-HEPE on the reproductive success of the copepod *Temora stylifera*. *Hydrobiologia*, 666 (1): 265-275. doi: 10.1007/s10750-010-0420-7. WOS:000289002100022. **IF=2.69, Q2**
19. Barreiro, A., **Carotenuto, Y.**, Lamari, N., Esposito, F., D'Ippolito, G., Fontana, A., Romano, G., Ianora, A., Miralto, A., Guisande, C. **2011**. Diatom induction of reproductive failure in copepods: The effect of PUAs versus non-volatile oxylipins. *Journal of Experimental Marine Biology and Ecology*, 401 (1), 13-19. doi: 10.1016/j.jembe.2011.03.007. WOS:000291172900003. **IF=2.17, Q2**
18. **Carotenuto, Y.**, Ianora, A., Miralto, A. **2011**. Maternal and neonate diatom diets impair development and sex differentiation in the copepod *Temora stylifera*. *Journal of Experimental Marine Biology and Ecology*, 396 (2), 99-107. doi:10.1016/j.jembe.2010.10.012. WOS:000286550400005. **(Y.C corresponding author). IF=2.17, Q2**
17. Suffrian, K., Simonelli, P., Nejstgaard, J. C., Putzeys, S., **Carotenuto, Y.**, Antia, A. N. **2008**. Microzooplankton grazing and phytoplankton growth in marine mesocosms with increased CO<sub>2</sub> levels. *Biogeosciences*, 5: 1145-1156. doi:10.5194/bg-5-1145-2008. WOS:000259986400013. **IF=4.30, Q1**
16. Buttino, I., De Rosa, G., **Carotenuto, Y.**, Mazzella, M., Ianora, A., Esposito, F., Vitiello, V., Quaglia, F., La Rotonda, M. I., Miralto, A. **2008**. Aldehyde-encapsulating liposomes impair marine grazer survivorship. *Journal of Experimental Biology*, 211 (9): 1426-1433. doi:10.1242/jeb.015859. WOS:000255155700017. **IF=3.31, Q2**
15. **Carotenuto, Y.**, Ianora, A., Di Pinto, M., Sarno, D., Miralto, A. **2006**. Annual cycle of early developmental stage survival and recruitment in the copepods *Temora stylifera* and *Centropages typicus*. *Marine Ecology Progress Series*, 314: 227-238. doi:10.3354/meps314227. WOS:000238837500020. **(Y.C corresponding author). IF=2.82, Q1**
14. Mazzocchi, M.G., Buffoni, G., **Carotenuto, Y.**, Pasquali, S., Ribera d'Alcalà, M. **2006**. Effects of food conditions on the development of the population of *Temora stylifera*: A modeling approach. *Journal of Marine System*, 62 (1): 71-84. doi:10.1016/j.jmarsys.2006.04.005. WOS:000240641900007. **IF=2.54, Q2**
13. Buttino, I., **Carotenuto, Y.**, De Rosa, G., Ianora, A., Quaglia, F., La Rotonda, M.I., Miralto, A. **2006**. Detection of fluorescent liposomes in the copepod gut using confocal laser scanning microscope. *Cytometry Part A*, 69 (5): 439-439. doi:10.1002/cyto.a. WOS:000237187700120. **IF=4.36, Q1**
12. Buttino, I., De Rosa, G., **Carotenuto, Y.**, Ianora, A., Fontana, A., Quaglia, F., La Rotonda, M.I., Miralto, A. **2006**. Giant liposomes as delivery system for ecophysiological studies in copepods. *Journal of Experimental Biology*, 209 (5): 801-809. doi:10.1242/jeb.02068. WOS:000236476100012. **IF=3.31, Q2**
11. **Carotenuto, Y.**, Wichard, T., Pohnert, G., Lampert, W. **2005**. Life history responses of *Daphnia pulicaria* to diets containing freshwater diatoms: effects of nutritional quality versus polyunsaturated aldehydes. *Limnology and Oceanography*, 50 (2): 449-454. doi:10.4319/lo.2005.50.2.0449. WOS:000227835200006. **(Y.C corresponding author). IF=4.75, Q1**
10. Paffenhöfer, G. A., Ianora, A., Miralto, A., Turner, J. T., Kleppel, G. S., Ribera d'Alcalà, M., Casotti, R., Caldwell, G. S., Pohnert, G., Fontana, A., Muller-Navarra, D C., Jonasdottir, S. H., Armbrust, V., Bamstedt, U., Ban, S., Bentley, M. G., Boersma, M., Bundy, M. H., Buttino, I., Calbet, A., Carlotti, F., **Carotenuto, Y.**, d'Ippolito, G., Frost, B., Guisande, C., Lampert, W., Lee, H. W., Mazza, S., Mazzocchi, G. M., Nejstgaard, J. C., Poulet, S., Romano, G., Smetacek, V., Uye, S., Wakeham, S. G., Watson, S., Wichard, T. **2005**. Colloquium on diatom-copepod interactions. *Marine Ecology Progress Series*, 286: 293-305. doi:10.3354/meps286293. WOS:000227440700026. **IF=2.82, Q1**
9. **Carotenuto, Y.** and Lampert, W. **2004**. Ingestion and incorporation of freshwater diatoms by *Daphnia pulicaria*: do morphology and oxylipin production matter? *Journal of Plankton Research*, 26 (5): 563-569. doi:10.1093/plankt/fbh053. WOS:000221296000006. **(Y.C corresponding author). IF=2.45, Q2**



8. Ianora, A., Miralto, A., Poulet, S. A., **Carotenuto, Y.**, Buttino, I., Romano, G., Casotti, R., Pohnert, G., Wichard, T., Colucci-D'Amato, L., Terrazzano, G. and Smetacek, V. **2004b**. Aldehyde suppression of copepod recruitment in blooms of a ubiquitous planktonic diatom. *Nature*, 429 (6990): 403-407. doi:10.1038/nature02526. WOS:000221644600036. **IF=49.96, Q1**
7. Ianora, A., Turner, J. T., Esposito, F., **Carotenuto, Y.**, d'Ippolito, G., Romano, G., Fontana, A., Guisande, C. and Miralto, A. **2004a**. Copepod egg production and hatching success is reduced by maternal diets of a non-neurotoxic strain of the dinoflagellate *Alexandrium tamarense*. *Marine Ecology Progress Series*, 280: 199-210. doi:10.3354/meps280199. WOS:000225268500017. **IF=2.82, Q1**
6. Buttino, I., Ianora, A., **Carotenuto, Y.**, Zupo, V. and Miralto, A. **2003**. Use of the confocal laser scanning microscope in studies on the developmental biology of marine crustaceans. *Microscopy Research and Technique*, 60 (4): 458-464. doi: 10.1002/jemt.10284. WOS:000180968400009. **IF=2.77, Q1**
5. **Carotenuto, Y.**, Ianora, A., Buttino, I., Romano, G. and Miralto, A. **2002**. Is postembryonic development in the copepod *Temora stylifera* negatively affected by diatom diets? *Journal of Experimental Marine Ecology and Biology*, 276 (1): 49-66. doi:10.1016/S0022-0981(02)00237-X. WOS:000178012300004. **(Y.C corresponding author). IF=2.17, Q2**
4. Guisande, C., Frangopulos, M., **Carotenuto, Y.**, Maneiro, I., Riveiro, I., Vergara, A. R. **2002**. Fate of paralytic shellfish poisoning toxins ingested by the copepod *Acartia clausi*. *Marine Ecology Progress Series*, 240: 105-115. doi:10.3354/meps240105. WOS:000178457600011. **IF=2.82, Q1**
3. Turner, J. T., Ianora, A., Esposito, F., **Carotenuto, Y.**, Miralto, A. **2002**. Zooplankton feeding ecology: does a diet of *Phaeocystis* support good copepod grazing, survival, egg production and egg hatching success? *Journal of Plankton Research*, 24 (11): 1185-1195. doi:10.1093/plankt/24.11.1185. WOS:000179038500006. **IF=2.46, Q2**
2. Laabir, M., Buttino, I., Ianora, A., Kattner, G., Poulet, S. A., Romano, G., **Carotenuto, Y.**, Miralto, A. **2001**. Effect of specific dinoflagellate and diatom diets on gamete ultrastructure and fatty acid profiles of the copepod *Temora stylifera*. *Marine Biology*, 138: 1241-1250. doi:10.1007/s002270100547. WOS:000169576700018. **IF=2.57, Q2**
1. **Carotenuto, Y.** **1999**. Morphological analysis of larval stages of *Temora stylifera* (Copepoda, Calanoida) from the Mediterranean Sea. *Journal of Plankton Research*, 21 (9): 1613-1632. doi:10.1093/plankt/21.9.1613. WOS:000082691600002. **(Y.C corresponding author). IF=2.46, Q2**

#### b. Publications: Book Chapters

2. Zupo, V., Mazzella, V., Fink, P., Saha, M., **Carotenuto, Y.**, & Mutalipassi, M. **2022**. Copepods vs. Salmons Environmental Treats for Crustaceans or Possible Eco-Sustainable Solutions? In *Crustaceans* (pp. 213-224). CRC Press. Pages 213-224
1. Amato, A., and **Carotenuto, Y.** **2018**. Planktonic calanoids embark into the 'omics' era. In: *Trends in Copepod Studies - Distribution, Biology and Ecology*, edited by M. Uttieri. New York: Nova Science Publishers, Inc. pp 287-314. ISBN: 978-1 53612-593-1

#### c. Publications: Papers on peer review journals without IF

5. Lauritano C., **Carotenuto Y.**, Procaccini G., Ianora A. **2012**. Changes in the molecular response to the same toxic diatom diet among different *Calanus helgolandicus* populations. *Biologia Marina Mediterranea*, 19 (1): 16-19. ZOOREC:ZOOR14908033339

4. Antia, A.N., Suffrian, K., Holste, L., Müller, M.N., Nejstgaard, J.C., Simonelli, P., **Carotenuto, Y.**, Putzeys, S. **2008**. Dissolution of coccolithophorid calcite by microzooplankton and copepod grazing. *Biogeosciences Discussions*, vol. 5 (1): 1-23. doi:10.5194/bgd-5-1-2008
3. **Carotenuto, Y.**, Putzeys, S., Simonelli, P., Paulino, A., Meyerhöfer, M., Suffrian, K., Antia, A., Nejstgaard, J. C. **2007**. Copepod feeding and reproduction in relation to phytoplankton development during the PeECE III mesocosm experiment. *Biogeosciences Discussions*, 4 (5): 3913-3936. doi:10.5194/bgd-4-3913-2007
2. Buttino, I., **Carotenuto, Y.**, de Rosa, G., Mazzella, M., Ianora, A., Miralto, M. **2006**. Giant liposomes as carriers of phytotoxins in copepods and their application in ecophysiological studies. *Biologia Marina Mediterranea*, 13 (2): 308-309. ZOOREC:ZOOR14211068627
1. **Carotenuto, Y.**, and Buttino, I. **2001**. Development and survival of larval stages of *Temora stylifera* (Copepoda: Calanoida) in two rearing conditions. *Biologia Marina Mediterranea*, 8 (2): 790-791. ZOOREC:ZOOR13900036333

#### d. Reports

3. ICES. **2022**. Working Group entitled Towards a EUROpean OBServatory of the non-indigenous calanoid copepod *Pseudodiaptomus marinus* (WGEUROBUS; outputs from 2021 meeting). Editors: A. Iriarte and M. Uttieri. Authors: A. Amato, A. Goruppi, +50 more co-authors, **Y. Carotenuto**, Z. Barroeta. *ICES Scientific Reports*. 4:3. 28 pp. <http://doi.org/10.17895/ices.pub.9771>
2. PO FEAMP Campania 2014/2020. Misura 2.51, WP4 Analisi e cartografia dell'oceanografia fisica, chimica e biologica e della meteorologia -Azione 4.1 - Oceanografia chimica, fisica e biologica e modellistica oceanografica. Report of scientific activity for the period **August 2019 – June 2020**
1. ICES 2018. Report of the Workshop entitled "Towards a European observatory of the invasive calanoid copepod *Pseudodiaptomus marinus*" (WKEUROBUS), 29–30 January **2018**, Naples, Italy. ICES CM 2018/EPDSG:19. 16 pp. Report of the Expert Group under the auspices of the International Council for the Exploration of the Sea

#### e. Databases

**2021**. Database of copepod secondary production measured during the oceanographic campaigns carried out within the PO FEAMP CAMPANIA 2014-2020, Misura 2.51. in September-October 2020, submitted to the Geonetwork geocatalogue:  
<https://geonetwork.bioinfo.szn.it/geonetwork/srv/ita/catalog.search#/homeGeoportale> (data are password-protected)

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Scientific production  
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Napoli, 08/09/2023

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