

## Giovanna Romano



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**Current Position:** ricercatore II° livello, Senior Scientist

**Current Affiliation:**

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

### Education/Training/Experience

Institute and Location	Degree / Function	Year	Field of Study
Higher School, Liceo Ginnasio Gian Battista Vico	Baccalaureate (Maturità classica)	1974-1979	Liceo Classico
Department of Biochemistry, Università di Napoli, Federico II Napoli, Italy	Master (Laurea)	1979-1983	Biological sciences
Stazione Zoologica Anton Dohrn, Napoli, Italy	Fellowship in Biochemistry	1983-1989	Bioactive peptides from marine organisms
Stazione Zoologica Anton Dohrn, Napoli, Italy	Staff Researcher	1989-2004	Ecophysiology of marine copepods
Stazione Zoologica Anton Dohrn, Napoli, Italy	Senior Investigator (1° Ricercatore)	2004- present	Bioactive secondary metabolites from diatoms

### Students' Supervision

PhD supervisor of four Ph.D. students and one Postdoctoral researcher.

## Publications

Author of 56 publications on ISI-journals (h index: 23, according to Google Scholar) and 1 book chapter.

*List of publications of the last 10 years* (2005-present):

### Peer-reviewed publications

- Paffenhofer GA, Ianora A, Miralto A, Turner JT, Kleppel GS, et al. (2005) Colloquium on diatom-copepod interactions. *Marine Ecology-Progress Series* 286: 293-305.
- Cutignano A, d'Ippolito G, Romano G, Lamari N, Cimino G, et al. (2006) Chloroplastic glycolipids fuel aldehyde biosynthesis in the marine diatom *Thalassiosira rotula*. *Chembiochem* 7: 450-456.
- d'Ippolito G, Cutignano A, Tucci S, Romano G, Cimino G, et al. (2006) Biosynthetic intermediates and stereochemical aspects of aldehyde biosynthesis in the marine diatom *Thalassiosira rotula*. *Phytochemistry* 67: 314-322.
- Fontana A, d'Ippolito G, Cutignano A, Miralto A, Ianora A, et al. (2007) Chemistry of oxylipin pathways in marine diatoms. *Pure and Applied Chemistry* 79: 481-490.
- Fontana A, d'Ippolito G, Cutignano A, Romano G, Lamari N, et al. (2007) LOX-induced lipid peroxidation mechanism responsible for the detrimental effect of marine diatoms on zooplankton grazers. *Chembiochem* 8: 1810-1818.
- d'Ippolito G, Lamari N, Montresor M, Romano G, Cutignano A, et al. (2009) 15S-lipoxygenase metabolism in the marine diatom *Pseudo-nitzschia delicatissima*. *New Phytol* 183: 1064-1071.
- Romano G, Miralto A, Ianora A (2010) Teratogenic effects of diatom metabolites on sea urchin *Paracentrotus lividus* embryos. *Marine Drugs* 8: 950-967.
- Barreiro A, Carotenuto Y, Lamari N, Esposito F, D'Ippolito G, et al. (2011) Diatom induction of reproductive failure in copepods: The effect of PUAs versus non volatile oxylipins. *Journal of Experimental Marine Biology and Ecology* 401: 13-19.
- Buttino I, Hwang JS, Sun CK, Hsieh CT, Liu TM, et al. (2011) Apoptosis to predict copepod mortality: state of the art and future perspectives. *Hydrobiologia* 666: 257-264.
- Buttino I, Pellegrini D, Romano G, Hwang J-S, Liu T-M, et al. (2011) Study of apoptosis induction using fluorescent and higher harmonic generation microscopy techniques in *Acartia tonsa* nauplii exposed to chronic concentrations of nickel. *Chemistry and Ecology* 27: 97-104.
- Gerecht A, Romano G, Ianora A, d'Ippolito G, Cutignano A, et al. (2011) Plasticity of oxylipin metabolism among clones of the marine diatom *Skeletonema Marinoi* (Bacillariophyceae). *Journal of Phycology* 47: 1050-1056.
- Ianora A, Romano G, Carotenuto Y, Esposito F, Roncalli V, et al. (2011) Impact of the diatom oxylipin 15S-HEPE on the reproductive success of the copepod *Temora stylifera*. *Hydrobiologia* 666: 265-275.
- Romano G, Costantini M, Buttino I, Ianora A, Palumbo A (2011) Nitric oxide mediates the stress response induced by diatom aldehydes in the sea urchin *Paracentrotus lividus*. *Plos One*. doi: 10.1371/journal.pone.0025980.
- Ianora A, Bentley MG, Caldwell GS, Casotti R, Cembella AD, et al. (2011) The relevance of marine chemical ecology to plankton and ecosystem function: an emerging field. *Marine Drugs* 9: 1625-1648.
- Cutignano A, Avila C, Rosica A, Romano G, Laratta B, et al. (2012) Biosynthesis and cellular localization of functional polyketides in the gastropod mollusc *Scaphander lignarius*. *Chembiochem* 13: 1759-1766.

- Marrone V, Piscopo M, Romano G, Ianora A, Palumbo A, et al. (2012) Defense against toxic diatom aldehydes in the sea urchin *Paracentrotus lividus*. *Plos One* 7. doi: 10.1371/journal.pone.0031750
- Turner JT, Roncalli V, Ciminiello P, Dell'Aversano C, Fattorusso E, et al. (2012) Biogeographic effects of the Gulf of Mexico red tide dinoflagellate *Karenia brevis* on Mediterranean copepods. *Harmful Algae* 16: 63-73.
- Gerecht A, Carotenuto Y, Ianora A, Romano G, Fontana A, et al. (2013) Oxylipin production during a mesocosm bloom of *Skeletonema marinoi*. *Journal of Experimental Marine Biology and Ecology* 446: 159-165.
- Romano G, Manzo E, Russo GL, d'Ippolito G, Cutignano A, et al. (2013) Design and synthesis of pro-apoptotic compounds inspired by diatom oxylipins. *Marine Drugs* 11: 4527-4543.
- Zhang J, Wu C, Pellegrini D, Romano G, Esposito F, et al. (2013) Effects of different monoalgal diets on egg production, hatching success and apoptosis induction in a Mediterranean population of the calanoid copepod *Acartia tonsa* (Dana). *Aquaculture* 400-401: 65-72.
- Kâ S, Carotenuto Y, Romano G, Hwang J-S, Buttino I, et al. (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.
- Keeling PJ, Burki F, Wilcox HM, Allam B, Allen EE, et al. (2014) The Marine Microbial Eukaryote Transcriptome Sequencing Project (MMETSP): illuminating the functional diversity of eukaryotic life in the oceans through transcriptome sequencing. *PLoS Biol* 12: e1001889.
- Maibam C, Fink P, Romano G, Buia M, Gambi M, et al. (2014) Relevance of wound-activated compounds produced by diatoms as toxins and infochemicals for benthic invertebrates. *Marine Biology* 161: 1639-1652.
- Migliaccio O, Castellano I, Romano G, Palumbo A (2014) Stress response to cadmium and manganese in *Paracentrotus lividus* developing embryos is mediated by nitric oxide. *Aquatic Toxicology* 156: 125-134.
- Ribalet F, Bastianini M, Vidoudez C, Acri F, Berges J, et al. (2014) Phytoplankton cell lysis associated with polyunsaturated aldehyde release in the Northern Adriatic Sea. *Plos One* 9. doi: 10.1371/journal.pone.0085947
- Sansone C, Braca A, Ercolesi E, Romano G, Palumbo A, et al. (2014) Diatom-derived polyunsaturated aldehydes activate cell death in human cancer cell lines but not normal cells. *Plos One* 9. doi: 10.1371/journal.pone.0101220
- Varrella S, Romano G, Ianora A, Bentley MG, Ruocco N, et al. (2014) molecular response to toxic diatom-derived aldehydes in the sea urchin *Paracentrotus lividus*. *Marine Drugs* 12: 2089-2113.
- Castellano I, Ercolesi E, Romano G, Ianora A, Palumbo A (2015) The diatom-derived aldehyde decadienal affects life cycle transition in the ascidian *Ciona intestinalis* through nitric oxide/ERK signalling. *Open Biology* 5. doi: 10.1098/rsob.140182
- Costantini S, Romano G, Rusolo F, Capone F, Guerriero E, et al. (2015) Anti-inflammatory effects of a methanol extract from the marine sponge *geodia cydonium* on the human breast cancer MCF-7 cell line. *Mediators of Inflammation*. In press
- Ianora A, Bastianini M, Carotenuto Y, Casotti R, Roncalli V, et al. (2015) Non-volatile oxylipins can render some diatom blooms more toxic for copepod reproduction. *Harmful Algae* 44: 1-7.
- Lauritano C, Carotenuto Y, Vitiello V, Buttino I, Romano G, et al. (2015) Effects of the oxylipin-producing diatom *Skeletonema marinoi* on gene expression levels of the calanoid copepod *Calanus sinicus*. *Marine Genomics*.

Maibam C, Fink P, Romano G, Buia MC, Butera E, et al. (2015) *Centropages typicus* (Crustacea, Copepoda) reacts to volatile compounds produced by planktonic algae. *Marine Ecology*. doi: 10.1111/maec.12254

**Book Chapters:**

Ianora A, Miralto A, Romano G (2012) Antipredatory Defensive Role of Planktonic Marine Natural Products. In: Fattorusso E, Gerwick WH, Tagliatela-Scafati O, editors. *Handbook of Marine Natural Products*: Springer Netherlands. pp. 711-748.