

## Biosketch - Anna Palumbo



Staff member of the Stazione Zoologica Anton Dohrn from 1980-2021. Since July 2007 Research Director in the Department of Biology and Evolution of Marine Organisms.

Main research activities include:

-Response of marine organisms to environmental factors. The effects of some environmental conditions (acidification, toxic bloom, microplastics) are examined on various marine organisms at different life phases by laboratory or field experiments. Oxidative and nitrosative parameters are followed, including redox state determination, production of antioxidant molecules, gene and protein expression, formation of nitric oxide and its signalling at gene and protein levels.

-Purification and biological activity of marine natural products. Main focus is on ovoidiol, a powerful antioxidant mainly present in marine invertebrates, bacteria, and microalgae. Its biological activity is currently investigated in sea urchins and diatoms.

The research activity is documented by the publication of about 115 publications on ISI-journals, 7 book chapters and 2 patents.

Scientometry: H index 37, total citations 4354 (11/2021). <http://orcid.org/0000-0002-5972-5589>.

Five relevant publications:

1. Murano C, Donnarumma V, Corsi I, Casotti R, **Palumbo A**. 2021. Impact of microbial colonization of polystyrene microbeads on the toxicological responses in the sea urchin *Paracentrotus lividus*. *Environ Sci Technol* 55:7990–8000.
2. Murano C, Agnisola C, Caramiello D, Castellano I, Casotti R, Corsi I, **Palumbo A**. 2020. How sea urchins face microplastics: uptake, tissue distribution and immune system response. *Environmental Pollution* 264, 114685.
3. Milito A, Orefice I, Smerilli A, Castellano I, Napolitano A, Brunet C, **Palumbo A**. 2020. Insights into the Light Response of *Skeletonema marinoi*: Involvement of Ovoidiol. *Marine drugs* 18, 477.
4. Migliaccio O, Pinsino A, Maffioli E, Smith AM, Agnisola C, Matranga V, Nonnis S, Tedeschi G, Byrne M, Gambi MC, **Palumbo A**. 2019. Living in future ocean acidification, physiological adaptive responses of the immune system of sea urchins resident at a CO<sub>2</sub> vent system. *Science of The Total Environment* 672, 938-950.
5. Migliaccio O, Castellano I, Di Cioccio D, Tedeschi G, Negri A, Cirino P, Romano G, Zingone A, **Palumbo A**. 2016. Subtle reproductive impairment through nitric oxide-mediated mechanisms in sea urchins from an area affected by harmful algal blooms. *Scientific Reports* 6, 26086.