

## Eugenio Rastelli



Born in Modena (Italy)

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### **Current Position:**

Researcher (Ricercatore III° livello)

### **Affiliation:**

Integrative Marine Ecology (EMI) Department, Stazione Zoologica Anton Dohrn, Napoli (Italy)

### **Education/Training/Experience**

<b>Institute and Location</b>	<b>Degree Function</b> /	<b>Year</b>	<b>Field of Study</b>
Polytechnic University of Marche, Ancona, Italy	Master (Laurea)	2008-2010	Marine Biology and Ecology
Polytechnic University of Marche, Ancona, Italy	Ph.D.	2010-2013	Marine Biology and Ecology
Polytechnic University of Marche, Ancona, Italy	Postdoc	2013-2014	Marine Microbial and Molecular Ecology
Stazione Zoologica Anton Dohrn, Napoli, Italy	Postdoc	2014-2017	Marine Ecosystem Monitoring/Environmental Sustainability/Microbial Ecology
Stazione Zoologica Anton Dohrn, Napoli, Italy	Researcher	2017-present	Marine Microbial and Molecular Ecology

### **Appointments and awards**

2013–present. Peer Reviewer for: *Environmental Microbiology and Environmental Microbiology Reports* (Wiley Online Library); *Scientific Reports* (Nature Publishing Group); *Frontiers in Marine Science* (Frontiers Media); *International Journal of Greenhouse Gas Control* (Elsevier); *Biology* (Multidisciplinary Digital Publishing Institute - MDPI); *Plos One* (Public Library of Science); *Chemistry and Ecology* (Taylor & Francis); *Viruses* (MDPI).

2013. Member of the organizing committee for the SIteE 2013 Congress (Italian Society of Ecology): Ecology for a sustainable Blue and Green Growth.

2011. Grant by The Gordon & Betty Moore Foundation (USA) for participation in the 6<sup>th</sup> Aquatic Virus Workshop organized at NIOZ (Royal Netherlands Institute for Sea Research), for the poster entitled “*Assessing the selective impact of viruses on Bacteria and Archaea in aquatic sediments*”.

2011. Grant for participation in the AIOL workshop (Italian Association in Limnology and Oceanography) for the presentation entitled “*Viral ecology in deep-sea Sediments*”.

2010. Grant by the European Science Foundation (ESF) for participation in the ESF Research Conference “*Marine Biotechnology: Future Challenges*”.

2010. Selected student for the ASM International Mentorship Program (*American Society for Microbiology*), ref. Prof. M. Suzuki (Director UPMC CNRS, Laboratoire de Biodiversité et Biotechnologie Microbiennes, Université Pierre et Marie Curie, France)

### **Other**

2008-present: Contribution to the organization and implementation of >20 oceanographic campaigns and scientific expeditions in the Pacific Ocean, Atlantic Ocean, Antarctica, North Sea, Mediterranean Sea, Red Sea, for a total of more than 200 days of field research activity.

>30 contributions to national and international congresses and scientific reports.

Participation in international projects: DEVOTES, ECO2, HERMES, HERMIONE, MAP, SUGAR, S&T MED, MIDAS, MERCES.

Participation in national projects: ABBaCo, RITMARE, PNRA-Antarctica, EXPLODIVE-FIRB, OBAMA-FIRB, mo.bio.mar.cal-ISPRA, INPUT.

Ongoing collaborations with JAMSTEC ([www.jamstec.go.jp/e/about/equipment/ships/](http://www.jamstec.go.jp/e/about/equipment/ships/)), Japan.

2011-2012. Invited Speaker at the “JAMSTEC Biogeos Seminar” cycles (Japan) for two presentations, entitled: “*The Izu-Ogasawara trench, a hot spot of viral activity*” (2011), and “*Viruses, major players in the functioning of deep-sea benthic ecosystem*” (2012).

### **Students’ Supervision**

2011-2015. Co-supervisor of 6 Bachelor students, 1 PhD student. Tutor of Master Students in the Microbial & Molecular Ecology Laboratory,

(<http://www.disva.univpm.it/content/microbial-and-molecular-ecology?language=en>),

in the Marine Biology and Ecology Laboratory

(<http://www.disva.univpm.it/content/marine-biology-and-ecology?language=en>),

and for the course of Ecology (BSc Biology) at the Polytechnic University of Marche (Ancona).

2015-present. Co-tutoring of n.1 MSc. Student and n.4 PhD students.

### **Peer-reviewed Publications**

Author of n.16 publications on ISI-journals (h-index 6) and n.3 book chapters

#### ***List of publications since 2013:***

##### ***Peer-reviewed publications***

Luna, G. M., Corinaldesi, C., **Rastelli, E.**, Danovaro, R. (2013). Patterns and drivers of bacterial  $\alpha$ - and  $\beta$ -diversity across vertical profiles from surface to subsurface sediments. *Environmental microbiology reports* 5: 731-739. doi: 10.1111/1758-2229.12075

Danovaro, R., Corinaldesi, C., **Rastelli, E.**, Dell’Anno, A. (2015). Towards a better quantitative assessment of the relevance of deep-sea viruses, Bacteria and Archaea in the functioning of the ocean seafloor. *Aquatic Microbial Ecology* 75: 81-90. doi: 10.3354/ame01747

Caruso, G., La Ferla, R., Azzaro, M., Zoppini, A., Marino, G., Petoche, T., Corinaldesi, C., Leonardia, M., Zaccone, R., Fonda Umani, S., Caroppo, C., Monticelli, L., Azzaro, F., Decembrini, F., Maimone, G., Cavallo, R.A., Stabili, L., Todorova, N.H., Karamfilov, V.K., **Rastelli, E.**, Cappello, S., Acquaviva, M.I., Narracci, M., De Angelis, R., Del Negro, P., Latini, M., Danovaro R. (2015). Microbial assemblages for environmental quality assessment: Knowledge, gaps and usefulness in the European Marine Strategy Framework Directive. *Critical Reviews in*

*Microbiology* 42: 883-904. doi:10.3109/1040841X.2015.1087380 Recommended in *F1000 Prime*  
<http://f1000.com/prime/ext/725964746>

- Rastelli E.**, Corinaldesi C., Dell'Anno A., Amaro, T., Queirós, A.M., Widdicombe, S., Danovaro, R. (2015). Impact of CO<sub>2</sub> leakage from sub-seabed carbon dioxide capture and storage (CCS) reservoirs on benthic virus–prokaryote interactions and functions. *Frontiers in Microbiology* 6:935. doi: 10.3389/fmicb.2015.00935 *F1000 Prime* <http://f1000.com/prime/ext/725832867>
- Rastelli E.**, Corinaldesi C., Dell'Anno A., Greco, S., Lo Martire, M., Carugati, L., Queirós, A.M., Widdicombe, S., Danovaro, R. (2016). CO<sub>2</sub> leakage from carbon dioxide capture and storage (CCS) systems affects organic matter cycling in surface marine sediments. *Marine Environmental Research* 122:158-168. doi: 10.1016/j.marenvres.2016.10.007
- Rastelli E.**, Corinaldesi C., Petani B., Dell'Anno, A., Ciglencéki, I., Danovaro, R. (2016). Enhanced viral activity and dark CO<sub>2</sub> fixation rates under oxygen depletion: the case study of the marine Lake Rogoznica. *Environmental Microbiology* 18:4511-4522. doi: 10.1111/1462-2920.13484
- Danovaro, R., Dell'Anno, A., Corinaldesi, C., **Rastelli, E.**, Cavicchioli, R., Krupovic, M., Noble, R.T., Nunoura, T., Prangishvili, D. (2016). Virus-mediated archaeal hecatomb in the deep seafloor. *Science Advances* 2016c;2:e1600492. doi: 10.1126/sciadv.1600492
- Hannachi, A., Elarbaoui, S., Khazri, A., Sellami, B., **Rastelli, E.**, D'Agostino, F., Beyrem, H., Mahmoudi, E., Corinaldesi, C., Danovaro, R. (2016). Impact of the biocide Irgarol on meiofauna and prokaryotes from the sediments of the Bizerte lagoon—an experimental study. *Environmental Science and Pollution Research* 23: 7712-7721. doi:10.1007/s11356-015-5936-y
- Rastelli E.**, Dell'Anno A., Corinaldesi C., Middelboe, M., Noble, R.T., Danovaro, R. (2016). Quantification of viral and prokaryotic production rates in benthic ecosystems: A methods comparison. *Frontiers in Microbiology* 7:1501. doi: 10.3389/fmicb.2016.01501
- Danovaro, R., Carugati L., Berzano, M., Cahill, A.E., Carvalho, S., Chenuil, A., Corinaldesi, C., Cristina, S., David, R., Dell'Anno, A., Dzhenbekova, N., Garcès, E., Gasol, J.M., Goela, P., Féral, J.P., Ferrera, I., Forster, R.M., Kurekin, A.A., **Rastelli, E.**, Marinova, V., Miller, P.I., Moncheva, S., Newton, A., Pearman, J.K., Pitois, S., Reñé, A., Rodríguez-Ezpeleta, N., Saggiomo, V., Simis, S.G.H., Stefanova, K., Wilson, C., Lo Martire, M., Greco, S., Cochrane, S., Borja A. (2016). Implementing and innovating marine monitoring approaches for assessing marine environmental status. *Frontiers in Marine Science* 3:213. doi: 10.3389/fmars.2016.00213
- Danovaro R, **Rastelli E.**, Corinaldesi C, Dell'Anno A. (2017). Marine archaea and archaeal viruses under global change. *F1000Res* 6:1241. doi: 10.12688/f1000research.11404.1
- Munari, C., Infantini, V., Scoponi, M., **Rastelli, E.**, Corinaldesi, C., Mistri, M. (2017). Microplastics in the sediments of Terra Nova Bay (Ross Sea, Antarctica). *Marine Pollution Bulletin* 122, 161-165. doi: 10.1016/j.marpolbul.2017.06.039
- Rastelli E.**, Corinaldesi C., Dell'Anno A., Tangherlini, M., Martorelli, E., Ingrassia, M., Lo Martire, M., Chiocci F.L., Danovaro, R. (2017). High potential for temperate viruses to drive carbon cycling in chemoautotrophy-dominated shallow-water hydrothermal vents. *Environmental Microbiology* [Epub ahead of print] doi:10.1111/1462-2920.13890
- Rastelli, E.**, Corinaldesi, C., Dell'Anno, A., Lo Martire, M., Greco, S., Facchini, M.C., O'Dowd, C., Ceburnis, D., Danovaro, R. (2017). Transfer of labile organic matter and microbes from the ocean surface to the marine aerosol: an experimental approach. *Scientific Reports* 7, 11475. doi: 10.1038/s41598-017-10563-z
- Danovaro, R., Corinaldesi, C., Dell'Anno, A., **Rastelli, E.** (2017). Potential impact of global climate change on benthic deep-sea microbes. *FEMS Microbiology Letters* fnx214. <https://doi.org/10.1093/femsle/fnx214>
- Amaro, T., Bertocci, I., Queiros, A.M., **Rastelli, E.**, Borgersen G., Brkljacic M., Nunes, J. Sorensen K., Danovaro, R., Widdicombe, S. (2018). Effects of sub-seabed CO<sub>2</sub> leakage: Short- and medium-term responses of benthic macrofaunal assemblages. *Marine Pollution Bulletin* 128, 519-526. doi: 10.1016/j.marpolbul.2018.01.068

### ***Book chapters***

- Danovaro, R., Corinaldesi, C., **Rastelli, E.**, Dell'Anno, A. (2016). Impacts and effects of ocean warming on microorganisms. In Explaining ocean warming: causes, scale, effects and consequences. Laffoley, D, and Baxter, JM. Eds. Full report. Gland, Switzerland: IUCN (International Union for Conservation of Nature). pp. 57-74. ISBN: 978-2-8317-1806-4
- Danovaro, R., **Rastelli, E.**, Corinaldesi, C., Dell'Anno, A. (2014). Deep-sea microbes and their role in the ocean interior. In: The Significance and Management of Natural Carbon Stores in the Open Ocean. Laffoley D, Baxter JM, Thevenon F and Oliver J, Eds., Gland, Switzerland: IUCN (International Union for Conservation of Nature); 2014 pp. 103-115. ISBN: 978-208317-1692-3
- Danovaro, R., **Rastelli, E.**, Corinaldesi, C., Dell'Anno, A. (2014). Deep-sea chemosynthetic carbon production. In: Laffoley D, Baxter JM, Thevenon F and Oliver J, Eds. The Significance and Management of Natural Carbon Stores in the Open Ocean. Gland, Switzerland: IUCN (International Union for Conservation of Nature); 2014 pp. 93-102. ISBN: 978-208317-1692-3

### **Press and outreach**

Online press releases, news & highlights on my research

Link:<http://www.the-scientist.com/?articles.view/articleNo/47235/title/Deep-Sea-Viruses-Destroy-Archaea/>

Link:<https://www.sciencenews.org/article/ocean-archaea-more-vulnerable-deep-sea-viruses-bacteria>

Link:[http://napoli.repubblica.it/cronaca/2016/10/13/news/piccoli\\_e\\_potenti\\_gli\\_archea\\_la\\_foresta\\_amazzonica\\_del\\_mare\\_combattono\\_l\\_acidificazione\\_degli\\_oceani-149674604/](http://napoli.repubblica.it/cronaca/2016/10/13/news/piccoli_e_potenti_gli_archea_la_foresta_amazzonica_del_mare_combattono_l_acidificazione_degli_oceani-149674604/)

Link:<http://f1000.com/prime/ext/725964746>

Link:<http://f1000.com/prime/ext/725832867>