

Lucia Rizzo



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Current Position: Researcher

Current Affiliation:

Istituto di Scienze delle Produzioni Alimentari - Consiglio Nazionale delle Ricerche (CNR-ISPA)
Via Monteroni, CAP 73100, Lecce (LE), Italy

Education/Training/Experience

Institute and Location	Degree / Function	Year	Field of Study
Lecce University, Italy	Master of Science	2010	Environmental Sciences
Lecce University, Italy	Master PostLauream	2012	Master in Research and development (R&D)
Ca' Foscari University of Venice, Italy	Ph.D.	2015	Environmental Sciences
Mediterranean Agronomic Institute of Bari (MAIB)	Fellowship	2014-2015	Coralligenous assemblages
University of Lecce, Italy	Course Postlauream	2015	Manager of Protected Areas
National Interuniversity Consortium For Marine Sciences, CoNISMa, Roma	Postdoc	2015-2018	Coralligenous assemblages
Labomar, Universidade Federal do Ceará, Fortaleza, Brasil	Visiting scientist	August/September 2019	Benthic Habitat Health
Stazione Zoologica Anton Dohrn, Napoli, Italy	Researcher	2018-2022	Marine Biology and Ecology

Projects

Member of Management Committee Cost Action CA20102 - Marine Animal Forest of the world (2021-ongoing).

WP Co-Leader “WP1: Coordination” Cost Action CA20102 - Marine Animal Forest of the world (2021-ongoing).

WP Co-Leader “WP2: Conservation status of benthic communities structuring coralligenous formations” in CRIMAC (Centro Ricerche ed Infrastrutture Marine Avanzate in Calabria) Project CORE-Calabria “Coralligenous Formations in Calabrian SAC” (2021-ongoing).

Task Leader “T3.2 Sessile Protected Species” in PO-FEAMP Campania (2014–2020), European Maritime and Fisheries Fund (2019-ongoing).

Vice-PI of the project ABBACO aimed at restoring the post-industrial site of Bagnoli-Coroglio (2019-2021).

Participation in national and international projects: MSFD, ADRI-PLAN, PRO.ACT. NATURA 2000, CoCoNet, MAREA, BIOMAP, BIG- Project, Pulmo, AMARE, AFRIMED.

Oceanographic cruises

Oceanographic Survey MARINE STRATEGY (Adriatic Sea). R/V Minerva Uno. Supervisor: Dr. L. Angeletti. Aug 2017

Oceanographic Survey MARINE STRATEGY (Central Mediterranean Sea). R/V Minerva Uno. Supervisor: Dr. L. Angeletti. Aug - Sep 2016

Oceanographic Survey BIOMAP (Ionian and Adriatic Sea). R/V Minerva Uno. Supervisor: Dr. A. Savini. May 2012

Students' Supervision

2021/2022. SZN Research scholarship. Researcher: Dr. Francesca Necci. Tutor: Dr. Lucia Rizzo.

2021/2022. SZN Research scholarship. Researcher: Dr. Andrea Picciolo. Tutors: Dr. Lucia Rizzo, Dr. Marco Munari.

2020/2021. SZN Research scholarship. Researcher: Dr. Silvia Stranges. Tutors: Dr. Lucia Rizzo.

2022. SZN Internship (Master in Capitale Naturale e Aree Protette. Pianificazione, progettazione e Gestione, La Sapienza Università di Roma). Student: Dr. Francesca Necci. Tutor: Dr. Lucia Rizzo.

2022. Thesis (Università Federico II di Napoli). Title: Assessing the effectiveness of the Marine Protected Area Torre Guaceto (Apulia, Italy) using coralligenous formations. Student: Dr. Wiem Bouaziz. Tutor: Prof. Simonetta Fraschetti. Co-tutor: Dr. Lucia Rizzo.

2021. Thesis (Università Federico II di Napoli). Title: Criteria for Site Selection Prioritization in a Restoration Framework. Student: Marianna Coppola. Tutor: Prof. Simonetta Fraschetti. Co-tutors: Dr. Lucia Rizzo; Dr. Marco Munari.

2017. Thesis (Università del Salento). Title: *Corallium rubrum* (Linnaeus, 1758): Distribuzione, Pressioni e Conservazione. Student: Carola Prato. Tutor: Prof. Simonetta Fraschetti. Co-tutor: Dr. Lucia Rizzo.

2017. Thesis (Università del Salento). Title: Valutazione quantitativa della presenza di Marine Litter sull'habitat a coralligeno nel Mar Ionio. Student: Lara Fumarola. Tutor: Prof. Simonetta Frascchetti. Co-tutor: Dr. Lucia Rizzo.

2012. Thesis (Università del Salento). Title: Il coralligeno lungo alcune coste italiane: analisi della letteratura. Student: Gianluca Pappaccogli. Tutor: Prof. Simonetta Frascchetti. Co-tutor: Dr. Lucia Rizzo.

Lectures

October 2022 Lecturer, Ecosystem Conservation and Management (18 hours). Course for PhD student. University of Teramo, Italy.

2-6 September 2019 Invited Instructor, Fortaleza's Austral Spring School: Global Change and Marine Biodiversity, Fortaleza, Brasil.

2016/2017 Lecturer, Microbiology and Hygiene (24 hours), Training course for academic courses in Biology and Medicine Degrees. Scientific and Classical Lyceum, Tricase (LE), Italy.

2017/2018 Lecturer, Microbiology and Hygiene (32 hours), Training course for academic courses in Biology and Medicine Degrees. Scientific and Classical Lyceum, Tricase (LE), Italy.

Publications:

Fabbrizzi, E., Giakoumi, S., De Leo, F., Tamburello, L., Chiarore, A., Colletti, A., Coppola, M., Munari, M., Musco, L., Rindi, F., **Rizzo, L.**, Savinelli, B., Franzitta, G., Grech, D., Cebrian, E., Verdura, J., Bianchelli, S., Mangialajo, L., Nasto, I., Sota, D., Frascchetti, S. (2023). The challenge of setting restoration targets for macroalgal forests under climate changes. *Journal of Environmental Management*, 326, 116834. DOI: 10.1016/j.jenvman.2022.116834

Stabili, L., **Rizzo, L.**, Caprioli, R., Alabiso, G., Piraino, S. (2022). How Much Recurrent Outbreaks of the Moon Jellyfish May Impact the Dynamics of Bacterial Assemblages in Coastal Lagoons?. *Water*, 14(23), 3908. DOI: 10.3390/w14233908

Rizzo, L., Minichino, R., Virgili, R., Tanduo, V., Osca, D., Manfredonia, A., Consoli, P., Colloca, F., Crocetta, F. (2022). Benthic litter in the continental slope of the Gulf of Naples (central-western Mediterranean Sea) hosts limited fouling communities but facilitates molluscan spawning. *Marine Pollution Bulletin*, 181, 113915.

Rossi, S., Bramanti, L., Horta, P., Allcock, L., Carreiro-Silva, M., Coppari, M., Dennis, V., Hadjioannou, L., Isla, E., Jimenez, C., Johnson, M., Mohn, C., Orejas, C., Ramšak, A., Reimer, J., Rinkevich, B., **Rizzo, L.**, Salomidi, M., Samaai, T., Schubert, N., Soares, M., Thurstan, R., Vassallo, P., Ziveri, P., Zorrilla-Pujana, J. (2022). Protecting global marine animal forests. *Science*. DOI: 10.1126/science.abq7583

Tamburello, L., Chiarore, A., Fabbrizzi, E., Colletti, A., Franzitta, G., Grech, D., Rindi, F., **Rizzo, L.**, Savinelli, B., Frascchetti, S. (2022). Can we preserve and restore overlooked macroalgal forests?. *Science of The Total Environment*, 806, 150855. DOI: 10.1016/j.scitotenv.2021.150855

- Stabili, L., **Rizzo, L.**, Caprioli, R., Leone, A. Piraino, S. (2021). Jellyfish Bioprospecting in the Mediterranean Sea: Antioxidant and Lysozyme-Like Activities from *Aurelia coerulea* (Cnidaria, Scyphozoa) Extracts. *Marine drugs*, 19(11), 619. DOI: 10.3390/md19110619
- Rizzo, L.**, Fiorillo, I., Rossi, S. (2021). Seasonal trends of the polyp expansion and nutritional condition of *Alcyonium acaule* (Octocorallia, Alcyonacea) *PeerJ* 9:e12032. DOI:10.7717/peerj.12032
- Basso, L., Papadia, P., **Rizzo, L.**, Migoni, D., Fanizzi, P.F., Piraino, S. (2021). Trace Metals Do Not Accumulate Over Time in The Edible Mediterranean Jellyfish *Rhizostoma pulmo* (Cnidaria, Scyphozoa) from Urban Coastal Waters. *Water*, 13(10), 1410. DOI: 10.3390/w13101410
- Rossi, S., **Rizzo, L.** (2021). The Importance of Food Pulses in Benthic-Pelagic Coupling Processes of Passive Suspension Feeders. *Water*, 13(7), 997. DOI: 10.3390/w13070997
- Rizzo, L.**, Musco, L., Crocetta, F. (2021). Cohabiting with litter: Fish and benthic assemblages in coastal habitats of a heavily urbanized area. *Marine Pollution Bulletin*, 164, 112077. DOI: 10.1016/j.marpolbul.2021.112077
- Mammone, M., Ferrier-Pagés, C., Lavorano, S., **Rizzo, L.**, Piraino, S., Rossi, S. (2021). High photosynthetic plasticity may reinforce invasiveness of upside-down zooxanthellate jellyfish in Mediterranean coastal waters. *Plos one*, 16(3), e0248814. DOI: 10.1371/journal.pone.0248814
- Rizzo, L.**, Pusceddu, A., Bianchelli, S., Frascchetti, S (2020). Potentially combined effect of the invasive seaweed *Caulerpa cylindracea* (Sonder) and sediment deposition rates on organic matter and meiofaunal assemblages. *Marine Environmental Research*, 159. DOI: /10.1016/j.marenvres.2020.104966
- Stabili, L., **Rizzo, L.**, Basso, L., Marzano, M., Fosso, B., Pesole, G., Piraino, S. (2020). The Microbial Community Associated with *Rhizostoma pulmo*: Ecological Significance and Potential Consequences for Marine Organisms and Human Health. *Marine Drugs*, 18(9), 437. DOI: 10.3390/md18090437
- Crocetta, F., Riginella, E., Lezzi, M., Tanduo, V., Balestrieri, L., **Rizzo, L.** (2020). Bottom-trawl catch composition in a highly polluted coastal area reveals multifaceted native biodiversity and complex communities of fouling organisms on litter discharge. *Marine Environmental Research*, 104875. DOI: 10.1016/j.marenvres.2020.104875
- Chimienti, G., **Rizzo, L.**, Kaleb, S., Falace, A., Frascchetti, S., Giosa, F. D., Tursi, A., Barbone, E., Ungaro, N., Mastrototaro, F. (2020). Rhodolith Beds Heterogeneity along the Apulian Continental Shelf (Mediterranean Sea). *Journal of Marine Science and Engineering*, 8(10), 813. DOI: 10.3390/jmse8100813
- de Oliveira Soares, M., Matos, E., Lucas, C., **Rizzo, L.**, Allcock, L., Rossi, S. (2020). Microplastics in corals: An emergent threat. *Marine Pollution Bulletin*, 161, 111810. DOI: 10.1016/j.marpolbul.2020.111810
- Colletti, A., Savinelli, B., Di Muzio, G., **Rizzo, L.**, Tamburello, L., Frascchetti, S., Musco, L., Danovaro, R. (2020). The date mussel *Lithophaga lithophaga*: Biology, ecology and the multiple impacts of its illegal fishery. *Science of The Total Environment*, 140866. DOI: 10.1016/j.scitotenv.2020.140866

- Angilè, F., Del Coco, L., Girelli, C.R., Basso, L., **Rizzo, L.**, Piraino, S., Stabili, L., Fanizzi, F.P. (2020). ¹H NMR Metabolic Profile of Scyphomedusa *Rhizostoma pulmo* (Scyphozoa, Cnidaria) in Female Gonads and Somatic Tissues: Preliminary Results. *Molecules* 4(25):806. DOI: 10.3390/molecules25040806
- Fabbrizzi, E., Scardi, M., Ballesteros, E., Benedetti-Cecchi, L., Cebrian, E., Ceccherelli, G., De Leo, F., Deidun, A., Guarnieri, G., Falace, A., Fraissinet, S., Giommi, C., Macic, V., Mangialajo, L., Mannino, A.M., Piazzzi, L., Ramdani, M., Rilov, G., Rindi, L., **Rizzo, L.**, Sarà, G., Souissi, J.B., Taskin, E. Frascchetti, S. (2020). Modeling Macroalgal Forest Distribution at Mediterranean Scale: Present Status, Drivers of Changes and Insights for Conservation and Management. *Frontiers in Marine Science*, 7, 20. DOI: 10.3389/fmars.2020.00020
- Basso, L., **Rizzo, L.**, Marzano, M., Intranuovo, M., Fosso, B., Pesole, G., Piraino, S., Stabili, L. (2019). Jellyfish summer outbreaks as bacterial vectors and potential hazards for marine animals and humans health? The case of *Rhizostoma pulmo* (Scyphozoa, Cnidaria). *Science of The Total Environment*, 692, 305-318. DOI: 10.1016/j.scitotenv.2019.07.155
- Rossi, S., Isla, E., Bosch-Belmar, M., Galli, G., Gori, A., Gristina, M., Ingrosso, G., Milisenda, G., Piraino, S., **Rizzo, L.**, Schubert, N., Soares, M., Solidoro, C., Thurstan, R.H., Viladrich, N., Trevor, J.W., Ziveri, P. (2019). Changes of energy fluxes in marine animal forests of the Anthropocene: factors shaping the future seascape. *ICES Journal of Marine Science*, 76(7), 20082019. DOI: 10.1093/icesjms/fsz147
- Rossi, S., **Rizzo, L.**, Duchêne, J. C. (2019). Polyp expansion of passive suspension feeders: a red coral case study. *PeerJ*, 7, e7076. DOI: 10.7717/peerj.7076
- Stabili, L., **Rizzo, L.**, Fanizzi, F. P., Angilè, F., Del Coco, L., Girelli, C. R., Lomartire, S., Piraino, S., Basso, L. (2019). The jellyfish *Rhizostoma pulmo* (Cnidaria): biochemical composition of ovaries and antibacterial lysozyme-like activity of the oocyte lysate. *Marine drugs*, 17(1), 17. DOI: 10.3390/md17010017
- Chimenti, G., Angeletti, L., **Rizzo, L.**, Tursi, A., Mastrototaro, F. (2018). Rov vs trawling approaches in the study of benthic communities: the case of *Pennatulula rubra* (Cnidaria: Pennatulacea). *Journal of the Marine Biological Association of the United Kingdom*. DOI: 10.1017/S0025315418000851
- Rizzo, L.**, Pusceddu, A., Stabili, L., Alifano, P., Frascchetti, S. (2017). Potential effects of an invasive seaweed (*Caulerpa cylindracea*, Sonder) on sedimentary organic matter and microbial metabolic activities. *Scientific Reports* 7:12113. DOI: 10.1038/s41598-017-12556-4.
- Stabili, L., **Rizzo, L.**, Pizzolante, G., Alifano, P., Frascchetti, S. (2017). Spatial distribution of the culturable bacterial community associated with the invasive alga *Caulerpa cylindracea* in the Mediterranean Sea. *Marine Environmental Research*, 125, 90-98. DOI: 10.1016/j.marenvres.2017.02.001.
- Basso, L., **Rizzo, L.**, Piraino, S., Stabili, L. (2017). Metabolic diversity of microbial community associated with *Rhizostoma pulmo* (Scyphozoa: Rhizostomeae). *Journal of Marine Microbiology*, 1(1).
- Basso, L., **Rizzo, L.**, Piraino, S., Stabili, L. (2017). Metabolic Diversity of Microbial Community associated with *Rhizostoma pulmo* (Scyphozoa: Rhizostomeae). *Biologia Marina Mediterranea* 24 (1).

- Stabili, L., Frascchetti, S., Acquaviva, M.I., Cavallo, R.A., De Pascali, S., Fanizzi, F.P., Gerardi, C., Narracci, M., **Rizzo, L.** (2016). The Potential Exploitation of the Mediterranean Invasive Alga *Caulerpa cylindracea*: Can the Invasion Be Transformed into a Gain? *Marine Drugs*, 14(11), 210. DOI:10.3390/md14110210.
- Pusceddu, A., Frascchetti, S., Scopa, M., **Rizzo, L.**, Danovaro, R. (2016). Meiofauna communities, nematode diversity and C degradation rates in seagrass (*Posidonia oceanica* L.) and unvegetated sediments invaded by the algae *Caulerpa cylindracea* (Sonder). *Marine environmental research*, 119, 88-99. DOI: 10.1016/j.marenvres.2016.05.015.
- Rizzo, L.**, Frascchetti, S., Alifano, P., Pizzolante, G., Stabili, L. (2016). The alien species *Caulerpa cylindracea* and its associated bacteria in the Mediterranean Sea. *Marine Biology*, 163(1), 1-12. DOI: 10.1007/s00227-015-2775-9
- Rizzo, L.**, Frascchetti, S., Alifano, P., Tredici, M.S., Stabili, L. (2016). Association of *Vibrio* community with the Atlantic Mediterranean invasive alga *Caulerpa cylindracea*. *Journal of Experimental Marine Biology and Ecology*, 475, 129-136. DOI: 10.1016/j.jembe.2015.11.013.
- Boero, F., Foglini, F., Frascchetti, S., Goriup, P., Macpherson, E., Planes, S., ... & **CoCoNet Consortium** (2016). CoCoNet: towards coast to coast networks of marine protected areas (from the shore to the high and deep sea), coupled with sea-based wind energy potential. *SCIRES-ITSCientific RESearch and Information Technology*, 6, 1-95. DOI: 10.2423/i22394303v6Sp1
- Rizzo, L.**, Acquaviva, M.I., Cecere, E., Narracci, M., Petrocelli, A., Stabili, L., Cavallo, R.A. (2016). The invasive seaweed *Undaria pinnatifida* (Laminariales, Phaeophyceae): a source of antibacterial compounds. *Biologia Marina Mediterranea* 23 (1).
- Stabili, L., **Rizzo, L.**, Alifano, P., Frascchetti, S. (2014). Functional diversity of bacterial community associated with the invasive alga *Caulerpa racemosa*. *Biologia Marina Mediterranea* 21 (1), 127128.
- Martin, C.S., Giannoulaki, M., De Leo, F., Scardi, M., Salomidi, M., Knitweiss, L., Pace, M.L., Garofalo, G., Gristina, M., Ballesteros, E., Bavestrello, G., Belluscio, A., Cebrian, E., Gerakaris, V., Pergent, G., Pergent-Martini, C., Schembri, P.J., Terribile, K., **Rizzo, L.**, Ben Souissi, J., Bonacorsi, M., Guarnieri, G., Krzelj, M., Macic, V., Punzo, E., Frascchetti, S. (2014). Coralligenous and maërl habitats: predictive modelling to identify their spatial distributions across the Mediterranean Sea. *Scientific Reports*, 4. DOI 10.1038/srep05073.

Book chapters

- Rossi, S., **Rizzo, L.** (2020). Marine animal forests as carbon immobilizers or why we should preserve these three-dimensional alive structures. In *Perspectives on the Marine Animal Forests of the World* (pp. 333-400). Springer, Cham.