Carmen Rizzo

Born in Reggio Calabria (Italy) on 31/12/1985

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Current Position: Researcher
Current Affiliation:
BLUBIO Department, Stazione Zoologica Anton Dohrn, Napoli (Italy)

Education/Training/Experience

Institute and Location	Degree / Function	Year	Field of Study
University of Messina Dept. Chemical, Biological, Pharmaceutical and Environmental Sciences	Magistral Degree *Biology and Ecology of the Coastal Marine Environment*	2009	Microbial Ecology and Biotechnology
University of Messina Dept. Chemical, Biological, Pharmaceutical and Environmental Sciences	Ph.D. *Environmental Sciences: Marine Environment and its Resources*	2010-2013	Microbial Ecology Biotechnology
University "Dante Alighieri", Reggio Calabria	Post-graduate Master degree *Law, Economics and Technology of Environmental Resources*	2014	Microbial Ecology Biotechnology
University of Messina	Advanced Training Course FORINNOVAQUA	2014-2015	Training for technology innovation in aquaculture.
National, Interuniversity Consortium for the Marine Sciences (CoNISMa)	Post-doc	2016-2017	Marine Hydrothermal environments, microbial diversity and new molecules of biotechnological interest (Project MARINE HAZARD)
University of Messina, Dept. Chemical, Biological, Pharmaceutical and Environmental Sciences	Post-doc	2019	Project "CT_LALLEMAND_2018" about "Antibiofilm activity of bacterial exopolysaccharides: activity against pathogen bacteria"
Stazione Zoologica Anton Dohrn, Napoli, Italy	Researcher	2019-present	Blu Biotechnology

Honours, Awards, Qualification, Scientific Societies

●22/07/2021-present, Associated Researcher at Institute of Polar Sciences, National Research Council, Messina.
●01/10/2020-30/09/2023, Expert in Microbial Ecology and Protection of Marine Environment at the University of Messina, Department of Chemical, Biological, Pharmaceutical and Environmental Sciences (Italy).
●10/08/2020. Award for young Italian researchers. Program of scientific visits to the Republic of Korea supported by the Italian Embassy in Seoul. Travel grants for young Italian researchers aimed at identifying new opportunities for bilateral scientific and technological collaboration.
●2009-present, Qualification for Biologist, University of Messina (Italy).

- Member of the Organizing Committee for the MultidisciPLinary Approach for the STudy of plastic litter pollution in MEDiterranean ecosystems: from impacts to potential solutions (PlastMED). Stazione Zoologica Anton Dohrn CRIMAC - Research Centre and Marine Advanced Infrastructures in Calabria Amendolara (CS) – Italy.
- Carmen Rizzo is member of several Italian Scientific Associations/Societies, including the Italian Society of Ecology (SItE), Italian Society of Experimental Biology (SIBS), Freshwater Biological Association (FBA).
- Member of the Organizing Committee for the First International Summer School on the study of Extreme Environments through Integrated Approaches (ISS-SEEA). Stazione Zoologica Anton Dohrn, Sicily Marine Centre, Messina (Italy).

Editorial and Review Boards:

●08/07/2024-present, Editorial Board Member (EBM) of BMC Microbiology
●02/03/2021-present, Review Editor (AE) of Frontiers in Marine Science: Section Marine Biotechnology
●31/08/2021-present, Associate Editor of the Journal of Biological Research.
●2019-present, Editorial Board Member (EBM) of SF Journal of Environmental and Earth Science
●2019-present, Editorial Board Member (EBM) of Environments

Guest Editors for:

●2024, Guest Co-Editor of Special Issue of Journal of Marine Science and Engineering on "Assessment of Marine Microbial Risks from Plastic Pollution".

●2024, Guest Co-Editor of Special Issue of Microorganisms on "Microorganisms as a Resource and a Threat to Human/Animal Health".

●2024, Co-Guest Editor of special issue of Polar Biology (Springer) on Recent advancements of the microbial ecology of the changing polar regions.

●Topic Editor for the Research Topic "Microbial Biodiversity and Bioprospecting in Polar Ecosystems in the Genomics Era", Evolutionary and Genomic Microbiology Section, Frontiers in Microbiology.

●2020-23, Guest Co-Editor (other Ed.: Dr. Carmen Rizzo, SZN. Italy) of Diversity for the Special Issue in Culture Collections as Hidden Sources of Microbial Biomolecules and Biodiversity.

●2019-20, Guest Co-Editor (other Ed.: Dr. Angelina Lo Giudice, CNR-ISP, Italy) of Microorganisms for the Special Issue in Polar microbial ecology: the role of microbes in the functioning of extremely cold ecosystems.

●2020-22, Guest Co-Editor (other Ed.: Dr. Angelina Lo Giudice, CNR-ISP, Italy) of Crystals for the Special Issue Linking Two Apparently Distant Worlds: Crystals and Microorganisms.

EDITORIALS

1.LO GIUDICE A., RIZZO C. (2020). Culture Collections as Hidden Sources of Microbial Biomolecules and Biodiversity. Diversity 12: 264; doi: 10.3390/d12070264

Carmen Rizzo is peer-reviewer for several international scientific journals, including Polar Biology, Microbial Ecology, Extremophiles, Science of the Total Environment, Frontiers in Marine Science, Archives of Microbiology, Biodegradation, Environmental Science and Pollution Research, International Microbiology, Marine Drugs, Scientific Reports, Microorganisms.

Scientific expeditions:

- July 16, 2022- July 30, 2022. Sampling campaign at KEVO SUBARCTIC RESEARCH STATION, in the context of the SearChIng for EmeRging Contaminants in Sub-Arctic rivErs project (CIRCE; INTERACT TA; PI Lo Giudice Angelina; Leader SZN Rizzo Carmen).

- Partecipation in the 35th Antarctic Campaign of Spanish Antarctic Research Program, at the research stations Juan Carlos I and Gabriel de Castilla. January 2022-February 2022.
- Oceanographic campaign in the Arctic Oceanin the context of the research project CASSANDRA (PRA2021). 29 August – 15 September 2021.
- Partecipation in the 34th Antarctic Campaign at the Italian Research Station Mario Zucchelli. December 2018-February 2019.
- Oceanographic campaign in the Mediterranean Sea on board of the Research Vessels Universitatis for monitoring of physical-chemical characteristic in the Straits of Messina waters and possible relations with migratory fluxes of cetaceans between meridional Tyrren and Ion.
- Oceanographic campaign in the Mediterranean Sea on board of the Research Vessels Urania.

Experiences and Training Courses

- 11/06/2023. Course Use of the Software Qgis, ALESSI - CONSUENZE AMBIENTALI
- Course Opito Basic Offshore Safety Induction & Emergency Training Including HUET and EBS. CFO, Ravenna 23-25 August 2021.
- Course METABARCODING AND METAGENOMIC DATA PROCESSING and ANALYSES: a practical overview. Stazione Zoologica Anton Dohrn, Naples, Italy. (3-7 February 2020)
- Course Liquid Chromatography and Mass Spectrometry Methods in Marine Science. CCMAR, Advanced Training, Gambelas Campus, Faro - Portugal. (28-30 October 2019)
- Course "Bioinformatics for Next-Generation Sequencing", Hyblea Training, 26-30 August 2019.
- Course "Introduction to R software", XIX edition, University of Roma La Sapienza, Dept. Statistic Sciences (29 May-31 May 2019).
- Course "Microbial Metagenome Analysis: Hands-On Training". Verbania, 13- 16 June 2017.
- Course "Publishing dos and don'ts for Microbial Ecologists" in 2016 (Catania, Italy).
- 3rd Course in Microbial Ecology "From cultivation to New-Generation Molecular Methods" in 2011 (Messina, Italy).
- Internships at the Karlsruher Institut fur Technologie (KIT), Karlsruhe – Germany (2010 and 2011).

Ongoing research projects

- **Project Component.** Potential Role of Sea Ice change in controlling Mercury in coastal Antarctic Areas (Italian Antarctic Research program PNRA0000090).

- **Project Component.** EuFish_SustainableGrowth - European fisheries enhancement through "Omic" characterization and innovative seafood production from underutilised fish species (Bando "Eranet Cofund on Blue Bioeconomy-Unlocking the potential of aquatic bioresources (BlueBio) Call 2021.

- **Project Component.** Enhancement of Sicilian shellfish farming in the area of Capo Peloro lagoon, Line of Intervention No.1 Conservation and enhancement of the breeding of endemic shellfish species in the Messina area (*Mytilus* spp.), 2022-2023. (Measure 2.51 PO FEAMP 2014-2020).

- **Principal Investigator.** BlueHealthy: BacteriaL and virUsEs as contaminants of Emerging concern in CALabrian marine environmenTs: new tools for tHeir occurrence, distribution and dYnamics, CRIMAC project (2021- 2024).

- **Project Component.** Project MARINE HAZARD Marine Hydrothermal environments, microbial diversity and new molecules of biotechnological interest. PON03PE_00203 (2016-2017).

- **Project Component.** CASSANDRA: AdvanCing knowledge on the present Arctic Ocean by chemical-phySical, biogeochemical and biological obServAtioNs to preDict the futuRe chAnges. Project Partecipant (PRA2021).

- **Project Component.** H2020-FNR-2020-2. Sustainable Exploitation of bio-based Compounds Revealed and Engineered from naTural sources. Work Programme Topic: Prospecting aquatic and terrestrial natural biological resources for biologically active compounds. Project Partecipant (FNR-11-2020).

●**Project Component.** MicroPolArS (PNRA18_00194): Microbial response to human Pollutants in polAr lakeS. Project Partecipant (National Antarctic Research Program).
● **Project Component.** CIRCE: SearChIng for emeRging Contaminants in Sub-Arctic rivErs, granted by the INTER-ACT (Funded by H2020) (Grant Agreement No. 730938), Member of the Proposal Team (2021-2023).
● **Project Component.** SPRYNTT: Comparative study on Sponge-associated ProkarYotic commuNities in RoThera (Adelaide Island, Antarctic Peninsula) and Thetys Bay (Terra Nova Bay, Ross Sea) sub-littoral zones, Transnational Access (TA) program of ASSEMBLE Plus (project n. 9713), Member of the Proposal Team (2019-2021).
● **Project Component.** BIP: Benthic filter-feeding Invertebrates from the Arctic as accumulators of Pollutants and tolerant bacterial communities, granted by the INTER-ACT (Funded by H2020) (Grant Agreement No. 730938), Member of the Proposal Team (2020-2022).
● **Principal Investigator.** DROP: "Diversity of bacteRial communities assOciated with sPonges from wild populations and in coupling with fish aquaculture systems, Transnational Access (TA) program of ASSEMBLE Plus (project n. 13490), Project Coordinaror (2020-2021).
● **Principal Investigator.** Sym(b)2iosis: AsSaYing Marine Benthic invertebrates in the Arctic for the associated BacterIal cOmmunitieS: dIversity and biotechnological potentialS, Transnational Access (TA) program of ASSEMBLE Plus (project n. 11142), Project Coordinaror (2020-2021).
● **Principal Investigator.** POLAR SLIMY: POtentiaL of AntaRctic Sponges MycaLe acerata and DendrIlla antarctica Mucus layer, Transnational Access (TA) program of ASSEMBLE Plus (project n. 11145), Project Coordinaror (2020-2021).

Teaching and tutoring activities

Co-Tutor of Theses

●01/12/2023-present. Co-Tutor of Aditya Thakur D.Y Patil School of Biotechnology and Bioinformatics, Mumbai, India, for the Master Degree Thesis entitled "Biotechnological potential of marine resources".

●01/11/2023-present. Co-Tutor Doctoral Thesis of Dr Francesco Fabiano, PhD Course of National Interest in "Biodiversity" A.A. 2023/2024 XXXIX cycle.
●2022-2024, Co-Tutor of the Ph D Student Dr. Giuseppe Cangemi. IMPLEMENTATION, REUSE AND RECYCLING OF BIODEGRADABLE PLASTICS IN MITILICOLTURE FARMING. Cycle XXXVII - A.A. 2021/2022, a PON "Research and Innovation" 2014-2020 - Action IV.4 "Doctorates and research contracts on innovation topics" and Action IV.5 "Doctorates on Green topics under Ministerial Decree No. 1061 of 10.08.2021.
●01/05/2023-present. Tutor of Miss Vittoria DIAS for the Master Degree Thesis entitled "Studio della bioluminescenza e di aspetti ecologici di specie mesopelagiche del Mediterraneo" in Marine Biology, University of Padova (Italy).
●27/03/2023-31/10/2023. Tutor of Miss Claudia GRAVAGNO for the Undegraduate Degree Thesis entitled "I rapporti di simbiosi in ambiente marino: batteri simbionti come strategie di adattamento e sopravvivenza" in Biological Sciences, University of Messina (Italy).
●27/03/2023-31/10/2023. Tutor of Miss Valeria CELI for the Undegraduate Degree Thesis entitled "Studio di sistemi modello per lo studio dell'attività biologica di molecole bioattive prodotte dalle cellule batteriche" in Biological Sciences, University of Messina (Italy). 27/03/2023-31/10/2023.
●27/03/2023-31/10/2023. Tutor of Miss Roberta SPATARO for the Undegraduate Degree Thesis entitled "Le comunità microbiche come indicatori di inquinamento: distribuzione e diversità in relazione alla presenza di contaminanti in ambiente marino" in Biological Sciences, University of Messina (Italy).

Tutor for Lab activities

●01/05/2023 al 01/02/2024, Tutor of Miss Vittoria DIAS, Student in Marine Biology, University of Padova (Italy), (9 months).
●17/10/2022-07/11/2022. Tutor of Miss Valeria CELI, Student in Biological Sciences, University of Messina (Italy), marine ecology curriculum (100 hours).
●10/10/2022-28/10/2022. Tutor of Miss Claudia GRAVAGNO Student in Biological Sciences, University of Messina (Italy), marine ecology curriculum (100 hours).
●26/09/2022-14/10/2022. Tutor of Miss Roberta SPATARO Student in Biological Sciences, University of Messina (Italy), marine ecology curriculum (100 hours).

Supervision for research grants

●01/05/2022-31/10/2023. Supervisor of Dr. Caterina Arigò for Research Grant "Exploration of hydrothermal areas for the discovery of new organisms for pharmaceutical and biotechnological research areas. PNIR project funds - National Research Infrastructure Program - PON PRIMA Strengthening Human Capital." (Grant 10/2022).

●16/11/2022-present. Supervisor of Dr. Vittorio Sansone for Scholarship "Functionalized membranes for sea quality." Centro Ricerche ed Infrastrutture Marine Avanzate in Calabria (CRIMAC)", Risorse FSC 2014-2020 – Piano Stralcio "Ricerca e Innovazione 2015-2017" - National Research Infrastructure Program (PNIR), action line 1. (Grant 63/2022).
●16/02/2023-30/10/2023. Supervisor of Dr. Francesco Fabiano for Scholarship "Marine microorganisms as indicators of health status of the marine environment" Centro Ricerche ed Infrastrutture Marine Avanzate in Calabria (CRIMAC)", Risorse FSC 2014-2020 – Piano Stralcio " Ricerca e Innovazione 2015-2017" - National Research Infrastructure Program (PNIR), action line 1. (Grant 75/2022). 16/02/2023-30/10/2023

Research and Review papers

[1] RIZZO, C., ARCADI, E., CALOGERO, R., RAPPAZZO, A.C., CARUSO, G., MAIMONE, G., LO GIUDICE, A., ROMEO, T., ANDALORO, F. (**2024**). Deciphering the evolvement of microbial communities from hydrothermal vent sediments in a global change perspective. *Environmental Research*, 240(1): 117514. https://doi.org/10.1016/j.envres.2023.117514. IF 11; Q1; Cit. 0.

[2] MARCHETTA, A.; PAPALE, M.; RAPPAZZO, A.C.; RIZZO, C.; CAMACHO, A.; ROCHERA, C.; AZZARO, M.; URZÌ, C.; LO GIUDICE, A.; DE LEO, F. (**2023**). A Deep Insight into the Diversity of Microfungal Communities in Arctic and Antarctic Lakes. *Journal of Fungi* 2023, 9, 1095. https://doi.org/10.3390/jof9111095. IF 4.7; Q2; Cit. 0.

[3] COSTA, G., LO GIUDICE, A., PAPALE, M. ET AL. (**2023**). Sponges (Porifera) from the Ross Sea (Southern Ocean) with taxonomic and molecular re-description of two uncommon species. *Polar Biology* 46, 1335–1348 (2023). https://doi.org/10.1007/s00300-023-03205-w. IF 1.7; Q2; Cit. 0.

[4] CORTI A., PAGANO G., LO GIUDICE A., PAPALE M., **RIZZO C.**, AZZARO M., VINCIGUERRA V., CASTELVETRO V., GIANNARELLI S. (**2023**) Marine sponges as bioindicators of pollution by synthetic microfibers in Antarctica. *Science of the Total Environment Volume* 902, 166043, https://doi.org/10.1016/j.scitotenv.2023.166043. IF 9.8; Q1; Cit. 0.

[5] ARCADI, E., **RIZZO, C.**, CALOGERO, R., SCIUTTERI, V., FABIANO, F., CONSOLI, P., ANDALORO, F., ROMEO, T. (2023). Microbial communities inhabiting shallow hydrothermal fields as sentinels of acidification processes. *Front. Microbiol.* 14:1233893. doi: 10.3389/fmicb.2023.1233893. IF 5.2; Q2; Cit. 0.

[6] LAFACE F., PEDÀ C., GIOMMI C., SCOZZAFAVA S., **RIZZO C.**, MALARA D., GRECO S., ROMEO T. (2023). A glimpse into the future: A suitable methodological approach for the detection and identification of micro-bioplastics in biota. *Science of The Total Environment*, 899, 165613. https://doi.org/10.1016/j.scitotenv.2023.165613. IF 9.8; Q1; Cit. 0.

[7] BATTAGLIA, P., PEDÀ, C., **RIZZO, C.**, STIPA, M.G., ARCADI, E., LONGO, F., AMMENDOLIA, G., CAVALLARO, M., RAO, I., VILLARI, A., CALOGERO, R., CONSOLI, P., SINOPOLI, M., ANDALORO, F., ROMEO T. (2023). How Rare Are Argonautoidea Octopuses in the Mediterranean? New Data from Stranding Events, Stomach Contents and Genetics. *Biology* (Basel). 9;12(3):420. doi: 10.3390/biology12030420. IF 4,2; Q2; Cit. 0.

[8] LO GIUDICE, A.; **RIZZO, C.** (2022). Bacteria Associated with Benthic Invertebrates from Extreme Marine Environments: Promising but Underexplored Sources of Biotechnologically Relevant Molecules. *Mar. Drugs*, 20, 617. IF 5.4; Q1; Cit. 1.

[9] **RIZZO, C.,** PERRIN, E., POLI, A., FINORE, I., FANI, R., LO GIUDICE, A. (2022). Characterization of the exopolymer-producing *Pseudoalteromonas* sp. S8-8 from Antarctic sediment. Applied Microbiology and Biotechnology 106(21), pp. 7173–7185. IF 5; Q1; Cit. 0.

[10] AZZARO, M.; PAPALE, M.; **RIZZO, C.**; FORTE, E.; LENAZ, D.; GUGLIELMIN, M.; LO GIUDICE, A. (2022). Antarctic Salt-Cones: An Oasis of Microbial Life? The Example of Boulder Clay Glacier (Northern Victoria Land). Microorganisms, 10, 1753. IF 4.5; Q2; Cit. 3.

[11] **RIZZO, C.**; PAPALE, M.; LO GIUDICE, A. (2022). *Idiomarina* sp. Isolates from Cold and Temperate Environments as Biosurfactant Producers. J. Mar. Sci. Eng., 10, 1135. IF 2.9; Q1; Cit. 2.

[12] CALOGERO, R.; RIZZO, C.; ARCADI, E.; STIPA, M.G.; CONSOLI, P.; ROMEO, T.; BATTAGLIA, P. (2022). Isolation and Identification of Luminescent Bacteria in Deep Sea Marine Organisms from Sicilian Waters (Mediterranean Sea). *J. Mar. Sci. Eng.*, 10, 1113. IF 2.9; Q1; Cit. 2.

[13] PAPALE, M.; **RIZZO, C.**; GIANNARELLI, S.; CARUSO, G.; AMALFITANO, S.; ASPHOLM, P.E.; MAIMONE, G.; MISEROCCHI, S.; RAPPAZZO, A.C.; LO GIUDICE, A.; ET AL. (2022). Benthic Microbial Communities in a Seasonally Ice-Covered Sub-Arctic River (Pasvik River, Norway) Are Shaped by Site-Specific Environmental Conditions. *Microorganisms*, 10, 1022. IF 4.5; Q2; Cit. 0.

[14] CARUSO, G., PAPALE, M., AZZARO, M., **RIZZO, C.**, LAGANÀ, P., CARUSO, R., LO GIUDICE, A. (2022). Antarctic Porifera homogenates as a source of enzymes and antibacterial substances: first results. *Polar Biology*, 45(5), 895–907. IF 1.7; Q2; Cit. 0.

[15] **RIZZO, C.,** LO GIUDICE, A. (2022). Life from a Snowflake: Diversity and Adaptation of Cold-Loving Bacteria among Ice Crystals. *Crystals*, 12(3), 312.

[16] ARCADI, E., RASTELLI, E., TANGHERLINI, M., **RIZZO, C.**, MANCUSO, M., SANFILIPPO, M., ESPOSITO, V., ANDALORO, F., ROMEO, T. (2022). Shallow-Water Hydrothermal Vents as Natural Accelerators of Bacterial Antibiotic Resistance in Marine Coastal Areas. Microorganisms 2022, 10, 479. https://doi.org/10.3390/microorganisms10020479. IF 4.5; Q2; Cit. 2.

[17] **RIZZO C.,** LO GIUDICE A. Life from a Snowflake: Diversity and Adaptation of Cold-Loving Bacteria among Ice Crystals. *Crystals* 2022, 12, 312. https://doi.org/10.3390/cryst12030312. IF 2.7; Q2; Cit. 0

[18] **RIZZO C.,** ARCADI E., CALOGERO R., SCIUTTERI V., CONSOLI P., ESPOSITO V., CANESE S., ANDALORO F., ROMEO T. (2022). Ecological and Biotechnological Relevance of Mediterranean Hydrothermal Vent Systems. *Minerals* 12, 251. https://doi.org/10.3390/min12020251. IF 2.5; Q2; Cit. 7.

[19] PAPALE, M.; LO GIUDICE, A.; RAPPAZZO, A.C.; AZZARO, M.; **RIZZO, C.** (2022). A First Glimpse on Cold-Adapted PCB-Oxidizing Bacteria in Edmonson Point Lakes (Northern Victoria Land, Antarctica). *Water* 14, 109. https://doi.org/10.3390/w14010109. IF 3.4; Q2; Cit. 1.

[20] FLORIS, R.; SANNA, G.; MURA, L.; FIORI, M.; CULURGIONI, J.; DICIOTTI, R.; **RIZZO, C.;** LO GIUDICE, A.; LAGANÀ, P.; FOIS, N. 2021. Isolation and Identification of Bacteria with Surface and Antibacterial Activity from the Gut of Mediterranean Grey Mullets. Microorganisms 2021, 9, 2555. https://doi.org/10.3390/microorganisms9122555. IF 4.5; Q2; Cit. 1.

[21] **RIZZO C.,** CALDARONE B., DE LUCA M., DE DOMENICO E., LO GIUDICE A. (2021). Native bilge water bacteria as biosurfactant producers and implications in hydrocarbon-enriched wastewater treatment. *Journal of Water Process Engineering* 43, 102271. 10.1016/j.jwpe.2021.102271. IF 7; Q1; Cit. 2.

[22] PAPALE M., **RIZZO C.,** CARUSO G., LA FERLA R., MAIMONE G., LO GIUDICE A., AZZARO M., GUGLIELMIN M. (2021). First Insights into the Microbiology of Three Antarctic Briny Systems of the Northern Victoria Land. *Diversity* 13 (7), 323. 10.3390/d13070323. IF 2.4; Q3; Cit. 5.

[23] **RIZZO C.,** ZAMMUTO V., LO GIUDICE A., RIZZO M.G., SPANÒ A., LAGANÀ P., MARTINEZ M., GUGLIELMINO S., GUGLIANDOLO C. (2021). Antibiofilm Activity of Antarctic Sponge-Associated Bacteria against *Pseudomonas aeruginosa* and *Staphylococcus aureus*. Journal of Marine Science and Engineering 9 (3), 243. 10.3390/jmse9030243. IF 2.9; Q1; Cit. 9.

[24] LO GIUDICE A., CONTE A., PAPALE M., **RIZZO C.,** AZZARO M., GUGLIELMIN M. (2021). Prokaryotic diversity and metabolically active communities in brines from two perennially ice-covered Antarctic lakes. *Astrobiology*. 10.1089/ast.2020.2238. IF 4.2; Q2; Cit. 9.

[25] COPPOLA D., LAURITANO C., PALMA ESPOSITO F., RICCIO G., **RIZZO C.,** DE PASCALE D. (2021). Fish Waste: from Problem to Valuable Resource. *Marine Drugs* 19 (2), 116. 10.3390/md19020116. IF 5.4; Q1; Cit. 109.

[26] PAPALE M., **RIZZO C.**, CARUSO G., AMALFITANO S., MAIMONE G., MISEROCCHI S., LA FERLA R., ASPHOLM P.E., DECEMBRINI F., AZZARO F. (2021). Ice Melt-Induced Variations of Structural and Functional Traits of the Aquatic Microbial Community along an Arctic River (Pasvik River, Norway). *Water*, 13, 2297. 10.3390/w13162297. IF 3.4; Q2; Cit. 1.

[27] LAURITANO C., **RIZZO C.**, LO GIUDICE A., SAGGIOMO M. (2020). Physiological and Molecular Responses to Main Environmental Stressors of Microalgae and Bacteria in Polar Marine Environments. Microorganisms 8 (12), 1957. 10.3390/microorganisms8121957. IF 4.5; Q2; Cit. 13.

[28] PAPALE M., RAPPAZZO A.C., MIKKONEN A., **RIZZO C.**, MOSCHEO F., CONTE A., MICHAUD L., LO GIUDICE A. (2020). Bacterial Diversity in a Dynamic and Extreme Sub-Arctic Watercourse (Pasvik River, Norwegian Arctic). *Water* 12 (11), 3098. 10.3390/w12113098. IF 3.4; Q2; Cit. 8.

[29] **RIZZO C.**, LO GIUDICE A. (2020). The Variety and Inscrutability of Polar Environments as a Resource of Biotechnologically Relevant Molecules. *Microorganisms* 8 (9), 1422. 10.3390/microorganisms8091422. IF 4.5; Q2; Cit. 10.

[30] LO GIUDICE A., **RIZZO C.** (2020). Culture Collections as Hidden Sources of Microbial Biomolecules and Biodiversity *Diversity* 12 (7), 264. 10.3390/d12070264. IF 2.4; Q3; Cit. 4.

[31] PAPALE M., **RIZZO C.**, FANI R., BERTOLINO M., COSTA G., PAYTUVÍ-GALLART A., SCHIAPARELLI S., MICHAUD L., AZZARO M., LO GIUDICE A. (2020). Exploring the diversity and metabolic profiles of bacterial communities associated with Antarctic sponges (Terra Nova Bay, Ross Sea). *Frontiers in Ecology and Evolution* 8, 268. 10.3389/fevo.2020.00268. IF 3; Q2; Cit. 10.

[32] **RIZZO C.,** GUGLIANDOLO C., LO GIUDICE A. (2020). Exploring Mediterranean and Arctic Environments as a Novel Source of Bacteria Producing Antibacterial Compounds to be Applied in Aquaculture. *Appl. Sci.*, 10, 4006. 10.3390/app10114006. IF 2.7; Q3; Cit. 6.

[33] **RIZZO C.,** CONTE A., AZZARO M., PAPALE M., RAPPAZZO A.C., BATTISTEL D., ROMAN M., LO GIUDICE A., GUGLIELMIN M. (2020). Cultivable Bacterial Communities in Brines from Perennially Ice-Covered and Pristine Antarctic Lakes: Ecological and Biotechnological Implications. *Microorganisms*, 8, 819. 10.3390/microorganisms8060819. IF 4.5; Q2; Cit. 11.

[34] LO GIUDICE A., POLI A., FINORE I., **RIZZO, C. (2020).** Peculiarities of extracellular polymeric substances produced by Antarctic bacteria and their possible applications. *Applied Microbiology and Biotechnology*, 104(7):2923-2934. 10.1007/s00253-020-10448-8. IF 5; Q1; Cit. 16.

[35] **RIZZO C.,** MALAVENDA R., GERÇE B., PAPALE M., SYLDATK C., HAUSMANN R., BRUNI V., MICHAUD L., LO GIUDICE A., AMALFITANO S. (2019). Effects of a simulated acute oil spillage on bacterial communities from Arctic and Antarctic marine sediments. *Microorganisms*, 7, 632. 10.3390/microorganisms7120632. IF 4.5; Q2; Cit. 21.

[36] SAVOCA S., LO GIUDICE A., PAPALE M., MANGANO S., CARUSO C., SPANÒ N., MICHAUD L., **RIZZO C.** (2019). Antarctic sponges from the Terra Nova Bay (Ross Sea) host a diversified bacterial community". *Scientific Reports*, 9:16135. 10.1038/s41598-019-52491-0. IF 4.6; Q2; Cit. 14.

[37] CAPUTO S., PAPALE M., **RIZZO C.,** GIANNARELLI S., CONTE A., MOSCHEO F., GRAZIANO M., ASPHOLM P.E., ONOR M., DE DOMENICO E., MISEROCCHI S., MICHAUD L., AZZARO L., LO GIUDICE A. (2019). Metal Resistance in Bacteria from Contaminated Arctic Sediment is Driven by Metal Local Inputs. *Archives of environmental contamination and toxicology*, 77(2): 291-307. 10.1007/s00244-019-00628-7. IF 4; Q2; Cit. 7.

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