

QUERO GRAZIA MARINA, PhD

Curriculum vitae et studiorum

EDUCATION

2011: PhD in Food Microbiology, Chemistry and Safety at University of Bari (Italy); 2006: MSc in Biotechnological Sciences at the University of Bari “Aldo Moro” (Italy), with 110/110 cum laude; 2004: Bachelor degree in Biotechnological Sciences at the University of Bari “Aldo Moro” (Italy) with 108/110.

WORK EXPERIENCE

2019 – today: Researcher at the National Research Council, Institute for Marine Biological Resources and Biotechnologies (CNR-IRBIM) of Ancona, Italy; 2017 –2019: Researcher at the Department of Integrative Marine Ecology (EMI), Stazione Zoologica “Anton Dohrn” of Naples, Italy; 2013 –2017: Post-doc position at the National Research Council, Institute of Marine Sciences (CNR-ISMAR) of Venice, Italy; 2011 –2012: Post-doc position at the National Research Council, Institute of Sciences of Food Production (CNR-ISPAs) of Bari, Italy

BIBLIOMETRIC INFO

Scholar: 39 documents (38 articles, 1 book chapter), 1214 citations, H-index 17

Scopus: 37 documents (36 articles, 1 book chapter), 860 citations, H-index 15

PRIZES AND AWARDS

- 2017: “RICERCA IL FUTURO – “Salviamo Il Mare Dall’Inquinamento Con I Batteri Mangia-Plastica” (“Plastic-degrading bacteria in the marine environment”); National Research Funding for Women in Science funded by Davines S.p.A (Italy) (www.ricercailfuturo.it), Bologna (Italy) October 2nd 2017
- 2016: UNASA Award (Unione Nazionale delle Accademie per le Scienze Applicate allo Sviluppo dell’Agricoltura, alla Sicurezza Alimentare ed alla Tutela Ambientale) for best scientific publication, University of Torino (Italy), Aula Magna, 4th March 2016
- 2015: Holder of mobility grant CNR (“Short Term Mobility Program”) at the Istituto Milenio de Oceanografia (IMO) (Concepcion, Chile), October 2015

RESPONSIBILITIES IN PROJECTS

- 2020-onward: B-BLUE Building the blue biotechnology community in the Mediterranean (INTERREG MED Project), Role: Scientific Responsible for CNR IRBIM and WP3 leader
- 2018-onward CIRCLES “Controlling mICrobiomes CircuLations for bETter food Systems” (H2020). Role: Task 6.1 and 6 and Subtask 5.1.2 leader
- 2017-2018: “RICERCA IL FUTURO – “Salviamo Il Mare Dall’Inquinamento Con I Batteri Mangia-Plastica” (“Plastic-degrading bacteria in the marine environment”); National Research Funding for Women in Science funded by Davines S.p.A (Italy), (www.ricercailfuturo.it). Role: Principal investigator
- 2019-2020: “MIMESIS2 - Microbial diversity on Marine plastic debris – part 2” CINECA Class C Projects for the use of informatic infrastructures aimed at bioinformatic analyses, Project code HP10CU4ABQ. Role: Principal investigator
- 2018: “μWAVE - Microbial diversity in response to marine heat waves”, within the “Call for study cases proposals at the distributed Laboratory of ‘Molecular Biodiversity’ funded by Lifewatch Italy”. Role: Principal investigator
- 2017-2018: “Prokaryotic diversity of the Po River delta lagoons under different anthropogenic impact”, ELIXIR-IIB Projects for the access and use of the European HPC (High Performance Computing) ELIXIR resources for bioinformatic analyses. Role: Principal investigator
- 2015: “MALWAre - Metagenomic study of microbial invasive species introduced by Ballast WateRs” Call Lifewatch-Italy for interdisciplinary research projects at the distributed Laboratory of Molecular Biodiversity. Role: Principal investigator
- 2015-2016: “DECODE - Microbial Diversity in Italian Coastal and Deep Marine Environments”, CINECA, Class C Projects for the use of informatic infrastructures aimed at bioinformatic analyses. Project code HP10CTY3HZ. Role: Principal investigator

PARTICIPATION TO OTHER RECENT PROJECTS

- 2018 – ongoing: “MetaCERROSS- A metagenomic-based investigation of the planktonic microbial food web in relation with ice melting occurring in the Ross Sea coastal ecosystem” Programma Nazionale di Ricerche in Antartide (PNRA), linea - B2, “Investigation and monitoring of Ross Sea using Mario Zucchelli Station facilities”. Role: OU participant
- 2013-2016: OCEAN CERTAIN “Ocean food web patrol – climate effects: reducing targeted uncertainties with an interactive network” (FP7-ENV) Role: RU Participant
- 2016: Agreement between MATTM-PNM and CNR- DTA for the Monitoring Programs of the Marine Strategy financed by MATTM. Role OU Participant
- 2013-2017: “RITMARE – La Ricerca Italiana per il Mare” (SP3_LI5_WP1_UO03; SP4_WP3_AZ2_UO03; SP3_WP2_AZ2_UO02) Joint Italian Flagship project on marine research funded by Ministry of Education Role OU Participant

FIELD WORK

- 2020: 1-day sampling campaigns – Snapshot (SYNOPTIC ASSESSMENT OF HUMAN PRESSURES ON KEY MEDITERRANEAN HOT SPOTS), Adriatic Sea, Marche Region, May/June/September campaigns
- 2016: Oceanographic Cruise - Marine Strategy Framework Directory Italy, Tyrrhenian Sea

- 2016: Oceanographic Cruise – SAND 2016 (SAND/RITMARE - RISD), Adriatic, Ionian and Tyrrhenian Sea;
- 2016: 2-days sampling campaign “RITMARE IV anno – Po River Prodelta lagoons”
- 2013 - 2016: Local sampling campaign (site OSD63, AcquaAlta) within the FP7 project Ocean Sampling Day (OSD) (<https://mb3is.megx.net/osd-registry/list>; <http://oceansamplingday.blogspot.co.uk/>; <https://mb3is.megx.net/osd-registry/list>)
- 2015: Oceanographic cruise - Ocean Certain/Venus3, Western Mediterranean Sea
- 2014: Oceanographic cruise RITMARE – Po Prodelta. II Leg (R/V Dallaporta)
- 2013: Oceanographic Cruise BIOLIG, Ligurian Sea
- 2013: 4-days sampling campaign on the Po River Prodelta (Italy), RITMARE I year
- 2013: 4-days sampling campaign on the Mar Piccolo of Taranto (Italy), RITMARE I year

REVIEWER for the journals:

Deep sea research part I, Science of the total environment, Limnology and Oceanography, Frontiers in Ecology and Evolution, Systematic and Applied Microbiology, Marine Environmental Research, Environmental Pollution, Marine Ecology, Hydrobiologia Aquatic Microbial Ecology, Journal of Limnology, Diversity, Genes, Journal of soils and sediments, Polar biology, Plos One, Advances in Oceanography and Limnology, Rendiconti Lincei - Scienze Fisiche e Naturali

SUPERVISION OF STUDENTS AND FELLOWS

- 2021-ongoing: co-supervisor of a PhD student within the PhD program FishMED
- 2021-ongoing: supervisor of a Research Fellow at IRBIM CNR
- 2020-2021: Scientific Supervisor of a “Assegno di Ricerca Professionalizzante” within the H2020 project CIRCLES - Controlling mIcRobiomes CircuLations for bETter food Systems at IRBIM-CNR
- 2019-2020: MSc Thesis Supervisor for CNR of 2 students from Università Politecnica delle Marche, (Marine Biology)

CONFERENCES ATTENDANCE

About 20 national and international conferences; speaker at 5 of them.

PUBLICATIONS

1. Curran JF, Zaggia L, **Quero GM** (2022) Metagenomic Characterization of Microbial Pollutants and Antibiotic- and Metal-Resistance Genes in Sediments from the Canals of Venice. *Water*, 14:1161.
2. Luna GM, **Quero GM**, Kokou, F., Kormas, K. (2022). Time to integrate biotechnological approaches into fish gut microbiome research. *Current Opinion in Biotechnology* 73: 121-127.
3. Basili M, Techtmann SM, Zaggia L, Luna GM, **Quero GM** (2021). Partitioning and sources of microbial pollution in the Venice Lagoon. *Science of The Total Environment*, 818:151755.
4. Basili M, Campanelli A, Frapiccini E, Luna GM, **Quero GM** (2021). Occurrence and distribution of microbial pollutants in coastal areas of the Adriatic Sea influenced by river discharge. *Environmental Pollution*, 285, 117672.
5. Marzocchi U, Bonaglia S, Zaiko A, **Quero GM**, Vybernaitė-Lubienė I, Politi T, Amulovienė A, Žilius M, Bartoli M, Cardini U (2021) Zebra mussel holobionts fix and recycle nitrogen in lagoon sediments. *Frontiers in microbiology*, 11, 1-13.
6. Palladino G, Rampelli S, Scicchitano D, Musella M, **Quero GM**, Prada F, ... & Biagi E (2021). Impact of marine aquaculture on the microbiome associated with nearby holobionts: the case of *Patella caerulea* living in proximity of Sea Bream aquaculture cages. *Microorganisms*, 9(2), 455.
7. **Quero GM**, Ape F, Manini E, Mirto S, Luna GM (2020) Temporal changes in microbial communities beneath fish farm sediments are related to organic enrichment and fish biomass over a production cycle. *Frontiers in Marine Science*, doi: 10.3389/fmars.2020.00524
8. Basili M*, **Quero GM***, D Giovannelli, E Manini, C Vignaroli, CG Avio, De Marco R, Luna GM. (2020) Major role of surrounding environment in shaping biofilm community composition on marine plastic debris. *Frontiers in Marine Science* doi:10.3389/fmars.2020.00262 (*First co-authors)
9. Fazi S., Baldassarre L., Cassin D., **Quero G.M.**, Pizzetti I., Cibic T., Luna G.M., Zonta R., Del Negro P. (2020) Prokaryotic community composition and distribution in coastal sediments following a Po river flood event (northern Adriatic Sea, Italy). *Estuarine, Coastal and Shelf Science* <https://doi.org/10.1016/j.ecss.2019.1065>
10. **Quero G.M.***, Celussi M.*, Relitti F., Kovačević V., Del Negro P., Luna G.M. (2020) Inorganic and organic carbon uptake processes and their connection to microbial diversity in meso- and bathypelagic Arctic waters (Eastern Fram Strait). *Microbial Ecology* <https://doi.org/10.1007/s00248-019-01451> (*First co-authors)
11. Ape F, Manini E, **Quero GM**, Luna GM, Sarà G, Vecchio P, Brignoli OP, Ansferri S, Mirto S. (2019) Biostimulation of in situ microbial degradation processes in organically-enriched sediments mitigates the impact of aquaculture. *Chemosphere* 226, 715-725
12. Armeli Minicante S, Piredda R, **Quero GM**, Finotto S, Bernardi Aubry F, Bastianini M, Pugnetti A, Zingone A (2019) Habitat heterogeneity and connectivity: effects on the planktonic protist community structure at two adjacent coastal sites (the Lagoon and the Gulf of Venice, Northern Adriatic Sea, Italy) revealed by metabarcoding. *Frontiers in Microbiology* 10, 2736
13. Buccheri MA, Salvo E, Coci M, **Quero GM**, Zoccarato L, Privitera V, Rappazzo G (2019) Investigating microbial indicators of anthropogenic marine pollution by 16S and 18S High Throughput Sequencing (HTS) library analysis. *FEMS Microbiology Letters* <https://doi.org/10.1093/femsle/fnz179>
14. Eckert EM, **Quero GM**, Di Cesare A, Manfredini G, Mapelli F, Borin S, Fontaneto D, Luna GM, Corno G (2019) Antibiotic disturbance affects aquatic microbial community composition and foodweb interactions but not community resilience. *Molecular Ecology* 28 (5), 1170-1182

15. Fusco V, **Quero GM**, Poltronieri P, Morea M, Baruzzi F (2019) Autochthonous and Probiotic Lactic Acid Bacteria Employed for Production of “Advanced Traditional Cheeses”. *Foods* 8 (9), 412
16. Celussi M*, **Quero GM***, Zoccarato L*, Franzo A, Corinaldesi C, Rastelli E, Lo Martire M, Galand P, Ghiglione JF, [...], Luna GM (2018) Planktonic prokaryote and protist communities in a submarine canyon system in the Ligurian Sea (NW Mediterranean). *Progress in Oceanography* 168, 210-221 (*First co-authors)
17. Luna GM, Manini E, Turk V, Tinta T, D’Errico G, Baldrighi E, Baljakk V, [...], **Quero GM**, et al. (2018) Status of faecal pollution in ports: A basin-wide investigation in the Adriatic Sea. *Marine Pollution Bulletin* 147, 219-228, doi:10.1016/j.marpolbul.2018.03.050
18. **Quero GM**, Perini L, Pesole G, Manzari C, Lionetti C, Bastianini M, Marini M, Luna GM (2017) Seasonal rather than spatial variability drives planktonic and benthic bacterial diversity in a microtidal lagoon and the adjacent open sea. *Molecular Ecology* 5961– 5973.
19. **Quero GM**, Luna GM (2017) Surfing and dining on the “plastisphere”: Microbial life on plastic marine debris. *Advances in Oceanography and Limnology* 8 (2), 199-2017
20. Luna GM, Chiggiato J, **Quero GM**, Schroeder K, Bongiorno L, Kalenitchenko D, Galand PE (2016) Dense water plumes modulate richness and productivity of deep sea microbes. *Environmental Microbiology* 18 (12), 4537-4548
21. Fusco V, **Quero GM**, Chieffi D, Franz CMAP (2016) Identification of *Lactobacillus brevis* using a species-specific AFLP-derived marker. *International Journal of Food Microbiology* 232, 90-94
22. Luna GM, **Quero GM**, Perini L (2016) Next generation sequencing reveals distinct fecal pollution signatures in aquatic sediments across gradients of anthropogenic influence. *Advances in Oceanography and Limnology* 7 (2), 115-124
23. Di Lena M, **Quero GM**, Santovito E, Verran J, De Angelis M, Fusco V (2015) A selective medium for isolation and accurate enumeration of *Lactobacillus casei*-group members in probiotic milks and dairy products. *International Dairy Journal* 47, 27-36
24. Perini L, **Quero GM**, Serrano García E, Luna GM (2015) Distribution of *Escherichia coli* in a coastal lagoon (Venice, Italy): Temporal patterns, genetic diversity and the role of tidal forcing. *Water Research* 87, doi:10.1016/j.watres.2015.09.021
25. **Quero GM**, Cassin D, Botter M, Perini L, Luna GM (2015) Patterns of benthic bacterial diversity in coastal areas contaminated by heavy metals, polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs). *Frontiers in Microbiology* <https://doi.org/10.3389/fmicb.2015.01053>
26. Fusco V, **Quero GM**, Cho GS, Bockelmann, W, Franz CMAP (2015) The genus *Weissella*: Taxonomy, ecology and biotechnological potential. *Frontiers in Microbiology* 6 (155)
27. Kopf A, Bicak M, Kottmann R, Schnetzer J, Kostadinov I, Lehmann K, Fernandez-Guerra A, [...], **Quero GM**, [...], Glöckner FO. (2015) The Ocean Sampling Day consortium. *Gigascience* 4 (27), doi.org/10.1186/s13742-015-0066-5
28. **Quero GM**, Fasolato L, Vignaroli C, Luna GM (2015) Understanding the association of *Escherichia coli* with diverse macroalgae in the lagoon of Venice. *Scientific Reports* 5, doi: 10.1038/srep10969
29. Fusco V, **Quero GM** (2014). Culture-dependent and culture-independent nucleic-acid-based methods used in the microbial safety assessment of milk and dairy products. *Comprehensive Reviews In Food Science And Food Safety* 13 (4), 493-537
30. **Quero GM**, Luna GM (2014) Diversity of rare and abundant bacteria in surface waters of the Southern Adriatic Sea. *Marine Genomics* 17, 9-15
31. **Quero GM**, Fusco V, Cocconcetti PS, Owczarek L, Borcakli M, Fontana C, Skapska S, Jasinska UT, Ozturk T, Morea M (2014) Microbiological, physico-chemical, nutritional and sensory characterization of traditional Matsoni: Selection and use of autochthonous multiple strain cultures to extend its shelf-life. *Food Microbiology* 38, 179-191
32. **Quero GM**, Santovito E, Visconti A, Fusco V (2014) Quantitative detection of *Listeria monocytogenes* in raw milk and soft cheeses: Culture- independent versus liquid- and solid-based culture-dependent real time PCR approaches. *LEBENSMITTEL-WISSENSCHAFT + TECHNOLOGIE (LWT)* 58:11-20
33. Borcakli M, Lucas J, Caputo L, Ozturk T, Baruzzi F, Fusco V, **Quero GM**, Quintieri L, Houghton M (2013) Effect of UV-C light in the preservation of raw fermented beverages. *Italian Journal of Food Science* 25, 213-221
34. On SLW, Brandt SM, Cornelius AJ, Fusco V, **Quero GM**, Maćkiw E, Houf K, Bilbao A, Benejat L, Megraud F, Collins-Emerson J, French NP, Gotcheva V, Angelov A, Alakomi HL, Saarela M, Paulin SM (2013) PCR revisited: A case for revalidation of PCR assays for microorganisms using identification of *Campylobacter* species as an exemplar. *Quality Assurance and Safety Of Crops & Foods* 49-62
35. Fusco V, Riccardi M, **Quero GM** (2012) Thin agar layer- versus most probable number-PCR to enumerate viable and stressed *Escherichia coli* O157: H7 and application in a traditional raw milk pasta filata cheese. *International Journal of Food Microbiology* 159, 1-8
36. Fusco V, **Quero GM** (2012) Nucleic Acid-Based Methods to Identify, Detect and Type Pathogenic Bacteria Occurring in Milk and Dairy Products. Book Chapter, CHAPTER 14, In: (a cura di): Ayman Amer Eissa, Structure and Function of Food Engineering. Vienna:InTech - Open Access Publisher. doi: 10.5772/49937
37. Baruzzi F, Poltronieri P, **Quero GM**, Morea M, Morelli L (2011) An in vitro protocol for direct isolation of potential probiotic lactobacilli from raw bovine milk and traditional fermented milks. *Applied Microbiology And Biotechnology* 90 (1), 331-342
38. Fusco V, **Quero GM**, Stea G, Morea M, Visconti A (2011) Novel PCR-based identification of *Weissella confusa* using an AFLP-derived marker. *International Journal of Food Microbiology* 45 (2-3), 437-443
39. Fusco V, **Quero GM**, Morea M, Blaiotta G, Visconti A (2011) Rapid and reliable identification of *Staphylococcus aureus* harbouring the enterotoxin gene cluster (egc) and quantitative detection in raw milk by real time PCR. *International Journal of Food Microbiology* 144 (3), 528-537