

Manoela Romanó de Orte, Ph.D.

Postdoctoral Research Scientist
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Education

Ph.D. Marine and Coastal management	University of Cádiz	2013
M.S. Water and Coastal Management	University of Cádiz / University of Santiago de Compostela	2009
B.S. Oceanography	Federal University of Paraná	2007

Research and Academic History

Postdoctoral Researcher Carnegie Institution for Science, Stanford University Supervisor: Ken Caldeira Grantee of: FAPESP-Brazil Research focus: Marine pollution, Plastic pollution	2017-present
Postdoctoral Researcher Federal University of São Paulo, Brazil Supervisor: Augusto Cesar Grantee of: FAPESP- Brazil Research focus: Carbonate chemistry, Ocean acidification, Ecotoxicology assessments	2014-2017
Ph.D. Researcher University of Cádiz and University of Huelva, Spain Advisors: Aguasanta Sarmiento and Tomás Ángel DelValls Casillas Grantee of: CAPES- Brazil Research focus: Sediment contamination, Geochemistry, Ocean acidification, Metal speciation, Carbonate Chemistry	2009-2013
Master's Researcher University of Cádiz and University of Santiago de Compostela, Spain Advisor: Alejo Carballeira and Tomás Ángel DelValls Casillas Grantee of: European Commission, Erasmus Mundus Scholarship Research focus: Toxicity tests, Antibiotics, Disinfectants Land-based aquaculture, Marine pollution	2007-2009

Fellowships, Grants and Awards

- **Postdoctoral fellowship from Fapesp (São Paulo Research Foundation)** Carnegie institution for Science (2017-2018)
- **Postdoctoral fellowship from Fapesp (São Paulo Research Foundation)** Federal University of São Paulo (2015-2019)
- **Postdoctoral fellowship from Capes (Ministry of Education, Brazil)** Federal University of São Paulo (2014)
- **Full scholarship for LAOCA (Latin-American Ocean Acidification Workshop)** Dichato, Chile (2014)
- **“Cum Laude”** distinction for doctoral thesis- University of Cádiz (2013)
- **Ph.D. fellowship from CAPES (Ministry of Education, Brazil)** University of Cádiz (2009-2013)
- **Full scholarship** Acidification in Aquatic Environments Workshop, Tromsø, Norway
- **Erasmus Mundus fellowship** University of Cádiz (2007-2009)

Teaching and mentoring experience

Lectures

University of Cádiz

Integrative tools for the assessment of the quality of aquatic ecosystems 2010-2013

Federal University of São Paulo

2014-2017

Lecture: *Techniques of Underwater Sampling*

Lecture: *Marine Pollution and Integrated Assessment Methods*

Lecture: *Marine Ecotoxicology*

Mentorship

Master's Candidate Adviser

Thomas Goulding (2015), Dorota Slazaj (2015), Esther Bautista Chamizo (2014)

Master's Candidate Co-Adviser

Bruna Alves de Brito (2016), Karin Cristine Baldauf (2016)

Ph.D. Adviser:

Esther Bautista Chamizo (2015-present)

Peer - reviewed Publications

- 1) **De Orte MR**, Bonnail E, Sarmiento AM, Riba I, DelValls A, Nieto JM. Metal fractionation in marine sediments acidified by enrichment of CO₂: a risk assessment. *Marine Pollution Bulletin* 131:611-619, 2018.

- 2) Bautista-Chamizo E, Sendra M, Dis A, Seoane M, **De Orte MR**, Riba I. Will temperature and salinity changes exacerbate the effects of seawater acidification on the marine microalgae *Phaeodactylum tricornutum*? *Science of the Total Environment* 634:87-94, 2018.
- 3) Basallote MD, Rodríguez-Romero A, **De Orte MR**, DelValls A, Riba I. CO₂ leakage simulation: effects of the pH decrease on fertilisation and larval development of *Paracentrotus lividus* and sediment metals toxicity. *Chemistry and Ecology* 34:1-21, 2018.
- 4) Goulding TA, **De Orte MR**, Slazaj D, Basallote MD, DelValls TA, CESAR A. Assessment of the environmental impacts of ocean acidification (OA) and carbon capture and storage (CCS) leaks using the amphipod *Hyale youngi*. *Ecotoxicology* 26:521-533, 2017.
- 5) Slazaj D, **De Orte MR**, Goulding T, Medeiros ID, DelValls TA, Cesar A. The effects of Ocean Acidification and a Carbon dioxide Capture and Storage leak on the early life stages of marine mussel *Perna perna* (Linneaus, 1758) and metal bioavailability. *Environmental Science and Pollution Research* 24:765-785, 2017.
- 6) Bautista-Chamizo E, **De Orte MR**, DelValls TA, Riba I. Simulating CO₂ leakages from CCS to determine Zn toxicity using the marine microalgae *Pleurochrysis roscoffensis*. *Chemosphere*, v. 144, p. 955-965, 2016.
- 7) Kerr R, Da Cunha LC, Kukuchi RKP, Horta PA, Ito RG, Muller MN, Orselli IBM, Lencina-Avila JM, **De Orte MR**, Sordo L, Pinheiro BR, Bonou FK, Schubert N, Bergstrom E, Copertino M. The Western South Atlantic Ocean in a high-CO₂ world: Current measurements capabilities and perspectives. *Environmental Management* 57:740-752, 2016.
- 8) Basallote MD, Rodríguez-Romero A, **de Orte MR**, DelValls TA, Riba, I. Evaluation of the threat of marine CO₂ leakage-associated acidification on the toxicity of sediment metals to juvenile bivalves. *Aquatic Toxicology*, v. 166, p. 63-71, 2015.
- 9) **De Orte MR**, Sarmiento AM, Basallote MD, Rodríguez-Romero A, Riba I, DelValls, TA. Effects on the mobility of metals from acidification caused by possible CO₂ leakage from sub-seabed geological formations. *Science of the Total Environment*, v. 470-471, p. 356-363, 2014.
- 10) **De Orte MR**, Sarmiento AM, DelValls TA, Riba I. Simulation of the potential effects of CO₂ leakage from carbon capture and storage activities on the mobilization and speciation of metals. *Marine Pollution Bulletin*, v. 86, p. 59-67, 2014.

- 11) **De Orte MR**, Lombardi AT, Sarmiento AM, Basallote MD, Rodriguez-Romero A, Riba I, DelValls TA. Metal mobility and toxicity to microalgae associated with acidification of sediments: CO₂ and acid comparison. *Marine Environmental Research*, v. 96, p. 136-144, 2014.
- 12) Cesar A, Lia LRB, Pereira CDS, Santos AR, Cortez FS, Choueri RB, **De Orte MR**, Rachid BRF. Environmental assessment of dredged sediment in the major Latin American seaport (Santos, São Paulo - Brazil): An integrated approach. *Science of the Total Environment*, v. 497-498, p. 679-687, 2014.
- 13) Rodriguez-Romero A, Jiménez-Tenório N, Basallote MD, **De Orte MR**, Blasco J, Riba I. Predicting the impacts of CO₂ leakage from sub-seabed storage: Effects of metal accumulation and toxicity on the model benthic organism *Ruditapes philippinarum*. *Environmental Science and Technology*, v. 48, p. 12292-301, 2014.
- 14) Rodriguez-Romero A, Basallote MD, **De Orte MR**, DelValls TA, Riba I, Blasco J. Simulation of CO₂ leakages during injection and storage in sub-seabed geological formations: Metal mobilization and biota effects. *Environment International*, v. 68, p. 105-117, 2014.
- 15) Basallote MD, **De Orte MR**, DelValls TA, Riba, I. Studying the effect of CO₂-induced acidification on sediment toxicity using acute amphipod toxicity test. *Environmental Science & Technology*, v. 48, p. 8864-8872, 2014.
- 16) **De Orte MR**, Carballeira C, Viana IG, Carballeira A. Assessing the toxicity of chemical compounds associated with land-based marine fish farms: The use of mini-scale microalgae toxicity test. *Chemistry and Ecology*, v. 29, p. 554-563, 2013.
- 17) Garrard SL, Hunter RC, Frommel AY, Lane AC, Phillips JC, Cooper R, • Dineshram R, Cardini U, McCoy SJ, Arnberg M, Rodrigues Alves BG, Annane S, **De Orte MR**, Kumar A, Aguirre-Martínez GV, Maneja RH, Basallote MD, Ape F, Torstensson A, Bjoerk MM. Biological impacts of ocean acidification: a postgraduate perspective on research priorities. *Marine Biology*, v. 160, p. 1789-1805, 2013.
- 18) Carballeira C, **De Orte MR**, Viana IG, Carballeira A. Implementation of a minimal set of biological tests to assess the ecotoxic effects of effluents from land-based marine fish farms. *Ecotoxicology and Environmental Safety*, v. 78, p. 148-161, 2012.
- 19) Carballeira C, **De Orte MR**, Viana IG, DelValls TA, Carballeira A. Assessing the toxicity of chemical compounds associated with land-based marine fish farms: The sea urchin embryo bioassay with *Paracentrotus lividus* and *Arbacia lixula*. *Archives of Environmental Contamination and Toxicology*, v. 63, p. 249-261, 2012.

Invited Conference Presentations (Oral)

De Orte MR, Balduf KC, Brito BA, Choueri RB, Medeiros ID, Pereira CDS, Cesar A. The use of Ecotoxicological assays to evaluate risk of CO₂ leakages from CCS activities. XVII Brazilian Congress of Ecotoxicology, 2016, Curitiba-PR, Brazil.

De Orte MR, DelValls TA, Riba I, Cesar A. The use of multiple lines of evidences to conduct risk assessment in sediments affected by CO₂ acidification. III International Symposium on Effects of Climate Changes on the World's Oceans, 2015, Santos-SP Brazil.

De Orte MR, Slazaj D, Goulding T, DelValls TA, Cesar, A. Using a battery of bioassays as an integrated tool to evaluate the effects of CO₂-induced acidification on metal toxicity. XVI Latin-American Congress of Ocean Science (COLACMAR), 2015, Santa Marta, Colombia.

De Orte MR, Sarmiento AM, Basallote MD, Riba I, DelValls A. Distribution of heavy metals in marine sediments acidified by CO₂ leaks during carbon capture and storage activities. XIII Brazilian congress of Ecotoxicology, 2014, Guarapari-ES, Brazil.

De Orte MR, Lombardi AT, Basallote M D, Rodriguez-Romero A, DelValls A, Riba I, Sarmiento A. Studying the impacts of metal mobility and seawater acidification caused by CO₂ leakage from geological storage sites on marine microalgae. XVII PRIMO-Pollutant Responses in Marine Organisms, 2013, Faro, Portugal.

De Orte MR, Basallote M D, Rodriguez-Romero A, DelValls A, Riba I, Sarmiento A. The effects of CO₂ leakages from marine stable geological formations on the mobility and availability of metals. Society of Environmental Toxicology and Chemistry (SETAC) 6th world congress, 2012, Berlin, Germany.

Patent

De Orte MR, Basallote MD, Rodriguez-RomeroA, DelValls TA, Riba I, Blaco J. *CO₂ Injection system for ecotoxicological studies*. Spanish Patent 201200753, 13/07/2012.

Journal Peer-Review

Marine Pollution Bulletin, Ecotoxicology and Environmental Contamination, Environmental Pollution, Journal of Hazardous Materials, Biogeoscience, Ecotoxicology and Environmental Safety, Regional Studies in Marine Science, Chemosphere, Journal of the Brazilian Chemical Society, Brazilian Journal of Oceanography, International Journal of Fisheries and Aquaculture, Science of the Total Environment

Other Relevant Professional activities

Ph.D. Thesis committee. Ph.D. Ana Borrero Santiago, University of Cádiz, September 2016.

Master Thesis committee. Ms.C. Tierry Val de Medeiros, Federal University of São Paulo, October 2016.

Master Project evaluator of the Postgraduate Program in Coastal and Oceanic Systems of the Center for Marine Studies. Federal University of Paraná, 2016.

Consultant at the project “*Determination of the quality of São Francisco River close to the factory from the company Zinco Votorantim metais in Três Marias, Brazil*” for the company VOTORANTIN S/A-Brazil. 2009-2012.

Relevant Professional Development Training

Teaching Workshop, Stanford University, 2018.

Scientific Communication, FAMELAB, 2016.

International Workshop- Ecotoxicological Approaches for the Environmental Assessment and Monitoring. São Paulo State University. Santos, Brazil. 2014.

Latin-American Workshop on Ocean Acidification (LAOCA). University of Concepción. Dichato, Chile. 2014.

Workshop in Acidification in Aquatic Environments. Marine Research institute. Tromsø, Norway, 2011.

Methodologies for Evaluating Metal Speciation. University of Huelva. Huelva, Spain 2010.

Scientific Diving. University of Cádiz, Spain 2008.