

Manoela Romanó de Orte, PhD

Postdoctoral Research Scientist
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Personal Information

Gender: Female

Bibliographic citation: De Orte MR

Date of Birth: October 3th, 1984

Nationality: Brazilian

Education

- 2017-current** Postdoctoral Research Position
Carnegie Institution for Science-USA
Supervisor: Ken Caldeira
Grantee of: FAPESP-Brazil
- 2014- 2017** Postdoctoral Research Position
Federal University of São Paulo- Brazil
Supervisor: Augusto Cesar
Grantee of: FAPESP- Brazil
- 2009 - 2013** Erasmus Mundus Ph.D. in Marine and Coastal Management
University of Cádiz- Spain
Advisor: Aguasanta Sarmiento; Tomás Ángel DelValls Casillas.
Grantee of: CAPES- Brazil.
Keywords: Sediment contamination; Ocean acidification; Carbon capture and storage; Metal speciation; Toxicity tests; Carbonate Chemistry.
- 2007 - 2009** European Joint Master in Water and Coastal Management
University of Algarve (Portugal) – University of Cádiz (Spain).
Advisor: Alejo carballeira; Tomás Ángel DelValls Casillas.
Grantee of: European Commission, Erasmus Mundus Scholarship.
Keywords: Toxicity tests; Antibiotics; Disinfectants; Land-based aquaculture; Microalgae.
- 2002 - 2006** Degree in Oceanography
Federal University of Paraná- Brazil
Advisor: Ana Teresa Lombardi.
Keywords: Ecotoxicology; Coastal management; Microalgae.

Complementary Education

- 2014** Latin-American Workshop on Ocean Acidification (LAOCA). Credit Hours: 50h. Marine Biological Station of University of Concepción. Dichato, Chile.
- 2014** International Workshop- Ecotoxicological Approaches for the Environmental Assessment and Monitoring. Credit Hours: 5 h. São Paulo State University. Santos, Brazil.

- 2011** Workshop in Acidification in Aquatic Environments. Credit Hours: 20h.
Marine Research institute. Tromso, Norway.
- 2010** Methodologies for Evaluating Metal Speciation. Credit Hours: 40h.
University of Huelva. Huelva, Spain.
- 2008** Scientific diving. Credit Hours: 35h
University of Cádiz. Cádiz, Spain.
- 2006** Identification of Cyanobacteria. Credit Hours: 6h.
Brazilian Society of Phycology. Itajaí, Brazil.
- 2006** Marine Ecotoxicology. Credit Hours: 6h.
Brazilian Society of Ecotoxicology. São Pedro, Brazil.
- 2002** Introduction to Marine Benthic Organisms. Credit hours: 20h.
Federal University of Paraná. Pontal do Paraná, Brazil.
- 1999** Open Water Diver. Credit Hours: 20h. PADI.

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).

Received a distinction “Cum Laude” for the doctoral thesis- University
of Cádiz (2013).

Ph.D. fellowship from CAPES (Ministry of Education, Brazil)-
University of Cádiz (2009-2013)

Full scholarship for Acidification in Aquatic Environments Workshop-
Tromso, Norway.

Erasmus Mundus fellowship- University of Cádiz (2007-2009).

Research experience

Carnegie Institution for Science- United States

2017-current Postdoctoral fellow, Department of Global Ecology
Supervisor: Ken caldeira

Federal University of São Paulo-Brazil

2014-2017 Postdoctoral fellow, Department of Ocean Sciences
Supervisor: Augusto César

University of Cádiz-Spain

2009 – 2013 Ph.D. fellow, Department of Chemistry and Physics
Supervisor: T. Ángel DelValls

2010 - 2012 Consultant

Project:
“Execution of samplings on the river São Fransicco (Três Marias, Brazil) to determine the quality of sediments.”

Funded by the company **Votarantim Metais Zinco S/A.**
Main researcher: T. Ángel DelValls

2009 - 2011 Consultant

Project:
“Determination of the quality of São Fransisco River close to the factory from the company Zinco Votorantim metais in Três Marias, Brazil“

Funded by the company **Votarantim Metais Zinco S/A.**
Main researcher: T. Ángel DelValls

2007-2009 Erasmus Mundus Master fellowship, Department of Chemistry and Physics
Supervisor: T. Ángel DelValls

University of Santiago de Compostela-Spain

2008 - 2010 Research Assistant
Supervisor: Alejo Carballeira Ocaña

Federal University of Santa Catarina- Brazil

2007 Laboratory Technician – Laboratory of Biomarkers of Aquatic Pollution-
Department of Biochemistry
Supervisor: Afonso Bainy

Federal University of Paraná- Brazil

2005-2006 Undergraduate Research Assistant, Laboratory of Ecotoxicology, Ocean
Sciences Center
Supervisor: Ana Teresa Lombardi

Teaching experience

2010-2013 **University of Cádiz**
Lecturer, European Master in Water and Coastal Management
Course:
“Integrative tools for the assessment of the quality of aquatic ecosystems: Toxicity testing.”

Publications

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* DOI 10.1007/s10646-017-1783-6

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* (Linnaeus, 1758) and metal bioavailability. **Environmental Science and Pollution Research** DOI 10.1007/s11356-016-7863-y.

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.

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* doi:10.1007/s00267-015-0630-x, 2015.

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.

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.

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.

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.

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.

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.

Rodríguez-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.

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.

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.

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.

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.

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.

Conference Presentations

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 (**Oral**). XIII Brazilian congress of Ecotoxicology, 2014, Grarapari-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 (**Oral**). 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 (**Poster and Oral**). Society of Environmental Toxicology and Chemistry (SETAC) 6th world congress, 2012, Berlin.

De Orte MR, Basallote MD, DelValls A, Riba I. The influence of CO₂-related seawater acidification on the survival and on stress oxidative enzyme responses in the clam *Ruditapes philippinarium* (**Poster**). Estuarine & Coastal Sciences Association (ECSA) Symposium (47), 2010, Figueira da Foz, Portugal.

De Orte MR, Carballeira C, Carballeira A. Development of a miniaturized microalgae bioassay to evaluate the ecotoxicity of marine spills: application to marine land-based fish farms (**Poster**). XVII Symposium of Cryptogamic Botany, 2009, Lisbon, Portugal.

De Orte MR and Lombardi AT. Toxicity of Bunker C oil in cells of *Skeletonema costatum* (**Poster**). IX Brazilian Congress of Ecotoxicology, 2006, São Pedro-SP, Brazil.

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.