

CURRICULUM VITAE

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PhD Marisa Almeida (*Female, born in 1974*) is a researcher at CIIMAR since 2005 with over 80 international publications in peer review scientific journals and ca. 70 presentations (oral and poster) in international and national scientific meetings. With a PhD in Chemistry (obtained in 2003) her main research area is bio and phytoremediation, being actively engaged in studies that aim to enhance the use of bio and phytoremediation as a tool of biotechnology for remediation of aquatic environments contaminated with different pollutants.

Her expertise is on environmental chemistry applied to estuarine environments, phytoremediation of contaminants in natural and constructed wetlands and bioremediation of oil spills as well as ecological risk assessment, having participated in several national and one international projects on these topics. She is also focusing on metals, hydrocarbons and emerging pollutants tracking in different environmental matrixes (water, sediment and biota), having extensive know how in analytical chemistry and application of several analytical techniques.

She has supervised or co-supervised 4 Pos Doc researchers (one on-going), 7 PhD students (5 on going), 17 MSc students (1 on going) and internships of 3 international students as well as more than a dozen Graduate students.

Moreover she regularly gives talks to the general public and school students in the frame of the CIIMAR outreach programs and projects, regarding both ocean and water literacy. She participates also in COST actions, acts as project proposals evaluator, theses evaluator and as invited reviewer of several scientific journals.

Academic degree:

- January 2003 – PhD. in Chemistry at Faculty of Sciences, University of Porto, Portugal
- September 1997 – Chemistry Degree at Faculty of Sciences, University of Porto, Portugal

Current position:

- September 2005 - ...: Researcher at CIIMAR

Previous positions:

- September 2005 - December 2007: Coordinator of Laboratório de Química do CIIMAR
- February 2003 - August 2005: Researcher (Pos Doc scholarship by FCT) at CIIMAR.
- February de 1999 - January de 2003: PhD student (PhD scholarship by FCT) at LAQUIPAI, Chemistry Department, Sciences Faculty, University of Porto, Portugal.
- February 1998 - January 1999: Technician (Technician scholarship by FCT) at LAQUIPAI, Chemistry Department, Sciences Faculty, University of Porto, Portugal.

Area of scientific activity

- Environmental Chemistry

Present research interests

- Remediation of emerging pollutants like pharmaceutical compounds
- Phytoremediation and Bioremediation processes
- Study of the interactions between plants and contaminants in the rhizosphere of salt marsh plants
- Biogeochemistry of estuarine sediments
- Analysis of contaminants in estuarine environments, namely metals and hydrocarbons
- Removal of pollutants form natural and constructed wetlands

Supervising experience:

- Supervising and co-supervising of three finished (in 2013, 2014 and 2015) and one on going Pos Doc projects.
- Supervising and co-supervising of two finished (one in 2012 and one in 2013) and four on going PhD thesis
- Supervising, co-supervising or collaborating in 17 Master thesis projects (1 on-going).
- Supervising and co-supervising of several Graduate thesis and technician scholarships, including international students since 2007.

Scientific dissemination:

- Team member of the project “O CIIMAR na Escola”, since September 2014. Activities (presentations, protocols, expositions, exhibitions...) related with scientific dissemination for schools and general public.

- Team member national project EEA Grants PT02_2°RPS_0033 “OceanLab - Protegendo os Oceanos: vem ao laboratório fazer connosco!” financed by Direcção Geral da Política do Mar, Governo Português, August 2015 - April 2017.

- Team member national project EEA Grants PT02_2°RPS_0044 “Mar de Plástico” financed by Direcção Geral da Política do Mar, Governo Português, August 2015 - April 2017.

- Team member national project EEA Grants Título “Poluição do Oceano: Ameaça Global, Acção Local” financed by Direcção Geral da Política do Mar, Governo Português, December 2014 - June 2016.

- Presentations at schools for under-graduate students

- Supervising and co-supervising of several Under-Graduate students in Summer Schools and Lab Weeks since 2011.

Evaluation of Research projects:

Invited evaluator for the Executive Agency for Higher Education, Research, Development and Innovation Funding of Romania (*remote evaluation and rapporteur*), COST Action, Portuguese Polar Program and ERANETMED

Participation in research projects:

Participation in national and international research projects

- Team Member national project ROSM - Sistema robótico de mitigação de derrame de crude-projeto nº 024055, refª NORTE-01-0145-FEDER-024055 - AAC nº 02/SAICT/2016, October 2017 - March 2019. Financed by Programa Operacional Regional do Norte através dos Fundos Europeus Estruturais e de Investimento (FEEI) no âmbito do sistema de apoio à investigação científica e tecnológica - projetos de investigação científica e desenvolvimento tecnológico (IC&DT) enquadrado no Programa Operacional Competitividade e Internacionalização apoiado pelo FEDER e por fundos nacionais

- Team Member international project EASME/EMFF/2016/1.2.1.4 – Blue Labs: innovative solutions for maritime challenges: “SpilLess - First line response to oil spills based on native microorganisms cooperation”, February 2017-January 2019. Funded by the European Maritime and Fisheries Fund (EMFF).

- Team Member (**workpackage leader**) national project Structured Program of R&D&I INNOVMAR - Innovation and Sustainability in the Management and Exploitation of Marine Resources (reference NORTE-01-0145-FEDER-000035, Research Line INSEAFOD (Innovation and Valorisation of Seafood Products: Meeting Local Challenges and Opportunities)) financiado pelo Northern Regional Operational Programme (NORTE2020) through the European Regional Development Fund (ERDF). January 2016- December 2018

- Team Member national project EEA Grants PT02_Aviso4_0017, “MarinEye – A prototype for multitrophic oceanic monitoring”, financed by Direção Geral da Política do Mar, Governo Português, August 2015 - April 2017.

- Team Member national project EEA Grants PT02_Aviso6_0003, Título “Aprender a conhecer o ambiente marinho de Portugal - BioMar PT, financed pela Direção Geral da Política do Mar, Governo Português, December 2014 - June 2016.

- Team Member (**task leader**) of the national project ECORISK (reference NORTE-07-0124-FEDER-000055), co-financed by the North Portugal Regional Operational Programme (ON.2 – O Novo Norte), under the National Strategic Reference Framework (NSRF), through the European Regional Development Fund (ERDF), January 2013 - June 2015.

- **Core** member of the national project “NITROTOX – Interference of Metals and PAHs in Nitrate Removal Biological Processes: Denitrification vs Anammox”, October 2011-February 2015 (FCT financed, PTDC/AAC-AMB/113973/2009).

- **Core** member the national project "PHYTOBIO - Phytoremediation and bioremediation of contaminants in salt marshes: plant – microorganisms interactions", June 2010 – November 2013 (FCT financed, PTDC/MAR/099140/2008).

- **Portuguese PI**, International project "OILDEBEACH - Buried oil in the intertidal beach zone: coupling between beach morphodynamic, natural degradation, forcing mechanisms and biological activity", October 2008 – January 2012. Coordinated by Universidad Vigo, Spain. Project INTERREG, ERA-AMPERA/0003/2007. Collaboration between Universidad Vigo (Spain), Université Montpellier (France) and Universidade do Porto (Portugal).

- Team Member of the national project “Rhizosphere Biogeochemistry and its Relevance for Endpoints and Phytoremediation”, September 2005- August 2008 (FCT financed, POCTI/CTA/48386/2002).

Other skills:

- Development of studies that enhance the use of phytoremediation as a tool of biotechnology for remediation of contaminated aquatic environments with different pollutants

- Development of Bioremediation Tidal Tower (BioTidal), a simple model that allows the simulation of the bioremediation processes under the influence of tidal cycles

- Development of recovery protocols for bioremediation environments affected by oil spills

COST Action:

- Member (MC Substitute) of COST Action: ES1302 - *European Network on Ecological Functions of Trace Metals in Anaerobic Biotechnologies*. Starting date: 19 November 2013; Ending date: 18 November 2017
- Member (Working Groups) da COST Action ES1403 – New and emerging challenges and opportunities in wastewater reuse (NEREUS). Starting date: 14 May 2014; Ending date: 13 May 2018

Recent and Relevant Publications:

(CMR Almeida has five book chapters and ca. 80 articles published in international scientific journals (ResearcherID: J-6375-2012, Scopus: ID 35570148300, ORCID: orcid.org/0000-0002-6836-0331) and ca 50 oral and 70 posters presentations at international scientific conferences)

Book chapters:

C. Marisa R. Almeida, Pedro Carvalho, Joana Fernandes, M. Clara Basto, Ana P. Mucha “*Constructed wetlands for livestock wastewater treatment: antibiotics removal and effects on CWs performance*”, Editors: Abid A. Ansari, Sarvajeet Singh Gill, Ritu Gill, Guy R. Lanza, and Lee Newman, In *Phytoremediation: Management of Environmental Contaminants* Volume IV, Springer-Verlag, Berlin Heidelberg, 2016, ISBN:978-3-319-41810-0 (Chapter 14, pp 267-281). DOI: 10.1007/978-3-319-41811-7_14.

C. Goncalves, M.A.D. Sousa, V.G. Samaras, **C.M.R. Almeida**, M.C.P.Basto, “Sample preparation methods for determination of pollutants in solid and complex environmental matrices”, Editors: Leo M.L. Nollet and Dimitra A. Lambropoulou. In *Chromatographic Analysis of the Environment: Mass Spectrometry Based Approaches*, CRC Press/Taylor & Francis, Fourth Edition, 2015.

C. M. R. Almeida, N. Couto, H. Ribeiro, A. P. Mucha, A. Bordalo, M. C. Basto, M. T. S. D. Vasconcelos “Salt marsh plants’ potential for the remediation of hydrocarbons-contaminated environments”, Editors: Ansari, A.A., Gill, S.S., Gill, R., Lanza, G.R., Newman, L., In *Phytoremediation: Management of Environmental Contaminants* Volume I, Springer-Verlag, Berlin Heidelberg, 2015, ISBN 978-3-319-10394-5 (Chapter 23, pp. 323-331).

C. M. R. Almeida, A. C. Rocha, A. P. Mucha, M. T. S. D. Vasconcelos “Evaluation of the potential of salt marsh plants for metal phytoremediation in estuarine environment”, Editors: Dharmendra Kumar Gupta, Francisco Javier Corpas and José Manuel Palma, In *Heavy Metal Stress in Plants*, Springer-Verlag, Berlin Heidelberg, 2013, ISBN: 978-3-642-38468-4 (Chapter 12, pp. 225-239), DOI: 10.1007/978-3-642-38469-1_12.

C. M. R. Almeida, A. P. Mucha, P. N. Carvalho, M. C. P. Basto, M. T. S. D. Vasconcelos “Mutual interactions between roots of salt marsh plants and sediments and their relevance for toxicity endpoints and rhizoremediation”, Editors: Greig Ramsey and Seoras McHugh, In *River Sediments, Environmental Science, Engineering and Technology Series*, Frank Columbus Ed., Nova Science Publishers, 2009, ISBN: 978-1-60741-437-7 (Chapter 4, pp. 103-127).

NATURE - Correspondence letters

Illimar Altosaar, Adrian Oehmen, **C. Marisa R. Almeida**, Stefania De Pascale, Pablo Domínguez de María, Diego Orzaez, Antonis Zervos, Chunlin Xu, “Funding decisions: Romania needs overseas reviewers”, 2012, *Nature – Correspondence, Nature*, **492**, 186 (13 December 2012), doi:10.1038/492186c.

European Commission publications:

1. “Bioremediation of an antibiotic pollutant by a salt marsh plant”, Science for Environment Policy, European Commission DG Environment News Alert Service, edited by SCU, The University of the West of England, Bristol, 2015.

2. “Laboratory-scale wetlands remove toxic veterinary drugs from wastewater”, Science for Environment Policy, European Commission DG Environment News Alert Service, edited by SCU, The University of the West of England, Bristol, 20 June 2013, Issue 333.

Papers (most recent and relevant papers):

1. Ana M. Gorito, Ana R. Ribeiro, **C. Marisa R. Almeida**, Adrián M.T. Silva, “A review on the application of constructed wetlands for the removal of priority substances and contaminants of emerging concern listed in recently launched EU legislation”, 2017, *Environmental Pollution*, **227**, 428-443
10.1016/j.envpol.2017.04.060

2. Joana P. Fernandes, Ana P. Mucha, Telmo Francisco, Carlos Rocha Gomes, C. Marisa R. Almeida, “Silver nanoparticles uptake by salt marsh plants – implications for phytoremediation processes and effects in microbial community dynamics”, 2017, *Marine Pollution Bulletin*,
10.1016/j.marpolbul.2017.03.052

3. Bôto, M.; **C.M.R. Almeida**, A.P. Mucha, “Potential of Constructed Wetlands for Removal of Antibiotics from Saline Aquaculture Effluents”, 2016, *Water*, **8**, 465 (14 pages). doi: 10.3390/w8100465
Open Access journal

4. I.P.F.M. Montenegro, A. P. Mucha, I. Reis, P. Rodrigues, **C. M. R. Almeida**, “Effect of petroleum hydrocarbons in copper phytoremediation by a saltmarsh plant (*Juncus maritimus*) and the role of autochthonous bioaugmentation”, 2016, *Environmental Science and Pollution Research*, **23**, 19471-19480

5. C. Gonçalves, C. Teixeira, M. C. P. Basto, **C. M. R. Almeida**, “PAHs levels in Portuguese estuaries and lagoons: salt marsh plants as potential agents for the containment of PAHs contamination in sediments”, 2016, *Regional Studies in Marine Science*, **7**, 211-221.

6. J. P. Fernandes, **C. M. R. Almeida**, A. C. Pereira, I. L. Ribeiro, I. Reis, P. Carvalho, M. C. P. Basto, A. P. Mucha, “Microbial community dynamics associated with veterinary antibiotics removal in constructed wetlands microcosms”, 2015, *Bioresource Technology*, **182**, 26-33

7. T. Oliveira, A. P. Mucha, I. Reis, P. Rodrigues, C. R. Gomes, **C. M. R. Almeida**, “Copper phytoremediation by a salt marsh plant (*Phragmites australis*) enhanced by autochthonous bioaugmentation”, 2014, *Marine Pollution Bulletin*, **88**, 231-238

8. **C. M. R. Almeida**, A. P. Mucha; M. Nunes da Silva; M. Monteiro; P. Salgado; T. Necrasov; C. Magalhães, “Salt marsh plants as key mediators on the level of cadmium impact on microbial denitrification”, 2014, *Environmental Science and Pollution Research*, **21**, 10270-10278.
9. H. Ribeiro, A. P. Mucha, **C. M. R. Almeida**, A. A. Bordalo, “Potential of phytoremediation for the removal of petroleum hydrocarbons in contaminated salt marsh sediments”, 2014, *Journal of Environmental Management*, **137**, 10-15.
10. P. N. Carvalho, M. C. P. Basto, **C. M. R. Almeida**, H. Brix, “A review of plant-pharmaceutical interactions: from uptake and effects in crop plants to phytoremediation in constructed wetlands”, 2014, *Environmental Science and Pollution Research*, **21**, 11729-11763.
11. M. N. Silva, A. P. Mucha, A. C. Rocha, C. Teixeira, C. R. Gomes, **C. M. R. Almeida**, “A strategy to potentiate Cd phytoremediation by saltmarsh plants - autochthonous bioaugmentation”, 2014, *Journal of Environmental Management*, **134**, 136-144.
12. J. Pontes, A.P. Mucha, H. Santos, I. Reis, A. Bordalo, M. C. Basto, A. Bernabeu, **C. M. R. Almeida**, “Potential of bioremediation for buried oil removal in beaches after an oil spill”, 2013, *Marine Pollution Bulletin*, **76**, 258-265.
13. **C. M. R. Almeida**, I. Reis, M. N. Couto, A. A. Bordalo, A. P. Mucha, “Potential of the microbial community present in an un-impacted beach sediment to remediate petroleum hydrocarbons”, 2013, *Environmental Science and Pollution Research*, **20**, 3176-3184.
14. P. N. Carvalho, J. L. Araújo, A.P. Mucha, M. C. P. Basto, **C. M. R. Almeida**, “Potential of constructed wetlands microcosms for the removal of veterinary pharmaceuticals from livestock wastewater”, 2013, *Bioresource Technology*, **134**, 412-416.
15. **C. M. R. Almeida**, A. P. Mucha, M. T. S. D. Vasconcelos, “Role of different salt marsh plants on metal retention in an urban estuary (Lima estuary, NW Portugal)”, 2011, *Estuarine Coastal and Shelf Science*, **91**, 243-249.

Language

	Reading	Writing	Conversation
English	Excellent	Excellent	Excellent
French	Good	n.d.	Elementary
Spanish	Good	n.d.	Elementary