Ana Paula Mucha
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Expertise

Ana Paula Mucha has a research position at CIIMAR, University of Porto, being the Principal Investigator of the EcoBioTec Group (Ecosystems Functioning and Biotechnology). She focus her research on the development of biotechnology tools for ecosystems recover, based on the ability of autochthonous plants and microorganisms to remove contaminants, through bioremediation and phytoremediation processes. She has relevant expertise in the frame of the COST Action, regarding (i) the effect of metals on the microbial communities associated to the roots of plants, (ii) the potential effect of metals on the biodegradation of organic contaminants, (iii) development of microbial consortia resistant to metals in order to enhance bioremediation processes, (iv) the fate and the effect of metal contamination on microorganisms, macroinvertebrates and plants and (v) the role of the interaction between plants and microorganisms in the removal of heavy metals from sediments.

Key papers related to the COST action

1. Nunes M., **Mucha A.P.**, Rocha A.C., Teixeira, C., Gomes C.R., Almeida C.M., A strategy to potentiate Cd phytoremediation by saltmarsh plants - autochthonous bioaugmentation, 2014, *Journal of Environmental Management*, (http://dx.doi.org/10.1016/j.jenvman.2014.01.004)
2. **Mucha A.P.**, Teixeira C., Reis I., Magalhães C., Bordalo A.A., Almeida C.M. Response of a salt marsh microbial community to metal contamination, 2013, *Estuarine, Coastal and Shelf Science*, 130: 81-88.
3. Almeida R., **Mucha A.P.**, Teixeira C., Bordalo A.A., Almeida C.M. Biodegradation of petroleum hydrocarbons in estuarine sediments: metal influence, 2013, *Biodegradation*, 24: 111-123.
4. **Mucha A.P.,** Almeida C.M., Magalhães C., Vasconcelos M.T., Bordalo A. Salt Marsh Plant-microorganism interaction in the presence of mixed contamination, 2011, *International Biodeterioration and Biodegradation,* 65: 326-333.
5. Almeida C.M.R., **Mucha A.P.**, Vasconcelos M.T.S.D. 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.
6. **Mucha A.P.**, Almeida C.M.R., Bordalo A., Vasconcelos M.T.S.D. LMWOA (low molecular weight organic acid) exudation by salt marsh plants: natural variation and response to Cu contamination, 2010, *Estuarine Coastal and Shelf Science*, 88: 63-70.
7. Almeida C.M.R., Dias A.C., **Mucha A.P.**, Bordalo A.A., Vasconcelos M.T.S.D. Influence of surfactants on the Cu phytoremediation potential of a salt marsh plant, 2009, *Chemosphere* 75: 135–140.
8. Almeida C.M.R., Dias A.C., **Mucha A.P.**, Bordalo A.A., Vasconcelos M.T.S.D. Study of the influence of different organic pollutants on Cu accumulation by *Halimione portulacoides*, 2009, *Estuarine Coastal and Shelf Science* 85: 627 – 632.
9. **Mucha A.P.**, Almeida C.M.R., Bordalo A.A., Vasconcelos M.T.S.D. Salt marsh plants (Juncus maritimus and Scirpus maritimus) as sources of strong Cu-complexing ligands in estuarine environments, 2008, *Estuarine Coastal and Shelf Science* 77: 104-112.
10. Almeida C.M.R., **Mucha A.P.**, Delgado M.F.C., Caçador M.I., Bordalo A.A., Vasconcelos M.T.S.D. Can PAHs influence Cu accumulation by salt marsh plants?, 2008, *Marine Environmental Research* 66: 311–318.
11. Almeida C.M.R., **Mucha A.P.**, Bordalo A.A., Vasconcelos M.T.S.D. Influence of a salt marsh plant (*Halimione portulacoides*) on the concentrations and potential mobility of metals in sediments, 2008, *Science of the Total Environment* 403:188-195.
12. Almeida C.M.R., **Mucha A.P.**, Vasconcelos M.T.S.D. Comparison of the role of the sea club-rush Scirpus maritimus and the sea rush Juncus maritimus in terms of concentration, speciation and bioaccumulation of metals in the estuarine sediment, 2006, *Environmental Pollution* 142: 151-159.
13. **Mucha A.P.**, Almeida C.M.R., Bordalo A.A., Vasconcelos M.T.S.D. Exudation of organic acids by a marsh plant and implications on trace metal availability in the rhizosphere of estuarine sediments, 2005, *Estuarine Coastal and Shelf Science* 65:191-198.
14. **Mucha A.P.**, Vasconcelos M.T.S.D., Bordalo A.A. Spatial and seasonal variations of the macrobenthic community and metal contamination in the Douro estuary (Portugal), 2005, *Marine Environmental Research* 60: 531-550.
15. Almeida C.M.R., **Mucha A.P.**, Vasconcelos M.T.S.D. Influence of the sea rush Juncus maritimus on metal concentration and speciation in estuarine sediment colonized by the plant, 2004, *Environmental Science and Technology* 38: 3112-3118.
16. **Mucha A.P.**, Vasconcelos M.T.S.D., Bordalo A.A. Macrobenthic community in the Douro estuary: relations with trace metals and natural sediment characteristics, 2003, *Environmental Pollution* 121: 169-180.