

## ARTICLES PUBLISHED BY IBAF-CNR GROUP ON PHYTOREMEDIATION

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## INTERNATIONAL JOURNALS AND PHD THESIS

1. Ancona et al. (2016) Plant-assisted bioremediation of a historically PCB-contaminated area in Southern Italy. *New Biotechnology* 09/2016;
2. Antonielli et al. (2002) Physiological and anatomical characterisation of *Phragmites australis* leaves. *Aquatic Botany* 72:55-66;
3. Ariani et al. (2015). RNA sequencing of *Populus x canadensis* roots identifies key molecular mechanisms underlying physiological adaption to excess zinc. *PLoS one*, 10(2), e0117571.
4. Bianconi (2011) “Applicazione sperimentale di Rizorimedio su suoli inquinati da composti organici: le potenzialità della short rotation coppice (src) per il recupero ambientale e la sostenibilità economica” Ph.D. thesis in Forest Ecology, Università degli studi della Tuscia, Viterbo, Italy, 89 pp.
5. De Paolis et al. (2011) Eco-physiological characterization of the culturable bacterial fraction of a heavy-metal contaminated soil subjected to phytoremediation. *Water Air and Soil Pollution* 216: 505–512;
6. Di Baccio et al. (2017) Response of *Lemna gibba* L. to high and environmentally relevant concentrations of ibuprofen: Removal, metabolism and morpho-physiological traits for biomonitoring of emerging contaminants. *Science of the Total Environment* (in press) DOI: 10.1016/j.scitotenv.2016.12.191;

7. Di Baccio et al. (2014). Early responses to cadmium of two poplar clones that differ in stress tolerance. *Journal of plant physiology*, 171(18), 1693-1705.
8. Fernandez et al. (2012) Photosynthetic and growth responses of *Populus* clones Eridano and I-214 submitted to elevated Zn concentrations. *Journal of Geochemical Exploration (special issue: polluted soils)* 123: 77-86;
9. Fernández et al. (2014) Gas-exchange, photo- and antioxidant protection, and metal accumulation in I-214 and Eridano *Populus* sp. clones subjected to elevated zinc concentrations. *Environmental Experimental Botany* 107: 144-153;
10. Gaudet et al. (2011) Intraspecific variation of physiological and molecular response to cadmium stress in *Populus nigra* L. *Tree Physiol* 31 (12), pp. 1309,18. doi:10.1093/treephys/tpr088
11. Iannelli et al. (2002). Antioxidant response to cadmium in *Phragmites australis* [Cav. (trin) ex Steud.] plants. *Plant Physiol Biochem* 40:977-982.
12. Iori et al. (2011) Induction of metal binding compounds and antioxidative defence in callus cultures of two black poplar (*P. nigra*) clones with different tolerance to cadmium. *Culture* 108 (1), pp. 17-26 V.
13. Iori et al. (2012) Assessment of ibuprofen tolerance and removal capability in *Populus nigra* L. by in vitro culture. *Journal of Hazardous Materials* 229-230: 217-223;
14. Iori et al. (2013) Growth responses, metal accumulation and phytoremoval capability in *Amaranthus* plants exposed to nickel under hydroponics. *Water, Air & Soil Pollution*, 224: 1450-1459;
15. Iori et al. (2013) Growth, physiological response and phytoremoval capability of two willow clones exposed to ibuprofen under hydroponic culture. *Journal of Hazardous Materials* 262: 796-804.
16. Iori et al. (2016) Physiology and genetic architecture of traits associated with cadmium tolerance and accumulation in *Populus nigra* L. *Trees* 30 (1), 125-139
17. Iori et al. (2017). Analysis of biometric, physiological, and biochemical traits to evaluate the cadmium phytoremediation ability of eucalypt plants under hydroponics. *iForest - Biogeosciences and Forestry* in press.
18. Lakhdar et al. (2010). Effect of municipal solid waste compost and sewage sludge use on wheat (*Triticum durum*): growth, heavy metal accumulation, and antioxidant activity. *Journal of the Science of Food and Agriculture* 90:965-971.
19. Lakhdar et al. (2012). Risk of municipal solid waste compost and sewage sludge use on photosynthetic performance in common crop (*Triticum durum*). *Acta Physiol Plant* 1-10. DOI 10.1007/s11738-011-0898-2
20. Marmiroli et al. (2011) Growth, physiological and molecular traits in Salicaceae trees investigated for phytoremediation of heavy metals and organics. *Tree Physiol* 31 (12), pp. 1319-1334
21. Maruska et al. (2016) Isolation and identification of fungi tolerant to polycyclic aromatic hydrocarbons and coal tar from different habitats in Lithuania. *Toxicological & Environmental Chemistry* 98: 77-89;
22. Massacci et al. (2001) Remediation of wetlands by *Phragmites australis*: the biological basis. *Minerva Biotechnologica* 13:135-40.
23. Massacci et al. (2008) Response of the photosynthetic apparatus of cotton (*Gossypium hirsutum*) to the onset of drought stress under field conditions studied by gas-exchange analysis and chlorophyll fluorescence imaging. *Plant Physiology and Biochemistry* 46:189-195
24. Mugnozza et al. (2013). *Salicaceae* biomass for multipurpose uses. *Biomass and Bioenergy* 54, 284-321
25. Passatore (2015) Bio- and phyto-remediation of a historically PCB-contaminated soil. Ph.D. thesis in forest ecology, Università degli studi della Tuscia, Viterbo, Italy, 133 pp
26. Passatore et al. (2014). Phytoremediation and bioremediation of polychlorinated biphenyls (PCBs): state of knowledge and research perspectives. *Journal of hazardous materials* 278, 189-202
27. Pietrini et al. (2003) Interaction of Cadmium with Glutathione and Photosynthesis in Developing Leaves and Chloroplasts of *Phragmites australis* Trin. ex Steudel. *Plant Physiol* 133 (2) 829-37.
28. Pietrini et al. (2010). Screening of poplar clones for cadmium phytoremediation using photosynthesis, biomass and cadmium content analyses. *International Journal of Phytoremediation* 12: 1-16
29. Pietrini et al. (2010). Spatial distribution of cadmium in leaves and its impact on photosynthesis: examples of different strategies in willow and poplar clones. *Plant Biology* 12:355–363
30. Pietrini et al. (2015) Evaluation of nickel tolerance in *Amaranthus paniculatus* L. plants by measuring photosynthesis, oxidative status, antioxidative response and metal-binding molecule content. *Environmental Science and Pollution Research* 22:482–494;
31. Pietrini et al. (2015). Assessment of physiological and biochemical responses, metal tolerance and accumulation in two eucalypt hybrid clones for phytoremediation of cadmium-contaminated waters. *Journal of Environmental Management* 162, 221-231
32. Pietrini et al. (2015). Ibuprofen exposure in *Lemna gibba* L.: Evaluation of growth and phytotoxic indicators, detection of ibuprofen and identification of its metabolites in plant and in the medium. *Journal of Hazardous Materials* 300: 189-193.
33. Pietrini et al. (2016) Combined effects of elevated CO<sub>2</sub> and Cd-contaminated water on growth, photosynthetic

- response, Cd accumulation and thiolic components status in *Lemna minor* L. *Journal of hazardous materials* 309, 77-86
34. Pietrini et al. (2017) Effects of a ladle furnace slag added to soil on morpho-physiological and biochemical parameters of *Amaranthus paniculatus* L. plants. *Journal of Hazardous Materials* (in press), DOI: 10.1016/j.jhazmat.2017.01.050;
  35. Pietropaoli S. (2014) "Mesocosmi sperimentali per lo studio dei processi fisiologici di specie arboree forestali nell'ambito della fitodepurazione: recupero di acque contaminate per la produzione di biomassa legnosa". PHD thesis, Università dellaTuscia, Viterbo.
  36. Pietrosanti L. (2010) Phytoextraction And Hydrological Phytocontrol In An Industrial Site Contaminated By Heavy Metals And Arsenic. PHD thesis, UniTuscia Viterbo, Italy.
  37. Zacchini et al. (2009). Metal tolerance, accumulation and translocation in poplar and willow clones treated with cadmium in hydroponics. *Water Air and Soil Pollution* 197: 23-34.
  38. Zacchini et al. (2011). An example of cadmium accumulation and tolerance abilities involving different metal binding and defense compounds in the *Populus nigra* L. clone Poli and *Salix alba* L. clone SS5. *Biol Plantarum* 55 (2), pp. 383-386

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39. Capotorti *et al.* (2007) "Phytoremediation test for arsenics pollution control in contaminated industrial soil in Porto Marghera" Battelle Press - 9th International In Situ and On-Site Bioremediation Symposium 2007 1, pp. 142-147
40. De Angelis *et al.* (2014) Fitotrattamento del percolato di discarica: il caso Alcantara. Terni, 28-29 novembre 2013. Meeting su Bonifica, recupero ambientale e sviluppo del territorio: esperienze a confronto sul fitorimedio. *Micron* (n.29 ago 2014).
41. Gaudet *et al.* (2010) IUFRO- Fifth International Poplar Symposium, Orvieto (Italy);
42. Paris *et al.* (2009) - Linking wood bioenergy production with soils and wastewater phytoremediation with poplar and willow trees in Italy. First International Conference on Advances in Wastewater Treatment and Reuse, 30 June – 02 July 2009
43. Pietrosanti *et al.* (2008). Hydrological control and phytoremediation by poplar and willow clones in a contaminated industrial site in Venice lagoon. *Proceedings of the 4° European Bioremediation Conference* 3-6 September 2008, Chania, Crete, Greece, ID 138 pp 1-5.
44. Pietrosanti *et al.* (2009). Phytoremediation of a metal contaminated industrial soil of Porto Marghera by a short rotation forestry stand. *Proceedings of the 11th Intern Conference on Environmental Science and Technology*, -5 September 2009, Chania, Crete, Greece , 3 pp 738-744
45. Zacchini *et al.* (2011). Physiological and biochemical characterisation of Eucalyptus hybrid clones treated with cadmium in hydroponics: perspectives for phytoremediation of polluted waters. *Proceedings of the 5° European Bioremediation Conference*, 4-7 July 2011, Chania, Crete, Greece, ID 147 pp 1-5.

## BOOKS

46. Bianconi et al. (2011). Field-scale rhizoremediation of a contaminated soil with hexachlorocyclohexane (HCH) isomers: the potential of poplars for environmental restoration In "Phytoremediation: Processes, Characteristics, and Applications". *Handbook of Phytoremediation* Eds. I.A. Golubev. Nova Science Publishers, Inc. Isbn: 978-1-61728-753-4. Chapter 31 pp. 783-794.
47. Grandi et al. (2014) Le piante che depurano l'acqua. Ed Il Campo Bologna. Pp 240
48. Grenni et al. (2016). Biorimedio fitoassistito: approccio ecologico per il rimedio di siti multi-contaminati. Monografia su "La ricerca sulle acque e le nuove prospettive di valorizzazione dei risultati in ambito pubblico e privato". Caucci editore, Bari a cura di E Brugnoli e V F Uricchio
49. Iori et al. (2014). Morphophysiological Responses, Heavy Metal Accumulation and Phytoremoval Ability in Four Willow Clones Exposed to Cadmium Under Hydroponics In *Phytoremediation: Management of Environmental Contaminants*, Volume 1, Ansari, A.A., Gill, S.S., Gill, R., Lanza, G.R., Newman, L. (Eds.), DOI 10.1007/978-3-319-10395-2\_7, © Springer International Publishing Switzerland 2015. Chapter 7 pp. 87-98.
50. Massacci et al. Capitolo su Fitorimedio bioassistito, pp.21-34 nel libro: *Le innovazioni tecnologiche nel settore della caratterizzazione e bonifica dei siti contaminati*, Cacucci Editore, a cura di Brugnoli E, Uricchio VF, Massarelli C, Zurlini G,
51. Passatore et al. (2016). Capitolo del libro "Acqua e salute per la popolazione" – stampa GraficaEtica – Roma.

52. Pietrini et al. (2005) "Cadmium interaction with thiols and photosynthesis in higher plants. In "Advances in Plant Physiology" Hemantaranjan editor, Vol. 8, Chapter 18 pp. 313-326, Scientific Publisher Jodhpur.

## TECHNICAL REPORTS

53. Massacci et al. (2009). Fitoestrazione e fitostabilizzazione di metalli pesanti nel sito contaminato Isola dei Petroli, Porto Marghera (Venezia), contratto ENI R&M Nr 4900157051/MF5
54. Massacci et al. (2009). Associazione di biorimedio di isomeri dell'esaclorocicloesano a produzione di biomassa da pioppo per energia nel bacino del fiume Sacco. Contratto per convenzione CNR-IBAF e Ufficio commissariale per l'emergenza nel territorio del bacino del Fiume Sacco tra le province di Roma e Frosinone.