



Enrica Roccotiello

PERSONAL INFORMATION

-  Department of Earth, Environment and Life Sciences, Università Di Genova (DISTAV)
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-  Skype Enrica_r.

Sex Female | Date of birth 27/03/1979 | Nationality Italian

POSITION

Researcher RTD a

WORK EXPERIENCE

01/10/2018-present

Researcher RTDa of Environmental and Applied Botany

University of Genoa, DISTAV, Italy

- Plant scientist working in the field of phytoremediation, bioremediation, soil quality evaluation via ecotoxicological tests, environmental sustainability, biodiversity of extreme habitats. Research topics include effects of anthropogenic sources of pollution and their potential remediation by means of several ecosustainable tests and bioremediation techniques, including plant diversity in metal-rich soils, native organisms' selection for bioremediation purposes and eco-physiological biomarkers to evaluate plant resistance to pollutants.
 - *Member* of the Ph.D course in Botany applied to agriculture and environment (since 2019)
 - Professor of: Botany and Applied Botany (6 ECTS) for Science of Architecture; Detection, mapping and monitoring of flora and vegetation (4 ECTS), Planning and design in natural environments and impact assessment (2 ECTS), for Science of Natural Systems.
- Business or sector** Research, Applied Botany

From 03/03/2014 to 30/09/2018

Post-doc – Applied Botany

University of Genoa, DISTAV, Italy L.240/2010

- Study on "Metal tolerance and accumulation in plants useful for phytoremediation Area 05/A1; ssd BIO 03 Post-doc fellowship, successful candidate in an open competition

Business or sector Research, Applied Botany

From 01-03-2012 to 28-02-2014

Post-doc – Applied Botany

University of Genoa, DISTAV, Italy L.240/2010

Guidelines and results dissemination of the project SUMFLOWER (LIFE+ 09 ENV/IT/000067) for a sustainable floriculture" Area 05/A1; ssd BIO 03 Post-doc fellowship, successful candidate in an open competition

Business or sector Research, Applied Botany

From 11.01.2012 to 11.03.2012

Coordinated and Continuous Collaboration

University of Genoa, DISTAV, Italy

Contract on "Application of phytotoxicity test to the evaluation of environmental quality" in the framework of the project "Higher plants and environmental quality" Resp. Prof. P. Modenesi.

Business or sector Research, Applied Botany

ADDITIONAL INFORMATION

Projects' involvement

Participation in a national research project with specific focus on interactions between metal hyper-accumulators from mining sites and mine soil and the circulating solutions in the project "Studies on biodiversity of disused or active mining areas and evaluation of accumulation / release of potentially toxic elements (PTE) as a function of the abiotic and biotic components in the study of the relationships between minerals and potentially toxic elements in supergenic environments through a multidisciplinary and multi-scale approach." National research Project PRIN 2010-2011 - prot. 2010MKHT9B_003" Minera-biosphere interactions: consequences on environment and human health". National Coordinator: Prof. Gilberto Artioli; Scientific responsible for Genova Prof. Gabriella Lucchetti. from 01-02-2013 to 01-01-2016

Participation to International research project with studies on methodologies to decrease the use of resources and to mitigate the impact of agricultural practices in the framework of the LIFE project 2011-2014 EU LIFE+ 09 ENV/IT/000067 SUMFLOWER "Sustainable Management Of Floriculture in the Western Riviera". Università di Genova - DISTAV, Impresa verde Liguria s.r.l., Centro di Sperimentazione e Assistenza Agricola, Istituto Regionale di Floricoltura (IRF), Distretto Agricolo Florovivaistico del Ponente, Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria - CREA (ex CRA). dal 01-03-2012 al 28-02-2014

Participation on National Research project on " Insights on a plant species flags of the Maritime Alps for their candidacy for World Heritage Sites "; studies on " *Berardia subacaulis* Vill., Wreck of the Tertiary in the Alps: insights on its phylogeography, ecology and reproductive biology " Scientific responsible L. Minuto Progetto di Ricerca di Ateneo 2011 dal 01-02-2011 al 30-06-2013

Participation on national research project on the As and Cd accumulation and localization in hydroponic culture on Pteridophytes and ultramicroscopic analysis of target species under As and Cd stress in the framework of 2008-2010 PRIN 2007 - prot. 2007PKFAAT_004, Ministero dell'Università e della Ricerca, "Mechanisms in response to arsenic and cadmium in model plants: from molecular to field studies" Coordinator Prof. G. Berta, Università degli Studi del Piemonte Orientale Amedeo Avogadro. dal 22-12-2008 al 22-12-2010

Participation on National Research to screen Pteridophytes from Liguria region able to accumulate As and metals, mesocosm tests, histochemical localization of metals in plant tissues, macro and micromorphological analysis. Research conducted in the framework of COFIN 2004 - prot. 2004055240_002 "Fitorisanamento di suoli contaminati da arsenico: Pteris vittata ed altre felci che iperaccumulano arsenico" national Coordinator Prof. Graziella Berta, Università del Piemonte Orientale A. Avogadro., dal 24-10-2005 al 24-11-2006

- Consulting**
- Responsible of the ecotoxicological evaluation via phytotoxicity tests on excavation materials and related conditionings. Study commissioned by Consorzio Collegamenti Integrati Veloci (COClV) third pass sector Giovi, with contract n. 6400017311. General Manager of the multidisciplinary study Prof. Mauro G. Mariotti, Università degli Studi di Genova. From 26-07-2016 to 15-10-2016
 - Responsible of the ecotoxicological evaluation via phytotoxicity tests on excavation materials and related conditionings. Study commissioned by Consorzio Collegamenti Integrati Veloci (COClV) third pass sector Giovi, with contract n. 6400018135. General Manager of the multidisciplinary study Prof. Mauro G. Mariotti, Università degli Studi di Genova. From 20-10-2016 to 23-12-2016
 - Responsible of the ecotoxicological evaluation via phytotoxicity tests of USE leaf polish. Study commissioned by Ditta Andrea Gallo s.r.l. Genova. From 1-04-2008 to 6-06-2008

Publications

Enrica Roccotiello authored 119 scientific products of which: 32 papers on international journals with Impact Factor, 2 PhD thesis, 2 monography, 4 contributions in volumes; 12 papers on national journals; 42 abstracts of International Conference, 17 abstracts of National Conference, 3 posters, 4 exhibitions.

Bibliometric indices (February 2020), Source: Scopus. h-index 12. **Total citations: 442**

Selected international publications

For the complete list visit:

▪ [orcid: 0000-0003-3701-9154](https://orcid.org/0000-0003-3701-9154)

▪ https://www.researchgate.net/profile/Enrica_Roccotiello2

METAL HYPERACCUMULATION IN PLANTS

- Rosatto S., **Roccotiello E.**, Di Piazza S., Cecchi G., Greco G., Zotti M., Vezzulli L., Mariotti M. (2019). Rhizosphere response to nickel in a facultative hyperaccumulator. *Chemosphere*, vol. 232, p. 243-253, ISSN: 0045-6535, doi: 10.1016/j.chemosphere.2019.05.193
- Cecchi, G., **Roccotiello, E.**, Di Piazza, S., Riggi, A., Mariotti, M.G., Zotti, M. Assessment of Ni accumulation capability by fungi for a possible approach to remove metals from soils and waters (2017) 52 (3), pp. 166-170. DOI: 10.1080/03601234.2017.1261539
- **Roccotiello, E.**, Serrano, H.C., Mariotti, M.G., Branquinho, C. The impact of Ni on the physiology of a Mediterranean Ni-hyperaccumulating plant (2016) 23 (12), pp. 12414-12422. DOI: 10.1007/s11356-016-6461-3
- **Roccotiello, E.**, Serrano, H.C., Mariotti, M.G., Branquinho, C. Nickel phytoremediation potential of the Mediterranean *Alyssoides utriculata* (L.) Medik (2015) 119, pp. 1372-1378. DOI: 10.1016/j.chemosphere.2014.02.031
- Marescotti, P., **Roccotiello, E.**, Zotti, M., De Capitani, L., Carbone, C., Azzali, E., Mariotti, M.G., Lucchetti, G. Influence of soil mineralogy and chemistry on fungi and plants in a waste-rock dump from the Libiola mine (eastern Liguria, Italy) (2013) 82 (1), pp. 141-162. DOI: 10.2451/2013PM0009
- Drava, G., **Roccotiello, E.**, Minganti, V., Manfredi, A., Cornara, L. Effects of cadmium and arsenic on *Pteris vittata* under hydroponic conditions (2012) 31 (6), pp. 1375-1380. DOI: 10.1002/etc.1835
- **Roccotiello, E.**, Viale, I., Cornara, L. Phytotoxicity tests with higher plants for environmental risk assessment (2011) 84 (1), pp. 45-47. DOI: 10.4081/jbr.2011.4489
- **Roccotiello, E.**, Zotti, M., Mesiti, S., Marescotti, P., Carbone, C., Cornara, L., Mariotti, M.G. Biodiversity in metal-polluted soils (2010) 19 (10 B), pp. 2420-2425.
- **Roccotiello, E.**, Manfredi, A., Drava, G., Minganti, V., Giorgio Mariotti, M., Berta, G., Cornara, L. Zinc tolerance and accumulation in the ferns *Polypodium cambricum* L. and *Pteris vittata* L. (2010) 73 (6), pp. 1264-1271. DOI: 10.1016/j.ecoenv.2010.07.019

URBAN GREEN

- Perini, K., Castellari, P., Giachetta, A., Turcato, C., **Roccotiello E.** (2020) Experiencing innovative biomaterials for buildings: Potentialities of mosses. *Building and Environment*, 172. ISSN 0360-1323, DOI: 10.1016/j.buildenv.2020.106708
- Perini, K., **Roccotiello, E.** (2018) Vertical greening systems for pollutants reduction. In: *Nature Based Strategies for Urban and Building Sustainability*, pp. 131-140. DOI: 10.1016/B978-0-12-812150-4.00012-4
- Lazzari, S., Perini, K., **Roccotiello, E.** (2018) Green streets for pollutants reduction. In: *Nature Based Strategies for Urban and Building Sustainability*, pp. 149-156. DOI: 10.1016/B978-0-12-812150-4.00014-8
- Perini, K., Ottel , M., Giulini, S., Magliocco, A., **Roccotiello, E.** (2017) Quantification of fine dust deposition on different plant species in a vertical greening system. *Ecological Engineering*, 100:268-276. DOI: 10.1016/j.ecoeng.2016.12.032