

PERSONAL INFORMATION **Antonello Prigioniero**

Sex [REDACTED]

EDUCATION AND TRAINING

- 2022 **PhD degree in Science and Technologies for Environment and Health**
University of Sannio – Department of Science and Technologies, Benevento (Italy)
- 2018 - 2022 **PhD student in Science and Technologies for Environment and Health**
University of Sannio – Department of Science and Technologies, Benevento (Italy)
- 2016 - 2018 **Master’s degree Forestry and Environmental Science e Technologies (LM-73).**
University of Molise – Department of Agriculture, Environment and Food, Campobasso (Italy).
- 2014 - 2016 **Degree in Forest and Environmental Technologies (L-25)**
University of Molise - Department of Agriculture, Environment and Food, Campobasso (Italy)

JOB EXPERIENCE

- 16/08/2022 **Research grant**
“Systematic characterization of different accessions (RGVs) provided under the targeted action a7 (Genetic-molecular characterization of indigenous Campania RGVs) of the DiCoVaLe Project using molecular markers.”

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B1	B1	B1	B1	B1

Communication skills ▪ good communication skills gained through my experience as PhD student keeping lectures and conferences

Organisational / managerial skills

- Good organizational and planning skills gained through my experience as PhD student.
- Good information management skills gained through my experience as PhD student.
- Good problem solving skills gained through my experience as PhD student.
- Good teamworking skills gained through my experience as PhD student.
- Good flexibility and adaptability gained through my experience as PhD student.
- Good resistance to stress gained through my experience as PhD student.

- Job-related skills**
- Good skills in data collection work in the field, acquired during the work carried out for the master's degree thesis and during my PhD course.
 - Good skills in laboratory work and familiarity with most of the basic instruments supplied to scientific laboratories. Skills acquired during the work carried out for the three-year degree thesis and PhD course.

- Computer skills**
- European ECDL license.
 Excellent knowledge of Office software.
 Good knowledge of the basics of GIS software.
 Excellent internet browsing skills.

- Driving licence**
- In possession of driving license B and own car.

SCIENTIFIC PRODUCTION

ISI-WOS Peer reviewed articles

- Scarano, P., **Prigioniero, A.**, Tartaglia, M., Zuzolo, D., Maisto, M., Ranauda, M.A., Schicchi, R., Geraci, A., Sciarrillo, R., Guarino, C. Rhus coriaria L. in tradition and innovation like natural dye. Sci Rep 14 12068 2024. <https://doi.org/10.1038/s41598-024-62528-8>
- Ranauda, M.A., Zuzolo, D., Maisto, M., Tartaglia, M., Scarano, P., Prigioniero, A., Sciarrillo, R., Guarino, C. Microplastics affect soil-plant system: Implications for rhizosphere biology and fitness of sage (*Salvia officinalis* L.). Environ Pollut. 2024 <https://doi.org/10.1016/j.envpol.2024.123656>.
- Maisto, M., Ranauda, M.A., Zuzolo, D., Tartaglia, M., Postiglione, A., **Prigioniero, A.**, Falzarano, A., Scarano, P., Castelvetro, V., Corti, A., Modugno, F., La Nasa, J., Biale, G., Sciarrillo, R., Guarino, C. Effects of microplastics on microbial community dynamics in sediments from the Volturno River ecosystem, Italy. 2024. Chemosphere. <https://doi.org/10.1016/j.chemosphere.2023.140872>
- **Prigioniero, A.**, Postiglione, A., Zuzolo, D., Niinemets, U., Tartaglia, ., Scarano, P., Mercurio, M., Germinario, C., Izzo, F., Trifuoggi, M., Toscanesi, M., Sciarrillo, R., Guarino, C. Leaf surface functional traits influence particulate matter and polycyclic aromatic hydrocarbons air pollution mitigation: Insights from Mediterranean urban forests. 2023. Journal of Cleaner Production. <https://doi.org/10.1016/j.jclepro.2023.138158>
- Tartaglia, M., Ranauda M.A., Falzarano, A., Maisto, M., Postiglione, A., **Prigioniero, A.**, Scarano, P., Zuzolo, D., Sciarrillo, R., Guarino, C., 2023. Metatranscriptomics of pastures under drought stress show a rhizospheric meta-organism reshape. Rhizosphere Volume 26 June 2023, 100687 10.1016/j.rhisph.2023.100687
- Tartaglia, M., Scarano, P., Prigioniero, A., Zuzolo, D., Postiglione, a.,

Falzarano, A., Amoresano, A., Illiano, A., Pinto, G., Schicchi, R., Geraci, A., Sciarrillo, R., Guarino, C. Multi-omic characterisation as a tool to improve knowledge, valorisation and conservation of wild fruit genetic resources: the case of *Arbutus unedo* L. *Frontiers in Plant Science*. 2023 1195673
10.3389/fpls.2023.1195673

- Postiglione, A., **Prigioniero, A.**, Zuzolo, D., Tartaglia, M., Scarano, P., Maisto, M., Ranauda, M.A., Sciarrillo, R., Thijs, S., Vangronsveld, J., Guarino, C. 2022. *Quercus ilex* Phyllosphere Microbiome Environmental-Driven Structure and Composition Shifts in a Mediterranean Context. *Plants* 11, 24 December 2022, 3528. 10.3390/plants11243528
- **Prigioniero, A.**, Paura, B., Zuzolo, D., Tartaglia, M., Postiglione, A., Scarano, P., Bellenger, S., Capuano, A., Serpe, E., Sciarrillo, R., Guarino, C. 2022 Holistic tool for ecosystem services and disservices assessment in the urban forests of the Real Bosco di Capodimonte, Naples. *Scientific Reports* 12, 1 December 2022, 16413. 10.1038/s41598-022-20992-0.
- **Prigioniero, A.**, Zuzolo, D., Niinemets, Ü., Postiglione, A., Mercurio, M., Izzo, F., Trifuoggi, M., Toscanesi, M., Scarano, P., Tartaglia, M., Sciarrillo, R., Guarino, C., 2022 Particulate matter and polycyclic aromatic hydrocarbon uptake in relation to leaf surface functional traits in Mediterranean evergreens: Potentials for air phytoremediation. *Journal of Hazardous Materials* 435, 129029.
<https://doi.org/10.1016/j.jhazmat.2022.129029>
- Scarano, P., Guida, R., Zuzolo, D., Tartaglia, M., **Prigioniero, A.**, Postiglione, A., Pinto, G., Illiano, A., Amoresano, A., Schicchi, R., Geraci, A., Sciarrillo, R., Guarino, C., 2022. An endemic plant of the Mediterranean area: phytochemical characterization of strawberry tree (*Arbutus unedo* L.) fruits extracts at different ripening stages. *Front. Nutr.*
<https://doi.org/10.3389/fnut.2022.915994>
- Tartaglia, M., Zuzolo, D., Postiglione, A., **Prigioniero, A.**, Scarano, P., Sciarrillo, R., Guarino, C., 2022. Biotechnological Combination for Co-contaminated Soil Remediation: Focus on Tripartite “Meta-Enzymatic” Activity. *Frontiers in Plant Science*, 13, doi: 10.3389/fpls.2022.852513
- Maisto, M., Ranauda, M.A., Zuzolo, D., Tartaglia, M., Postiglione, A., **Prigioniero, A.**, Falzarano, A., Scarano, P., Sciarrillo, R., Guarino, C., 2022. Influence of sediment texture on HDPE microplastics recovery by density separation. *Journal of Environmental Management*, 317, 115363.
<https://doi.org/10.1016/j.jenvman.2022.115363>.
- Tartaglia, M., Sciarrillo, R., Zuzolo, D., Postiglione, A., **Prigioniero, A.**, Scarano, P., Ruggieri, V., & Guarino, C. (2022). Exploring an enhanced rhizospheric phenomenon for pluricontaminated soil remediation: Insights from tripartite metatranscriptome analyses. *Journal of Hazardous Materials*, 428, 128246. <https://doi.org/10.1016/j.jhazmat.2022.128246>
- Scarano, P., Tartaglia, M., Zuzolo, D., **Prigioniero, A.**, Guarino, C., Sciarrillo, R., 2022. Recovery and Valorization of Bioactive and Functional Compounds from the Discarded of *Opuntia ficus-indica* (L.) Mill. Fruit Peel.

Agronomy, 12(2):388. <https://doi.org/10.3390/agronomy12020388>

- Zuzolo, D., Guarino, C., Postiglione, A., Tartaglia, M., Scarano, P., **Prigioniero, A.**, Terzano, R., Porfido, C., Morra, L., Benotti, D., Gresia, D., Stacul, E.R., Sciarrillo, R. Overcome the limits of multi-contaminated industrial soils bioremediation: Insights from a multi-disciplinary study (2022) Journal of Hazardous Materials, 421, art. no. 126762, DOI: 10.1016/j.jhazmat.2021.126762

- Capotorti G, Bonacquisti S, Abis L, Aloisi I, Attorre F, Bacaro G, Balletto G, Banfi E, Barni E, Bartoli F, Bazzato E, Beccaccioli M, Braglia R, Bretzel F, Brighetti MA, Brundu G, Burnelli M, Calfapietra C, Cambria VE, Caneva G, Canini A, Caronni S, Castello M, Catalano C, Celesti-Grapow L, Cicinelli E, Cipriani L, Citterio S, Concu, ..., **Prigioniero A.**, et al. (2020). More nature in the city. PLANT BIOSYSTEMS, vol. 154, p. 1003-1006, ISSN: 1126-3504, doi: 10.1080/11263504.2020.1837285 EA OCT 2020

- Guarino C, Marziano M, Tartaglia M, **Prigioniero A.**, Postiglione A, Scarano P, Sciarrillo R (2020). Poaceae with PGPR Bacteria and Arbuscular Mycorrhizae Partnerships as a Model System for Plant Microbiome Manipulation for Phytoremediation of Petroleum Hydrocarbons Contaminated Agricultural Soils. AGRONOMY, vol. 10, ISSN: 2073-4395, doi: 10.3390/agronomy10040547

- **Prigioniero A.**, Scarano P., Ruggieri V., Marziano M., Tartaglia M., Sciarrillo R., Guarino C., 2020. Plants Named "Lotus" in Antiquity: Historiography, Biogeography, and Ethnobotany. Harvard Papers in Botany, 25(1),59-71. DOI:10.3100/hpib.v25iss1.2020.n8

- **Prigioniero A.**, Sciarrillo R., Spuria L., Zuzolo D, Marziano M., Scarano P., Tartaglia M., Guarino C., 2020. Role of historic gardens in biodiversity-conservation strategy: the example of the Giardino Inglese of Reggia di Caserta (UNESCO) (Italy). Plant Biosystems. DOI: 10.1080/11263504.2020.1810812

- **Prigioniero A.**, Geraci A., Schicchi R., Tartaglia M., Zuzolo D., Scarano P., Marziano M., Postiglione A., Sciarrillo R., Guarino C., 2020 Ethnobotany of dye plants in Southern Italy, Mediterranean Basin: floristic catalog and two centuries of analysis of traditional botanical knowledge heritage, 2020. J Ethnobiology Ethnomedicine 16, 31. <https://doi.org/10.1186/s13002-020-00384-2>

- Scarano P., Naviglio D., **Prigioniero A.**, Tartaglia M., Postiglione A., Sciarrillo R., Guarino C., 2020. Sustainability: Obtaining Natural Dyes from Waste Matrices Using the Prickly Pear Peels of Opuntia ficus-indica (L.) Miller. Agronomy, 10, 528.

- **Prigioniero A.**, D. Zuzolo, R. Sciarrillo, C. Guarino, 2020. Assessing pollinosis risk in the Vesuvius National Park: A novel approach for Index of Urban Green Zones Allergenicity. Environmental Research 197 (2021) 111063, <https://doi.org/10.1016/j.envres.2021.111063>

Organizing Committee of
Conferences and CongressParticipation at
Conferences and Congress

- **Prigioniero A.**, Zuzolo D., Niinemets Ü., Guarino C., 2020. Nature-based solutions as tools for air phytoremediation: A review of the current knowledge and gaps *Environmental Pollution* 277 (2021) 116817, <https://doi.org/10.1016/j.envpol.2021.116817>
- Zuzolo D., Guarino C., Formato C., Tartaglia M., Sciarrillo R., Paura B., **Prigioniero A.**, 2021. Divide et Disperda: Thirty Years of Fragmentation and Impacts on the Eco-Mosaic in the Case Study of the Metropolitan City of Naples. *Land* 2021, 10, 485. <https://doi.org/10.3390/land10050485>
- GENUINE 2023. Global strategy for the conservation and use of fruit tree genetic resources. University of Sannio, Benevento, Italy. 30-31 January 2023.
- Tortorella M., **Prigioniero, A.**, New holistic database concept for agro-biodiversity knowledge, conservation and protection: the Di.Co.Va.Le experience. GENUINE 2023. Global strategy for the conservation and use of fruit tree genetic resources. University of Sannio, Benevento, Italy 30-31 January 2023. Oral Presentation
- **Prigioniero, A.**, Guarino, C. Role of historic gardens in natural heritage conservation. International Conference on Monumental Trees. Knowledge, conservation, valorization. 14-15-16 October 2022, Palermo (Italy). Oral presentation.
- **Prigioniero, A.**, Ranauda, M.A., Zuzolo, D., Postiglione, A., Tartaglia, M., Maisto, M., Scarano, P., Sciarrillo, R., Guarino, C. New holistic database concept for agro-biodiversity knowledge, conservation and protection. AGROSYM 2022. Oral Presentation.
- **Prigioniero, A.**, Zuzolo, D., Niinemets, Ü., Postiglione, A., Mercurio, M., Izzo, F., Trifuoggi, M., Toscanesi, M., Scarano, P., Tartaglia, M., Maisto, M., Ranauda, M.A., Sciarrillo, R., Guarino, C. Role of leaf surface functional traits in sequestration and retention of particulate matter and polycyclic aromatic hydrocarbons in Mediterranean urban forests. 9th International Workshop on Biomonitoring of Atmospheric Pollution. 3-5 October 2022, Napoli (Italy). Oral Presentation.
- **Prigioniero, A.**, Guarino, C. Renaturalization of the HC Turin-Milan Railway Line and the Mestre Bypass. 4th International Symposium of Soil and Water Bioengineering: Materials and Techniques in Ecological Restoration. 23-24 September 2022, Sant'Agata di Militello (Messina, Sicily) ITALY. Oral Presentation.
- **Prigioniero, A.**, Zuzolo, D., Niinemets, Ü., Postiglione, A., Mercurio, M., Izzo, F., Trifuoggi, M., Toscanesi, M., Scarano, P., Tartaglia, M., Maisto, M., Ranauda, M.A., Sciarrillo, R., Guarino, C. Role of leaf surface functional traits in sequestration and retention of particulate matter and polycyclic aromatic hydrocarbons in Mediterranean urban forests. 117° Congresso della Società Botanica Italiana. Poster presentation
- **Prigioniero, A.**, Zuzolo, D., Niinemets Ü., Postiglione, A., Mercurio, M., Izzo, F., Trifuoggi, M., Toscanesi, M., Scarano, P., Tartaglia, M., Sciarrillo, R., Guarino, C.

Exploration of the leaf surface: discovering functional traits useful in PM and PAHs air phytoremediation” International Conference “Air Pollution Threats to Plant Ecosystems” - Paphos (Cyprus) 11-15 October 2021. Oral presentation

- Maisto, M., Scarano, P., Naviglio, D., **Prigioniero, A.**, Tartaglia, M., Postiglione, A., Ranauda, M.A., Zuzolo, D., Sciarrillo, R., Guarino, C. *Opuntia ficus-indica* (L.) Miller as a sustainable source for natural dyes production. AGROSYM 2021 Poster presentation
- Scarano, P., **Prigioniero, A.**, Postiglione, A., Maisto, M., Ranauda, M.A., Tartaglia, M., Zuzolo, D., Guarino, C., Sciarrillo, R., Phytochemical characterization of strawberry tree (*Arbutus unedo* L.) leaves and fruit extracts at various ripeness. AGROSYM 2021 Oral presentation
- **Prigioniero, A.**, Zuzolo, D., Sciarrillo, R., Guarino, C., Assessing pollinosis risk in the Vesuvius national park (southern Italy): a novel approach for index of urban green zones allergenicity. AGROSYM 2021 Oral presentation
- Ranauda, M.A., Tartaglia, M., Zuzolo, D., **Prigioniero, A.**, Maisto, M., Postiglione, A., Scarano, P., Sciarrillo, R., Guarino, C., Effects of a microbial consortium on *Schedonorus arundinaceus* in a pluricontaminated soil AGROSYM 2021 Poster presentation
- Zuzolo, D., Guarino, C., Postiglione, A., Tartaglia, M., Scarano, P., **Prigioniero, A.**, Maisto, M., Terzano, R., Porfido, C., Sciarrillo, R., Overcome the limits of multi-contaminated industrial soils bioremediation: insights from a multi-disciplinary study. 116° Congresso della Società Botanica Italiana. ISBN 978-88-85915-26-8 Oral presentation
- **Prigioniero, A.**, Zuzolo, D., Postiglione, A., Mercurio, M., Izzo, F., Trifuoggi, M., Toscanesi, M., Scarano, P., Tartaglia, M., Sciarrillo, R., Guarino, C. Exploration of the leaf surface: discovering functional traits useful in PMs and PAHs air phytoremediation. 116° Congresso della Società Botanica Italiana. ISBN 978-88-85915-26-8 Poster presentation
- Tartaglia, M., Sciarrillo, R., Zuzolo, D., Postiglione, A., **Prigioniero, A.**, Scarano, P., Ranauda, M.A., Ruggieri, V., Guarino, C. Bioremediation of pluricontaminated soils: insights from a tripartite metatranscriptomics. 116° Congresso della Società Botanica Italiana. ISBN 978-88-85915-26-8 Poster presentation
- Scarano, P., **Prigioniero, A.**, Zuzolo, D., Tartaglia, M., Postiglione, A., Maisto, M., Ranauda, M.A., Guarino, C., Sciarrillo, R. Phytochemical characterization of *Arbutus unedo* L. leaves and fruit extracts at various ripening stages. 116° Congresso della Società Botanica Italiana. ISBN 978-88-85915-26-8 Poster presentation
- Postiglione, A., **Prigioniero, A.**, Tartaglia, M., Zuzolo, D., Scarano, P., Ranauda, M.A., Maisto, M., Sciarrillo, R., Guarino, C. The phyllosphere of *Quercus ilex* provides an ecosystem service in the abatement of atmospheric pollution in the urban area of Naples: epiphytic microorganism dislodgement protocol for metagenomic analysis. 116° Congresso della Società Botanica Italiana. ISBN 978-88-85915-26-8 Poster presentation

- **Prigioniero, A.**, Zuzolo, D., Sciarrillo, R., Guarino, C., 2020. Assessing allergenicity in the Vesuvius National Park through a modified Index of Urban Green Zones (IUGZA). Scientific Research Abstracts Vol. 10, p. 36, 2020 ISSN 2464-9147 (Online) INTERNATIONAL MEETING OF GEOHEALTH SCIENTISTS | GHC 2020 Poster presentation

- Tartaglia, M., Scarano, P., **Prigioniero, A.**, Postiglione, A., Sciarrillo, R., Guarino C. Variations of biological systems during the ripening of *Capsicum annum* L., friariello variety. Metabolic and proteomic changes. 115° Congresso della Società Botanica Italiana. ISBN 978-88-85915-24-4 Poster presentation

- Scarano, P., Schicchi, R., **Prigioniero, A.**, Tartaglia, M., Postiglione, A., Sciarrillo, R., Guarino C. The recovery of sumac (*Rhus coriaria* L.), an ancient dye plant. A conventional method and an innovative method compared for extraction and dyeing with sumac extracts. 115° Congresso della Società Botanica Italiana. ISBN 978-88-85915-24-4 Oral presentation

- **Prigioniero, A.**, Sciarrillo, R., Marziano, M., Scarano, P., Tartaglia, M., Postiglione, A., Guarino, C. Role of historic gardens in biodiversity-conservation strategy: the example of the English Garden of Royal Palace of Caserta (UNESCO) (Italy). 115° Congresso della Società Botanica Italiana. ISBN 978-88-85915-24-4 Poster presentation

- Postiglione, A., Tartaglia, M., **Prigioniero, A.**, Scarano, P., Sciarrillo, R., Guarino C. Low level vegetation for the removal of PHAs from contaminated soil. Autofluorescence microscopy for the detection of PHAs in *Verbascum sinuatum* L. leaf, stem, root. 115° Congresso della Società Botanica Italiana. ISBN 978-88-85915-24-4 Poster presentation

- Scarano, P., **Prigioniero, A.**, Naviglio, D., Gallo, M., Sciarrillo, R., Guarino, C. The prickly pear peel (*Opuntia ficus-indica* (L.) Mill.): an example of source of a bioactive compounds obtained using an eco-innovative extraction technology, Extractor Naviglio® Italian Chemical Society – XXVIII Congress of Analytical Chemistry Division Poster presentation

- Scarano, P., **Prigioniero, A.**, Tartaglia, M., Sciarrillo, R., Guarino C. Wild edible plants: a source of bioactive compounds obtained by eco-innovative extraction and separation technologies. Separation Science Meetings Poster presentation

- **Prigioniero, A.**, Scarano, P., Marziano, M., Sciarrillo, R., Guarino, C. Ecosystem services of urban forest, quantification, and evaluation. Study case in Real Bosco of Capodimonte, Naples. 114° Congresso della Società Botanica Italiana. ISBN 978-88-85915-23-7 Poster presentation

- Scarano, P., Naviglio, D., **Prigioniero, A.**, Sciarrillo, R., Guarino C. The Prickly Pear peel (*Opuntia ficus-indica* (L.) Mill.): an example of source of bioactive compounds obtained using an eco-innovative extraction technology, extractor Naviglio. 114° Congresso della Società Botanica Italiana. ISBN 978-88-85915-23-7 Poster presentation

Seminars

- Guarino, C., **Prigioniero, A.** Il ruolo delle foreste urbane nell'erogazione dei

servizi ecosistemici: il caso studio di Capodimonte. Series of seminars DiARC Napoli - Green infrastructure e progetto ambientale: strategie e azioni di protezione climatica. 07/05/2021, Online seminar .

- Guarino, C., Zuzolo, D., **Prigioniero, A.** "NATURE-BASED SOLUTIONS: Soluzioni sostenibili e ispirate alla Natura per il miglioramento della qualità ambientale" online seminar organized by Accademia Nazionale dei Lincei. 30/04/2021
- Guarino C., **Prigioniero, A.**, Scarano, P. Etnobotanica e applicazioni sperimentali dei pigmenti naturali per lo sviluppo di filiere sostenibili. Webinar Università degli studi della Tuscia - Lo scarto diventa un valore: dalla chimica alla bioraffineria forestale Possibilità, limiti e prospettive per lo sviluppo dei territori in chiave bioeconomica. 25/03/2021
- Guarino C., Zuzolo D., **Prigioniero, A.** L'uomo inquina...Le piante depurano. Ciclo di seminari, IC Moscati–DST Unisannio – AmbienteFaScuola. 11-12/2020
- Guarino, C., Prigioniero, A. Il mondo in un giardino. Seminar, Appuntamento in Giardino 2019 – Reggia di Caserta. 01/06/2019

Spin-off and Patents

- Participation in the non-participating 'academic spin-off' company called 'AURA', of which the University of Naples 'Federico II' is the proposing party
- Owner of the industrial invention "Apparato per la propagazione di vegetazione bioassorbente" Brevetto N° 102022000023622 depositato il 16/11/2022
- Owner of the industrial invention "Apparato multifunzione per la propagazione di vegetazione bioassorbente" Brevetto N° 102022000023628 depositato il 16/11/2022

Honours and awards

- Grant for the 117° Congresso della Società Botanica Italiana. 17 giugno 2022
- Grant for the 114° Congresso della Società Botanica Italiana. 13 giugno 2019

"According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV"

Dichiarazione sostitutiva dell'atto di notorietà (artt. 46 e 47 D.P.R. n.445/2000)

Le dichiarazioni e le attestazioni di cui sopra sono effettuate ai sensi degli artt. 46 e 47 D.P.R. n.445/2000. Il sottoscritto Antonello Prigioniero

è consapevole delle sanzioni penali previste dall'art. 76 del citato D.P.R. per le ipotesi in atti e dichiarazioni mendaci.

Campobasso, 29/05/2024

The declarant