

CURRICULUM VITAE - PROF. ELISABETTA LOFFREDO

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EDUCATION and CAREER

2018 *National Habilitation* as Full Professor in Agricultural Chemistry

2004-present *Associate Professor*, Department of Soil, Plant and Food Sciences, University of Bari Aldo Moro, Italy.

1995-2004 *Academic Researcher* in Agricultural Chemistry, University of Bari Aldo Moro, Italy.

1994-1995 *Research Assistant*, Institute of Agricultural Chemistry, University of Bari, Italy.

1992-1994 *Research periods* with contracts or as volunteer, Institute of Agricultural Chemistry, University of Bari, Italy.

1991-1992 *Visiting scientist* CNR Research Fellow, laboratory of Organic Chemistry of the Department of Nematology, University of California, Riverside, USA, under the supervision of Prof. C. E. Castro.

1990-1992 *Research Fellow*, two-year fellowship of the National Research Council (CNR)-Italy. First year of research activity conducted at the Institute of Agricultural Nematology applied to plants of CNR, Bari. Second year of research activity conducted at the Department of Nematology, University of California, Riverside, USA.

1987-1990 *Research volunteer*, National Research Council (CNR)-Italy, Institute of Agricultural Nematology applied to plants, Bari. Responsible of annual research projects of the Institute.

1986-1987 *Research Fellow*, National Research Council (CNR)-Italy, Institute of Agricultural Nematology applied to plants, Bari. Research Programme on the 'Dynamics of nematicides in the environment and plants'.

1985-1986 *Research periods* with contracts, Institute of Agricultural Chemistry, Faculty of Agriculture, University of Bari.

1986 *Habilitation to the Profession of Agronomist*

1985 *Graduation (BS/MS equivalent) in Agricultural Sciences* with maximum grade (110/110) "cum Laude" and triple applause from the Graduation Commission, University of Bari (Italy). Research thesis in Agricultural Chemistry.

TEACHING and INSTITUTIONAL ACADEMIC ACTIVITY

Didactic activity carried out in Bachelor and Master Degree Courses of University of Bari Aldo Moro (UNIBA), Italy

Prof. LOFFREDO has carried out teaching activity since 1996, initially at the Faculty of Agriculture of the UNIBA and subsequently at the Degree Courses afferent to the Dept. of Soil, Plant and Food Sciences and the Dept. of Agro-Environmental and Territorial Sciences of UNIBA.

The teaching activity carried out at UNIBA is the following:

1996-1999	Laboratory activity for the course of <i>Soil Science</i> of the Degree Course in Agricultural Sciences and Technologies. Member of the Examination Committees in <i>Fertilization Chemistry</i> , <i>Soil Chemistry</i> , <i>Soil Science</i> of the Degree Course in Agricultural Sciences and Technologies.
1999-2000	<i>Complements of Soil Chemistry and General Pedology</i> (7 ECTS)
2000-2002	<i>Soil Chemistry</i> (5 ECTS)
2002-2003	<i>Soil Chemistry</i> (6 ECTS)
2003-2004	<i>Principles and Methods of Chemical Analyses</i> (4 ECTS)
2004-2006	<i>Principles and Methods of Chemical Analyses</i> (4 ECTS) <i>Management of the Chemical Fertility of Soils</i> (4 ECTS)
2006-2008	<i>Principles and Methods of Chemical Analyses</i> (4 ECTS) <i>Biochemistry and Physiology</i> (5 ECTS)
2008-2009	<i>Eco-compatible Management of Soils</i> (6 ECTS) <i>Forest Biochemistry</i> (3 ECTS)
2009-2020	<i>Eco-compatible Management of Soils</i> (6 ECTS) <i>Analytical and Instrumental Chemistry with Laboratory</i> (6 ECTS)
2020-2021	<i>Eco-compatible Management of Soils</i> (6 ECTS) <i>Analytical and Instrumental Chemistry with Laboratory</i> (6 ECTS) <i>Sustainable Biomass Management</i> (6 ECTS) of the International Master Degree in Innovation Development in Agrifood Systems (IDEAS).
2021-2024	<i>Eco-compatible Management of Soils</i> (6 ECTS) <i>Sustainable Biomass Management</i> (6 ECTS) of the International Master Degree in Innovation Development in Agrifood Systems (IDEAS).

Supervising and tutoring of Laurea, Master of Science and PhD Thesis

Prof. Loffredo has been Supervisor of numerous theses for BSc, M.Sc. and PhD students at UNIBA.

Bachelor Degree in Food Science and Technology

- Caratterizzazione, trattamenti e riuso delle acque reflue. Antonio Notarangelo, 2021

Master of Science in Management and Sustainable Development of Mediterranean Rural Systems

- Biodecontaminazione di acque e sedimenti da composti distruttori endocrini mediante funghi ligninolitici. Giancarlo Castellana, 2011
- Aspetti chimici e biologici di due tipi di hydrochar in comparazione al biochar. Giuseppe Perri, 2016
- Chemical and biological aspects of different types of soil organic amendments. Roberto Gattullo, 2018
- Use of *Cannabis sativa* L. and carbon- rich materials to remove organic pollutants from soil and water and to control eutrophication. Giuseppe Picca, 2020

Master of Science in Agro-Environmental and Territorial Sciences

- Impiego di matrici organiche da riciclo di biomasse per limitare l'assorbimento e l'accumulo di inquinanti emergenti in piante di rucola. Claudia Carnimeo, 2020
- Aspetti chimici e biologici dei sottoprodotti della digestione anaerobica di biomasse di scarto. Nicoletta De Chirico, 2021
- Biochar da residui agricoli: produzione, analisi di fattibilità tecnico-economica e studio di adsorbimento di contaminanti organici. Paola Devito, 2021
- Impiego di compost e vermicompost per favorire la crescita del cetriolo e limitare l'assorbimento di contaminanti organici. Giovanni Cirrottola, 2022
- Aspetti chimici e biologici del sottoprodotto biochar del processo di gassificazione di biomassa legnosa. Nicola Colatorti, 2022
- Impiego dei sottoprodotti della digestione anaerobica di sansa bifase per il miglioramento della fertilità chimica e biologica del suolo coltivato. Nunzio Vito Digregorio, 2023
- Rimozione di contaminanti organici dall'acqua mediante l'uso di adsorbenti da scarti vegetali. Giorgio Mazziotta, 2024

Master of Science in Food Science and Technology

- Rimozione dell'ocratossina A da matrici acquose mediante l'impiego di adsorbenti a basso costo di origine vegetale. Ylenia Scarcia, 2019

Lectures in PhD Courses

Agricultural Chemistry Analyses with Laboratory, Principles and Applications of Chromatographic Techniques and Spectrometry and chromatography over the XIX-XXII cycles.

Participation in the PhD Teaching Board

Starting from 1998 until today (from the XIII to the XXXVI cycle), she has continuously been a PHD Board member of UNIBA. PhD Courses: Agricultural Chemistry and Soil and Food Sciences.

Tutor of the following PhD Theses:

1. XIII Cycle: Antimutagenic effects of humic substances from soil and other natural sources in agricultural plant species. PhD Giuseppe Ferrara.
2. XX Cycle: Effects of various plant growth substrates, humic fractions and allelochemical compounds on the growth of phytopathogenic soil-borne fungi. PhD Mariagrazia Berloco.
3. XXIII Cycle: Phytodecontamination of soil and water from endocrine disruptor compounds. PhD Concetta Eliana Gattullo.
4. XXVII Cycle: Adsorption and bioremoval of endocrine disruptor compounds from a wastewater using low cost materials and ligninolytic fungi. PhD Giancarlo Castellana.
5. XXX Cycle: Use of biochar for adsorption of organic contaminants and control of soil-resident fungi. PhD Eren Taskin.
6. XXXIII Cycle: Chemical and biological aspects of organic amendments produced from waste biomass using different technological processes. PhD Marco Parlavecchia.
7. XXXVI Cycle: Sustainable use of carbon-rich materials from biomass recycling for the control of pollutants bioavailability in soil and other matrices. PhD Claudia Carnimeo
8. XXXVII Cycle: Valorizzazione degli scarti nel settore agro alimentare. PhD student Antonella Lamonaca.

9. XXXIX Cycle: Innovative and sustainable solutions for soil management in marginal areas. PhD student Nicola Colatorti.

Teaching in International University Master Course

2014-2015 Courses of *Allelopathic Interaction* (2 ECTS) and *Fate of Bioactive Compounds in Soil and Water* (2 ECTS) in the Master Course in Biotechnology for Medicinal and Aromatic Plants - BiotecMAP of University of Bari Aldo Moro.

Institutional Academic Activity

In 2008 she was a member of the Commission for the institution of the Master Course 'Sustainable Rural Development' of UNIBA, of which she was in the Coordination Board for the entire duration of the course.

From 2011 to 2017 she was in the Coordination Board of the Master Course 'Management and Sustainable Development of Mediterranean Rural Systems' of UNIBA.

Member of the Commission for the Revision of the teaching programs of the Bachelor Course 'Food Science and Technology' of UNIBA.

Member of Examination Commission for the awarding of research grants.

Member of the Examination Commission for admission to UNIBA PhD Courses (XIX, XX, XXIII, XXIX, XXXIII, XXXVI and XXXVIII cycles).

Enrolled in the Register of Experts of the Council for Research in Agriculture and the Analysis of Agricultural Economics (CREA), she was part of the Examination Commission of the national public competitions.

Designated Responsible of the Research Unit of UNIBA in the Italian Phytochemicals and Environment Research Group (GRIFA).

SCIENTIFIC ACTIVITY

Main Research fields: *Soil Chemistry and Environmental Chemistry*

Past and Present Research Interests

1. *Advanced analytical techniques for the study of humic substances (HS) in soil and other matrices (UV-Vis, IR, ESR and fluorescence spectroscopy).*
2. *Direct effects of HS and their interaction products with pesticides on the growth of plants of agricultural concern.*
3. *Chromatographic analytical methods for the analysis of organic contaminants present in plants, soil, water, and other matrices.*
4. *Study of pesticides dynamics in the soil-plant system.*
5. *Study of allelochemical and autotoxic compounds: isolation, identification, interaction with HS and biological activity on nematodes, plants, and soil-resident fungi.*
6. *Desmutagenic and antimutagenic effects of HS in plants.*
7. *Quantitative and qualitative aspects of the interaction between processed and unprocessed biomass, soil amendments and HS and inorganic and organic soil contaminants.*

8. *Environmental fate and biological activity of endocrine disrupting chemicals.*
9. *Pathogenic-suppressive activity of HS from natural and anthropogenic matrices, soil amendments, dissolved organic matter and allelopathic compounds on plant pathogenic soil-resident fungi and effects on antagonistic fungi.*
10. *Phytoremediation and mycodegradation of natural and anthropogenic solid and liquid matrices such as soils, sediments, water, and wastewater from organic pollutants.*
11. *Chemical, agricultural, and environmental aspects of raw and processed waste biomass, such as compost, vermicompost, digestates, biochar and hydrochar.*

Coordination of Research Projects

- 2023-2025 Principal Investigator of the Research Project PRIN 2022 PNRR ‘Microbially-enriched biosorbents from waste recycling and soil-resident fungi as novel and sustainable tools to mitigate soil pollution by chemicals of emerging concern and prevent their entry and accumulation in vegetables’.
- 2019 Research Project ‘*Chemical, biological and environmental aspects of soil organic amendments obtained from waste biomass with different technological processes*’, funded by University of Bari (Funds 2017-2018).
- 2018-2024 Research Project RONSAS - “Trial for the production of defecation gypsum in line with purification plants at Barletta and Foggia and their use in Puglia, “POR PUGLIA 2014–2020. Sub Azione 6.4.a – Convention between Acquedotto Pugliese (AQP) and the Department of Soil, Plant and Food Sciences of University of Bari Aldo Moro.
- 2017 Research Project ‘*Chemical, biological and environmental aspects of the use of biochar and other organic matrices for soil amendment*’, funded by University of Bari (Funds 2015-2016).
- 2015 Research Project ‘*Chemical, biological and environmental aspects of soil amendment with biochar and other natural and anthropogenic organic matrices*’, funded by University of Bari (Funds 2014).
- 2013 Research Project ‘*Biodecontamination and phytodecontamination of natural and anthropogenic matrices from persistent organic pollutants with endocrine disruptor activity*’, funded by University of Bari (Funds 2012).
- 2013 Financial contribution by the University of Bari for the high score received in PRIN 2009 for the Project ‘*Role of humic substances in a low environmental impact control strategy of root-knot nematodes in tomato*’ presented as Principal Investigator, and Coordinator of the Research Unit of Bari with the Project ‘*Humic and humic-like fractions as direct promoters of plant growth and modulators of the bioavailability and bioaccumulation of chemical activators of resistance to root knot nematodes in tomato plants*’.
- 2011 Financial contribution by the University of Bari for the high score received in PRIN-COFIN 2008 for the Project ‘*Role of humic substances in a low environmental impact control strategy of root-knot nematodes in tomato*’ presented as Principal Investigator, and Coordinator of the Research Unit of Bari with the Project ‘*Humic and humic-like fractions as direct promoters of plant growth and modulators of the bioavailability and bioaccumulation of chemical activators of resistance to root knot nematodes in tomato plants*’.

- 2011 Scientific Responsible of the Research Grant ‘*Greenhouse and laboratory tests on the use of various organic amendments and their humic and dissolved organic fractions as promoters of the germination and growth of endemic and endangered plants*’, Research program 08.02 AGR13, D.R. n.69 of 13/01/2011.
- 2009 Financial contribution by the University of Bari for the high score received in PRIN-COFIN 2007 for the Project ‘*Role of humic substances in a low environmental impact control strategy of root-knot nematodes in tomato*’ presented as Principal Investigator, and Coordinator of the Research Unit of Bari with the Project ‘*Humic and humic-like fractions as direct promoters of plant growth and modulators of the bioavailability and bioaccumulation of chemical activators of resistance to root knot nematodes in tomato plants*’.
- 2005 Research Project ‘*Assessment of pathogenic-suppressive properties of new organic substrates for ornamental plants and of their humic fractions*’ of the Research Unit of Bari, funded by the Ministry of University and Research, PRIN 2005. Principal Investigator Prof. P. Genevini of University of Milano.
- 2005 Research Project ‘*Humic substances isolated from rhizosphere and bulk soil: chemical and spectroscopical properties and their effects on plant allelopathy*’, funded by University of Bari (Funds 2005).
- 2004 Research Project ‘*Humic substances isolated from rhizosphere and bulk soil: chemical and spectroscopical properties and their effects on plant allelopathy*’, funded by University of Bari (Funds 2004).
- 1997-1998 CNR Bilateral Research Project ‘*Physiological and biochemical effects of humic substances of different origin and their interaction with pesticides on the growth of crop plants, and in particular on rhizosphere processes*’, in cooperation with the Institut Für Pflanzenernährung of Hohenheim University, Germany.
- 1990-1991 CNR Research Project ‘*Dynamics of nematocides in soil and plants and their residues in edible plant parts*’, Institute of Agricultural Nematology applied to plants, CNR, in Bari.

Participant/Collaborator in National and International Research Projects

- 2023–2025 Research Project PRIN 2022 - Upcycling strategies for the conversion of food by-products into NExt-GEneration soil improvers with plant-biostimulant properties and multifunctional effect on soil chemical and physical properties, microbiota, and crop nematode pests. A Fork-to-Farm approach (Ne.Ge.S.I.)’.
- 2023–2024 PRIMA Project: Innovative Sustainable technologies TO extend the shelf-life of Perishable MEDiterranean fresh fruit, vegetables and aromatic plants and to reduce WASTE (StopMedWaste).
- 2021 Horizon Europe Seeds – By-products Sustainable Recovery 4 Health (BSR-4H). Research Project funded by UNIBA. Reference Cluster n. 6. Food products, bioeconomy, natural resources, agriculture and environment.
- 2020-2022 Research Project ‘BIOMIS’ January-October 2022. Funding organization: MUR, Months/Person 4
- 2011-2014 Research Project ‘*Development of innovative food products through biotechnological, plant engineering, and technological solutions (PROINNO_BIT)*’. Funded by

- DARE/DISSPA-University of Bari. PON02_00657_00186_3417037". Scientific Responsible: Prof. Marco Gobetti. Months/person 9
- 2011-2014 Research Project '*Technological and clinical protocols for the production of functional foods (PRO.ALI.FUN.)*' PON02_00657 – PON02_00186_2937475. PON 'Ricerca e Competitività 2007-2013'. Funded by DARE/DISSPA-University of Bari. Scientific Responsible: Prof. Donato Pastore. Month/Person 3
- 2009-2012 Strategic Project '*Optimization and Environmental Recovery of MSW Landfills*' - PS_057, co-funded by Apulia Region and European Commission. POR Puglia 2000-2006 Misura 3.13 "Ricerca e Sviluppo Tecnologico". Scientific Responsible: Prof. Nicola Senesi.
- 2008-2011 Research Project '*Effects of Quality Composts and Other Organic Amendments and Their Humic and Fulvic Acid fractions on the Germination and Early Growth of Slickspot Peppergrass (Lepidium papilliferum) and Switchgrass in Various Experimental Conditions*' funded by US ARMY RDECOM ACQ CTR – W911NF, Durham, USA. Contract No. W911NF-08-1-0076. Contract No. W911NF-08-1-0076. PI: Prof. Nicola Senesi.
- 2005-2006 Research Project '*Assessing the effects of soil humic acids and fulvic acids on germination and early growth of native and introduced grass varieties*', funded by "FISC Sigonella Naval Regional Contracting DET - London". Contract No. N62558-05-P-0179. PI: Prof. Nicola Senesi.
- 2003-2004 Research Project '*Assessing the effect of humic acids on germinating a native american plant*', funded by United States Army Contract No. N62558-03-M-0010. PI: Prof. Nicola Senesi.
- 2001-2005 Titular Member of EC Working Group 2 'Experimental Tools and Methods Used in Rhizosphere Research', COST Action 631 '*Understanding and Modelling Plant-Soil Interactions in the Rhizosphere Environment (UMPIRE)*'. Link: http://www.cost.eu/COST_Actions/essem/631 12/03/2002.
- 1998-2002 Bilateral Research Project (CNR-CSIC) '*Addition to soils of urban wastes and pig slurries: evaluation of soil fertility level and organic matter modifications*', in cooperation with Centro de Ciencias Medioambientales del CSIC of Madrid, Spain.
- 1998-2000 Research Project '*Assessment of the quality of organic matter in organic fertilizers and in soils treated with them by direct and advanced chemical and chemical-physical methods*', funded by the Ministry of University and Research, PRIN 2005. PI: Prof. N. Senesi.
- 1997-2000 European Commission Research Project '*Prediction of the Behaviour of Potential Endocrine Disrupters in Soils Using Vitellogenin Assays as Biosensors (PRENDISENSOR)*'. Contract n. ENV4-CT97-0473. Partners: Universidade Nova de Lisboa, University of Bari, Technische Universitaet Berlin, Institut für Chemound Biosensorik e.V., Dienst Landbouwkundig Onderzoek, Dresden University of Technology. Link: https://www.cordis.europa.eu/project/rcn/39033_it.html.
- 1996-1998 Titular Member of the Working Group '*Adsorption-Desorption Studies, COST Action 66 'Fate of Pesticides in the Soil and the Environment*', European Commission.
- 1993-1996 EC Research Project '*Colloid-Facilitated leaching of Groundwater Contaminants through Soils as Affected by European Region and Soil Manuring (ENVIRONMENT)*'.

Contract n. EV5V-CT92-0203. Partners: University of Bari, Rothamsted Experimental Station, Universidade Nove de Lisboa and Research Institute for Agrobiology and Soil Fertility (AB-DLO), Ministry of Agriculture of The Netherlands. Link: https://cordis.europa.eu/project/rcn/5311_en.html.

Scientific research activity carried out at foreign universities

Scientific research activities for one year (February 1991-January 1992) in Organic Chemistry laboratory directed by Prof. C. E. Castro of the Department of Nematology of the University of California, Riverside (UCR), USA.

Participation in the organisation, direction and coordination of national and international research centres/groups

In addition to participating in research groups of national Research Projects, she participated in meetings for international Research Projects, such as those of the European Community (COST Action 631, PRENDISENSOR, COST Action 66, ENVIRONMENT), those financed by US ARMY and bilateral CNR-CSIC.

Furthermore, she participates in the following Research Groups:

1. Interuniversity Consortium “National Institute of Biostructures and Biosystems” (INBB) supervised by the MUR. Included among the Italian researchers most involved in the study of Endocrine Disruptors. Online publication of the INBB "Census of Research Activities in Italy on Endocrine Disruptors" (personal profile on pages 113-115). <http://www.inbb.it/wp-content/uploads/2014/07/Censimento-Interferenti-Endocrini-2014.pdf>
2. Responsible of the Research Unit of the DiSSPA Department of the University of Bari Aldo Moro in the Italian Phytopharmaceuticals and Environment Research Group (GRIFA)
3. Interdepartmental Center “HEALTHY FOOD” of the University of Bari Aldo Moro.
4. Expert belonging to the University of Bari Aldo Moro in the "Environmental risk assessment" (ERA) area of expertise of the European Food Safety Authority (EFSA).

Organizing Committees of national and international Congresses

- 2019 First Joint Meeting on Soil and Plant System Sciences (SPSS 2019) ‘*Natural and Human-induced Impacts on the Critical Zone and Food Production*’. September 23-26, 2019, Bari, Italy.
- 2013 International Conference ‘*Biochars, Composts and Digestates - BCD*’. October 17-20, 2013, Bari, Italy.
- 2012 4th International Congress of The European Commission of Soil Science System (ECSSS) ‘*EUROSOIL 2012: Soil Science for the Benefit of Mankind and Environment*’. July 2-6, 2012, Bari, Italy.
- 2009 15th International Symposium of MESAEP ‘*Environmental Pollution and its Impact on Life in the Mediterranean Region: problems and solutions*’. October 7-11, 2009, Bari, Italy.
- 2005 National Congress of the Italian Society of Soil Science – SISS, ‘*The soil: the central system in the environment and in agriculture*’. June 21-24, Bari, Italy.

Member of the Editorial Board of scientific Journals

1. *Journal of Advances in Soil Sciences*, Isaac Scientific Publishing Co., Ltd, Hong Kong.
2. *Pesticide Research Journal*, Society of Pesticide Science, New Delhi, India.
3. *Materials* – Carbon Materials section, MDPI (Basel, Switzerland).

Evaluator of scientific Projects for Italian and Foreign Institution

Research Projects Evaluator for the Italian Ministry of University and Research (MUR) and foreign Scientific Research Organizations and Institutions, including *Grant Agency of Czech Science Foundation (CAČR)* of Czech Republic; *National Science Center (Narodowe Centrum Nauki, OPUS e PRELUDIUM)*, Krakow, Poland; *The Georgian National Science Foundation*; *Shota Rustaveli National Science Foundation (SRNSF)*, Georgia; *Austrian Science Found (FWF)*, Austria; *BARD - Binational Agricultural Research & Development Fund*, USA-ISRAEL; *National Commission for Scientific and Technological Research (CONICYT-Chile)*, Chile.

Peer-Review activity for international scientific Journals with Impact Factor

Referee for the following Journals (WoS-JCR): *Acta Agriculturae Scandinavica*, *Agrochimica*, *Applied and Environmental Soil Science*, *Chemical Engineering Journal*, *Chemosphere*, *Clean – Soil, Air, Water*, *Critical Reviews in Environmental Science and Technology*, *Ecotoxicology and Environmental Safety*, *Engineering in Life Sciences*, *Environmental Pollution*, *Environmental Science and Pollution Research*, *Environmental Technology*, *Environmental Technology & Innovation*, *Fresenius Environmental Bulletin*, *Geoderma*, *Journal of Agricultural and Food Chemistry*, *Journal of Environmental Management*, *Journal of Hazardous Materials*, *Journal of Soils and Sediments*, *Marine Pollution Bulletin*, *Naturwissenschaften*, *Pakistan Journal of Scientific & Industrial Research*, *Pedosphere*, *Plant and Soil*, *Science of the Total Environment*, *Scientia Horticulturae*, *Scientific Reports*, *Waste and Biomass Valorization*, *Water, Air, & Soil Pollution*.

International Collaborations for scientific research activity

Prof. Fernando Santana, Department of Environmental Science and Engineering, Faculty of Science and Technology, New University of Lisbon, Lisbon, Portugal.

Dr. Antony J. Palazzo, Engineer Research and Development Center - Cold Regions Research and Engineering Laboratory, Hanover, New Hampshire, USA.

Prof. Ricardo Marcos, Departament de Genètica i de Microbiologia, Universitat Autònoma de Barcelona, Bellaterra, Cerdanyola del Valles, Spain.

Prof. Robert Mortimer, Head of the School of Earth and Environment at the University of Leeds, United Kingdom. The PhD student M. Berloco, tutored by me and funded with a Marie Curie fellowship, spent four months in 2007 in Prof. Mortimer's laboratories.

Prof. Christian E. W. Steinberg, Department of Biology, Freshwater and Stress Ecology of Humboldt-Universität, Berlin. The PhD student C.E. Gattullo, tutored by me, spent six months in 2009-2010 in Prof. Steinberg's laboratories.

Prof. Peter Leinweber, Institute of Land Use, Faculty of Agricultural and Environmental Sciences, University of Rostock, Rostock, Germany. The post-doc student C.E. Gattullo, under my supervision, was guest scientist for two months in 2011 in Prof. Leinweber's laboratories.

Prof. André Henrique Rosa, Universidade Estadual Paulista 'Júlio de Mesquita Filho' (UNESP) - Sorocaba, Department of Environmental Engineering, Sorocaba, São Paulo, Brazil. The Brazilian PhD student Bruno Barboza Cunha spent five months in 2011 under my supervision

in our laboratories in Bari. The Brazilian PhD student Carol de Castro Bueno spent two months in 2017 under my supervision in our laboratories in Bari.

Prof. Baoshan Xing, University of Massachusetts, Stockbridge School of Agriculture, Amherst, MA, USA. Following a signed Co-Tutorship Bilateral Agreement, the MSc student G. Picca, under my supervision, spent four months in performing part of his Global Thesis.

Dr. Cèsar Plaza, Department of Soil, Plant and Environmental Quality de l'Instituto de Ciencias Agrarias, CSIC, Madrid, Spain. The PhD student M. Parlavecchia, tutored by me, spent one month in 2020 in Dr. Plaza's laboratories.

Synthesis of the Scientific Activity

Author of 128 scientific publications, the majority of which (over 100) are international. These include articles in journals, 20 book chapters and proceedings of national and international conferences. Furthermore, he is the author of 120 abstracts of presentations at national and international conferences.

Journal Articles – Last 10 years

1. **E. Loffredo**, C. Carnimeo, V. D'Orazio, N. Colatorti. Sorption and release of the pesticides oxyfluorfen and boscalid in digestate from olive pomace and in digestate-amended soil. **Journal of soils and sediments** (2024). <https://doi.org/10.1007/s11368-024-03748-3>
2. **E. Loffredo**, C. Carnimeo, N. De Chirico, A. Traversa, C. Coccozza. The liquid by-product of biogas production: characterisation and impact on soil fungi. **Environmental Technology** (2023). <https://doi.org/10.1080/09593330.2023.2220888>
3. C. Carnimeo, N. Colatorti, V. D'Orazio, P. Trotti, **E. Loffredo**. Potential of biochar from wood gasification to retain endocrine disrupting chemicals. **Materials** 16, 569 (2023). <https://doi.org/10.3390/ma16020569>
4. C. Carnimeo, A. Gelsomino, G. Cirrottola, M. R. Panuccio, **E. Loffredo**. Compost and vermicompost in cucumber rhizosphere promote plant growth and prevent the entry of anthropogenic organic pollutants. **Scientia Horticulturae** 303, 111250 (2022). <https://doi.org/10.1016/j.scienta.2022.111250>
5. **E. Loffredo**. Recent advances on innovative materials from biowaste recycling for the removal of environmental estrogens from water and soil. **Materials** 15, 1894 (2022). <https://doi.org/10.3390/ma15051894>
6. **E. Loffredo**, C. Carnimeo, R. Silletti, C. Summo. Use of the solid by-product of anaerobic digestion of biomass to remove anthropogenic organic pollutants with endocrine disruptive activity. **Processes** 9, 2018 (2021). <https://doi.org/10.3390/pr9112018>
7. M. Parlavecchia, R. Gattullo, G. Perri, **E. Loffredo** Modulatory effects of biochar, hydrochar and vermicompost on the growth of horticultural plants and phytopathogenic fungi. **Acta Horticulturae** 1311, 541-548 (2021). <https://doi.org/10.17660/ActaHortic.2021.1311.69>
8. **E. Loffredo**, M. Parlavecchia. Use of plant-based sorbents and mycodegradation for the elimination of endocrine disrupting chemicals from soil: a novel facile and low-cost method.

9. **E. Loffredo**, G. Picca, M. Parlavecchia. Single and combined use of *Cannabis sativa* L. and carbon-rich materials for the removal of pesticides and endocrine disrupting chemicals from water and soil. **Environmental Science and Pollution Research** 28, 3601-3616 (2021). DOI: 10.1007/s11356-020-10690-7
10. V. D’Orazio, D. Stallone, S. Sermani, **E. Loffredo**, M. Cirulli, G.L. Bruno. Phytotoxic metabolites produced by *Verticillium dahliae* Kleb. in olive wilting: a chemical and spectroscopic approach for their molecular characterisation. **Natural Product Research** 35, 1991-2001 (2021) DOI: 10.1080/14786419.2019.1652284.
11. M. Parlavecchia, C. Carnimeo, **E. Loffredo**. Soil amendment with biochar, hydrochar and compost mitigates the accumulation of emerging pollutants in rocket salad plants. **Water, air, and soil pollution** 231, 554 (2020). <https://doi.org/10.1007/s11270-020-04915-1>.
12. **E. Loffredo**, Y. Scarcia, M. Parlavecchia. Removal of ochratoxin A from liquid media using novel low-cost biosorbents. **Environmental Science and Pollution Research** 27, 34484-34494 (2020). DOI: 10.1007/s11356-020-09544-z.
13. M. Parlavecchia, V. D’Orazio, **E. Loffredo**. Wood biochars and vermicomposts from digestate modulate the extent of adsorption-desorption of the fungicide metalaxyl-M in a silty soil. **Environmental Science and Pollution Research** 26, 35924-35034 (2019). <https://doi.org/10.1007/s11356-019-06729-z>.
14. E. Taskin, G. Perri, **E. Loffredo**. Impact of type and dose of biochar and hydrochar on growth response of phytopathogenic and antagonistic soil-resident fungi. **Fresenius Environmental Bulletin** 28, 9070-9076 (2019).
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