Dr. Elisa Pellegrino-Curriculum Vitae – Autumn 2015

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## PRESENT POSITION

Since 2013: Permanent Research Assistant at Scuola Superiore Sant'Anna (SSSUP), Pisa, Italy (D 7\_B1)

## RESEARCH INTERESTS

Sustainable management of agro-ecosystems. Bread and durum wheat and forage and grain legumes. Soil quality evaluation on the basis of community composition and structure of nitrifying and denitrifying bacteria, oxidizing archaea and arbuscular mycorrhizal fungi (AMF). Diversity, phylogeny and functionality of different microorganisms, especially arbuscular mycorrhizal fungi (AMF). Morphological and molecular AM fungal diversity in natural ecosystems, differently managed agroecosystems and under different biomass crops. Field inoculation of AMF. Interactions between non-native, inoculated AMF and native AMF in low input, organic and conventional agriculture. Functional diversity of the AMF, mainly the study of the extraradical mycelium and micro- and macronutrient uptakes as a functional traits. Biological control: the interaction between AMF and weeds in organic agriculture. Molecular characterization and methane performances of bacteria and archaea in anaerobic batch reactors fed with new promising feedstoocks/biomass crops. Impact of climat change on soil erosion. Nutraceutical properties of foods.

**OUTLINE OF MY CURRENT PROJECTS**

Molecular ecology. I use DNA- and RNA-based methods to study the diversity, phylogeny and functionality of organisms that would otherwise be hard to investigate because they are very small and/or difficult to isolate. In particular I am working on the following projects:

- Community composition and structure of nitrifying and denitrifying bacteria, oxidising archaea and AMF in a Mediterranean peatland secondary succession. Project: methods of phytoremediation for improving trophic quality of waters and effects of re-flooding on peat degration – AMASS;

- Soil quality evaluation on the basis of the AMF (i.e., AM fungal diversity, composition and structure) occurring under different biomass crops. Main project tile: Improved flux prototypes for N2O emission from agriculture. Project: IPNOA;

- Determination of species composition and structure of AMF, ammonia oxidising bacteria and denitrifying bacteria and assessment of links between microbial groups and plant community diversity in Mediterranean meadows: Project: FORMANOVA;

- Characterization of old varieties of bread wheat and utilization of bioinoculant for functional foods. Main projects: QUANTICA and FATEPRESCO.

## - Leguminous crops and bioinoculants. Project: FORCASEOMAREMMA

- Molecular characterisation of methanogenic archaea and bacteria in biogas-producing reactor fed with different biomass crops or other residues (giant reed, maize, sorghum and macroalgae);

## EDUCATION

2004–2007: **Ph.D. in Crop and Environmental Sciences**, University of Pisa, Pisa, Italy. Ph.D. thesis title: “Mycorrhiza for Sustainable Management of Agro-ecosystems. Field Studies on Molecular and Functional Biodiversity of Native and Inoculated AM Fungi”. Supervisor: Prof. Manuela Giovannetti.

2003: **M.Sc. Degree** (110/110 *cum laude* = with honours)in Agricultural Sciences, University of Pisa, Pisa, Italy. Thesis title: ”Evaluation of Efficiency of AM fungi in symbiosis with *Medicago sativa* and *Trifolium alexandrinum*”. Supervisors: Prof. Prof. Manuela Giovannetti.

## ACADEMIC EXPERIENCE

August 2015: **Visitor Scientist at the Department of Agricultural Sciences**, West Virginia University, Morgantown, USA - International Culture Collection of (Vesicular) Arbuscular Mycorrhizal Fungi (INVAM). Project title: *Taxonomical and molecular diversity of Arbuscular mycorrhizal fungi retrieved in soils cultivated with modern and old varieties of bread wheat*. Supported by SSSUP. Supervisors: Prof. Joseph Morton.

2011-2013: **Postdoctoral** **research fellow**. Project title: *Development of an instrument to evaluate the agro-environmental sustainability of agricultural systems*. Institute of Life Sciences, SSSUP, Pisa, Italy. Supervisor: Prof. Enrico Bonari.

## 2010-2011: Research Fellowship. Project title: *Field monitoring of the quality of soil amended by olive mill wastewater (OMW).* Institute of Life Sciences, SSSUP, Pisa, Italy. Supervisor: Prof. Enrico Bonari.

2008-2010:Postdoctoral Fellowship*.* Project title*: Interactions Between Weeds and Arbuscular Mycorrhizal Fungi in Biological and Sustainable Agro-Ecosystems*. SSSUP, Pisa, Italy.Supervisor: Prof. Paolo Bàrberi.

2008: **Research Fellowship** (SOILSINK, Italian National Research Project on Climatic Change and Agricultural and Forest Systems). Project title: *Mycorrhizal Markers for the Carbon Cycle. Biodiversity Study of AM Fungi within Grassed and Non-Grassed Vineyard Soils using Molecular Analysis of the 18S-Ribosomal-Portion DNA Sequences*. Department of Plant Biology, Faculty of Agricultural Science, University of Pisa, IT. Supervisor: Prof. Manuela Giovannetti.

2007: **Research Fellowship** (SOILSINK, Italian National Research Project on Climatic Changes and Agricultural and Forest Systems). Project title: *Gene-Bank Research and Comparative Analysis of the Data by Bioinformatics Tools*. Department of Plant Biology, Faculty of Agricultural Science, University of Pisa, IT. Supervisor: Prof. Manuela Giovannetti.

April – October 2006: **Visitor Scientist at the Department of Biology**, University of York, UK. Project title: *Molecular Diversity of AM Fungi of a Low Input Agricultural Soil*. Fellowship awarded by the University of Pisa, IT. Supervisors: Prof. J. Peter W. Young.

May – October 2006: **Research Fellowship** (UK Population Biology Network). Project title: *Influences of Management and Plant Diversity on AM Fungal Communities, using Molecular Techniques of Fingerprinting (T-RFLP) and Cloning and Sequencing*. Department of Biology, University of York, UK. Supervisor: Prof J. Peter W. Young.

2002 – 2003: **Research Assistant** during the M.Sc. Thesis, Laboratory of Microbiology, Department of Chemistry and Agricultural Biotechnology, University of Pisa, Pisa, IT.

## TEACHING EXPERIENCE

November 2015: Advanced Seminars on Analysis of Multivariate Data using CANOCO, Ph.D. in Agrobiosciences, SSSUP, Pisa, IT (15 hours; 1 CFU).

October 2014: Advanced Seminars on Analysis of Multivariate Data using CANOCO, Ph.D. in Agrobiosciences, SSSUP, Pisa, IT (15 hours; 1 CFU).

September 2013: Advanced Seminars on Analysis of Multivariate Data using CANOCO, Ph.D. in Agrobiosciences, SSSUP, Pisa, IT (15 hours; 1 CFU).

2008 – 2009: Taught a Course on Molecular Sequences and Genomics, Ph.D. in Agrobiosciences, SSSUP, Pisa, IT (20 hours; 1 CFU).

2004 – 2005: Seminars within the Agricultural Microbiology Course, Faculty of Agricultural Sciences, University of Pisa, IT; Lab Practices within the Agricultural Microbiology Course, Faculty of Agricultural Sciences, University of Pisa, IT.

**TUTORING EXPERIENCE**

**Giovanni Cafà, 2008,** Master Student, Faculty of Agriculture, University of Pisa. Master Thesis: “Molecular monitoring of arbusculrar mycorrhizal fungi in roots of *Medicago sativa*”.

**Chandra Kamatchi Ramasamy, 2008-2011,** PhD thesis in Agrobiodiversity, SSSUP. PhD thesis: “Arbuscular mycorrhizal fungi in low external input agroecosystems”.

**Chiara Vallebona 2010**, PhD student in Agrobioscinecs. PhD thesis in Agrobiosciences. PhD thesis: “Climate change and soil erosion”.

**Elisa Corneli, 2012,** Master Student. Master thesis: *Arundo donax* L. for biogas production.

**Valentina Ciccolini, 2011,** master student. Master thesis: “Preliminary study: a phytodepuration area for the treatment of surface water in the Massaciuccoli basin”; **2012**, Phd student in Agrobiosciences. PhD thesis: “Soil quality in reclaimed Mediterranean peatlands: Impact of land use on soil biodiversity, functionality and greenhouse gas emissions”

**Antonio Coccina** **2015**, PhD student in Agrobiosciences. PhD thesis: Plant-soil Interactions to enhance nitrogen use efficiency and nutracetuical properties of durum wheat.

PROFESSIONAL EXPERIENCE

July – August 2002: Agronomical adviser at the “Poggio di Camporbiano”, Biodynamic Farm, S. Gimignano, Siena, IT.

September 2002: *Pre-lauream* professional training at the Regional Agency of Agricultural Development (ARSIA), Pisa, IT.

September-December 2002: *Pre-lauream* professional training at “Meristema”, Biotechnological Laboratory specialised in Micropropagation and classical breeding, Pisa, IT.

COMPUTER EXPERTISE

**Mac and Windows user:** Office (Word, Excel, Access and Power Point) and Adobe (Indesign, Illustrator and Photoshop).

**Linux environment**: Unix shell and Perl scripting.

**Reference management**: EndNote.

**Mapping**: GPS mapping solution/data visualisation Arcview.

**Statistics**: SPSS 16.0, Cohort, Syntax2000, CANOCO for Windows, PCORD 5, free software R, Primer, Permanova for Primer, TWINSPAN, EstimateSwin751, Comprehensive Meta-Analysis

**Image digitalised acquisition**: Image Master (Pharmacia), Quantimet 500 (Leica).

**Molecular Data Analysis (Evolution)**: CLUSTALX, Treeview, FigTree, Bioedit, Seaview, Mufft, Mussle, T-coffee, PhyML, PAUP, Treecon, TreeFinder, T-RFLP software, FragMatch, MrBayes, Beast, Garli, Migrate, Lamarc, Mega.

**Multiple Genome Alignment:** Vista, Mauve, TMummer. **Dr**

**Orthology Inference:** EggNOG, Sinteny, TreeFam, Ensembl. OrthoMCL DB.

**Molecuar Data Visualisation:** Circos.

**Sequence Analysis**: Chromas 2, NCBI Research, BLAST.

**Primer Design**: Primer3.

RESEARCH EXPERTISE

- Construction and maintenance of bacterial and fungal cultures on solid media or liquids.

- Maintenance and development of collections of AM fungi. Cultivation of trap-hosts for the propagation of the AM fungi. Isolation and maintenance in pure culture of strains of AM fungi.

- Isolation of microorganisms with selective media, differential or enrichment techniques.

- Taxonomic identification and metabolic system of characterisation (Biolog System).

- Extraction and identification of spores of AM fungi from soil samples. Identification and quantification of AM fungal structures both by light and confocal microscopy.

- Several methods of visualisation and staining of mycorrhizal roots and mycelia: epifluorescence, trypan-blue, succinate-dehydrogenase (SDH), diaminophenylindone (DAPI) of mycorrhizal roots.

- Visualisation of the extraradical mycelium (ERM) by destructive and non-destructive methods and in vitro reproduction of AMF.

- Physical and chemical analyses of soil and chemical analyses of plant material (P, N).

- DNA and RNA extraction, PCR, purification, RFLP, T-RFLP, cloning and Sanger sequencing, real-time PCR, 454-sequencing.

- Phylogenetics and statististics (i.e., uni- and multivariate data analyses, geostatistics and mapping and meta-analysis).

FOREIGN LANGUAGES

**Italian**: native language.

**English**: advanced level. June 2009: First Certificate in English: 70/100 (grade: C); 8 August – 30 September 2005: Course of English for Academic and Research Purposes, Centre for English. Language Teaching, University of York, UK (168 hours); 9 August – 27 August 2004: Course IELTS preparation at Intermediate Level, Cambridge Campus, APU, UK (45 hours).

**French**: proficiency level.

**Spanish**: basic level.

**Latin and Ancient Greek**: advanced level.

**RESEARCH PROJECTS**

Since 2012, she is the italian member in the COST ACTION 0905 “Mineral-improved crop production for healthy food and feed” (http://www.umb.no/costaction), Working Group 1 – Soil plant-interactions.

- HORIZON (under revision)

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- ARIMNET (under revision)

-2015-2017:

**- 2015-2017:** “Valorization of the epigenetic properties of ancient genotypes of Tuscan wheat bio-fortified with iron and zinc in the prevention of chronic heart failure”( <http://www.researchtuscany.com/intoscana/progetto_dett.asp?lingua=en&idlink=18&id_progetto=181&cat=cat_1>)

**- 2011-on going:** “Restoration of a Mediterranean Drained Peatland” RestoMedPeatland funded by the “Consorzio di Bonifica Versilia-Massaciuccoli” and started in 2011 aiming to restore the lost of ecological functions of a Mediterranean peatland area by rewetting. In a pilot experimental field of 15 ha, three different management systems, with decreasing anthropogenic action, have been evaluated: (A) constructed wetland; (B) vegetation filters and (C) natural wetland. <https://sites.google.com/site/restomedpeatland>)

**-2011-2014:** “Fodder crops and innovative animal feed for production of pecorino cheese with nutraceutical properties” FORMANOVA funded by Europe through the Tuscany Region (January 2012-October 2013) aiming to obtain new types pecorino cheese with nutraceutical properties related to an high content of conjugated linoleic acid (CLA), vaccenic acid (VA) and omega-3 fatty acids and a low content of saturated fatty acids.

**-2011-2014:** “Bread chain development and health improvement: ancient wheat varieties for new breads” QUANTICA funded by Europe through the Tuscany Region (January 2012-January 2014) aiming to organize and evaluate, on the basis of techno-economical aspects, a short chain for the production of a bread made of flour from ancient varieties of wheat and characterized by a high content of B vitamins, B6 and acid folic acid, important for the prevention of cardiovascular disease (<https://sites.google.com/site/quanticaqualitaantica/home>).

**-2007-2015:** “Updated fodder crops systems for typical milk-cheese productions of the “Maremma, Tuscany” FORCASEOMAREMMA funded by Europe through the Tuscany Region (February 2013-August 2014) aiming to several objectives related to each other: i) introduction of technical innovations in the cultivation of fodder and raw materials for feed concentrates and their application in food systems optimized according to the modern techniques of ruminant nutrition “Cornell Net Carbohydrates and Protein System” (CNCPS); optimization and characterization of the food self-supply of milk buffalos; ii) introduction of more sustainable agronomical, environmental and economical updated techniques in the agro-zootechnical farms; iii) optimization of the technological and nutritional milk buffalo quality; iv) development of farm transformed products obtained by buffalo and cow milk, linked to the territory, healthy and with high nutritional quality; v) use, for different types of cheese, of specific strains, isolated from buffalo and cow milk.

-2012-2013“Agronomical use monitoring of olive mill waste water and pomace” ARETO funded by the Tuscany Region (2012-2013).

-2013: “Nutraceutical value of old varieties of Triticum aestivum” ALBERESE funded by the Tuscany Region.

RESEARCH GRANTS

2012: EMBO fellowship for a course on **Bioinformatics and Comparative Genome Analysis Course** in Naples, IT (<http://www.pasteur.fr/~tekaia/BCGA2012.html>).

2011: **Application for a Small Ecological Project** (British Ecological Society) “Arbuscular mycorrhizal fungal occurrence, community composition and structure within the roots of Restionaceae along a hydrological gradient in the Cape Floristic Region, South Africa (£2500). Supporters: Prof. J. Peter W. Young and Dr. Brian Mantlana (Director of Communication and Policy, South African National Biodiversity Institute).

2006: **Short-term fellowship** from the University of Pisa, IT. Destination: UK. Host Laboratory: Department of Biology, University of York. Duration of the fellowship: 6 months. Research subject: “Molecular Diversity of Arbuscular Mycorrhizal Fungi” (£2000).

**COLLABORATIONS**

J. Peter W. Young (Department of Biology, University of York, UK); Hannes A. Gamper (Department of Environmental Sciences, University of Basel); Dr. Yoseph Araya (Open University, UK); Dr. Petr Smilauer (University of South Bohemia, Faculty of Biological Sciences, České Budějovice, CZ); Matthias Rillig Professor (W3) at the Plant Ecology Department of the Freie University of Berlin, Germany; Maarja Öpik, Senior Research at the Plant Ecology Laboratory of the Tartu Ülikool University, Estonia; Dirk Redecker, Professeur at the Université de Bourgogne, Dijon, France (INRA); Arthur Schuessler, group leader, University of Munich (LMU), Genetics, Biocenter, Germany.

**PEER REVIEWER**

PloOne; New Phytologist; Soil Biology and Fertility; Applied soil ecology; Agriculture, Ecosystems and Environment; Soil Biology and Biochemistry; Biomass and Bioenergy; Agronomy for Sustainable Development; The Scientific World Journal; Italian Journal of Agronomy; Polish Journal of Environmental Studies.

**SCIENTIFIC MEMBERSHIPS**

British Ecological Sociey; International Society for Microbial Ecology (ISME); GfOe (Ecological Society of Germany, Austria and Switzerland).

**INTERNATIONAL SELECTION**

Short listed in 2006 at the il Department of Biology of the University of York, UK, for a three year Postdoc position “The diversity of natural communities of arbuscular mycorrhizal fungi: niche or neutral model?”. In 2008 at the Department of Plant Ecology, Freie University of Berlin, Germany, for a three year Postdoc position “Manipulative and observational studies along land use gradients at three locations in Germany”. In 2011 at the University of Aberdeen, “Effects of intra- and interspecific diversity of ectomycorrhizal fungi on ecosystem processes”.

## INVITED SPEAKER AT INTERNATIONAL CONFERENCES

- International Conference of Mycorrhiza 8th (ICOM8) Arizona 2015.

- PROSODOL CRETE 2012 LIFE PROJECT <http://www.prosodol.gr/?q=it>

**EVALUATOR OF PROJECTS**

* For the British Ecological Society
* For the Romanian National Scientific Research Council and its Executive Agency for Higher Education, Research, Development and Innovation

## PUBLICATIONS

ARTICLES IN ISI JOURNALS

Laura Ercoli, Enrico Bonari, Cristiano Tozzini, Arthur Schüßler, Elisa Pellegrino. Effects of field inoculation by arbuscular mycorrhizal fungi and nitrogen fertilization on production and quality. Under revision in Plant and Soil (SBB10208).

Valentina Ciccolini, Enrico Bonari, Elisa Pellegrino. **Phylogenetic and multivariate analyses to determine the effect of agricultural land-use intensification and soil physico-chemical properties on N-cycling communities in drained Mediterranean peaty soils.** Under revision in Soil Biology and Biochemistry (SBB10208).

Valentina Ciccolini, Enrico Bonari, Elisa Pellegrino (2015). **Land-use intensity and soil properties shape the composition of fungal communities in Mediterranean peaty soils drained for agricultural purposes.** Biology and Fertility of Soil (DOI 10.1007/s00374-015-1013-4).

Elisa Pellegrino, Maarja Öpik, Enrico Bonari, Laura Ercoli (2015). **Responses of wheat to arbuscular mycorrhizal fungi: a meta-analysis of field studies from 1975 to 2013.** Soil Biology and Biochemistry 84: 210-217.

Elisa Pellegrino, Stefano Bedini (2014). **Enhancing ecosystem services in sustainable agriculture: Biofertilization and biofortification of chickpea (*Cicer arietinum* L.) by arbuscular mycorrhizal fungi.** Soil Biology and Biochemistry 68: 429-439.

Elisa Pellegrino, Simona Bosco, Valentina Ciccolini, Chiara Pistocchi, Tiziana Sabbatini, Nicola Silvestri, Enrico Bonari (2014). **Agricultural abandonment in Mediterranean reclaimed peaty soils: Long-term effects on soil chemical properties, arbuscular mycorrhizas and CO2 flux**. Agriculture, Ecosystems and Environment 199: 164–175.

Chiara Vallebona, Elisa Pellegrino, Paolo Frumento, Enrico Bonari (2014). **Temporal trends in extreme rainfall intensity and erosivity in the Mediterranean region: a case study in southern Tuscany, Italy.** Climatic Change 128: 139-151.

Claudia Di Bene, Elisa Pellegrino, Marta Debolini, Nicola Silvestri, Enrico Bonari (2013). **Short- and long-term effects of olive mill wastewater land spreading on soil chemical and biological properties.** Soil Biology and Biochemistry 56: 21-30.

Elisa Pellegrino, Alessandra Turrini, Hannes A. Gamper, Giovanni Cafa', Enrico Bonari, J. Peter W. Young, Manuela Giovannetti (2012). **Establishment, persistence and effectiveness of arbuscular mycorrhizal fungal inoculants in the field revealed using molecular genetic tracing and measurement of yield components**. New Phytologist 194: 810-822.

Elisa Pellegrino, Claudia Di Bene, Cristiano Tozzini, Enrico Bonari (2011). **Impact on soil quality of a 10-year-old short-rotation coppice poplar stand compared with intensive agricultural and uncultivated systems in a Mediterranean area.** Agriculture, Ecosystems and Environment 140: 245-254.

Elisa Pellegrino, Stefano Bedini, Luciano Avio, Enrico Bonari, Manuela Giovannetti (2011). **Field inoculation effectiveness of native and exotic arbuscular mycorrhizal fungi in a Mediterranean agricultural soil.** Soil Biology and Biochemistry 43: 367-376.

Stefano Bedini, Elisa Pellegrino, Luciano Avio, Sergio Pellegrini, Paolo Bazzoffi, Emanuele Argese; Manuela Giovannetti (2009). **Changes in soil aggregation and glomalin-related soil protein content as affected by the arbuscular mycorrhizal fungal species Glomus mosseae and Glomus intraradices.** Soil Biology and Biochemistry 41: 1491-1496.

Luciano Avio, Elisa Pellegrino, Enrico Bonari, Manuela Giovannetti (2006)**. Functional diversity of arbuscular mycorrhizal fungal isolates in relation to extraradical mycelial networks.** New Phytologist 172: 347-357.

Manuela Giovanetti, Luciano Avio, Paola Fortuna, Elisa Pellegrino, Cristiana Sbrana, Patrizia Strani (2006). **At the root of the wood wide web: self recognition and nonself incompatibility in mycorrhizal networks.** Plant Signaling & Behavior 1: 1-5.

ARTICLES IN JOURNALS WITH REFEREES

Claudia Di Bene, Elisa Pellegrino, Cristiano Tozzini, Enrico Bonari (2011). **Changes in soil quality following poplar short-rotation forestry under different cutting cycles.** Italian Journal of Agronomy 6: 28-35.

Elisa Pellegrino, Chandra Kamatchi Ramasamy, Cristiana Sbrana, Paolo Bàrberi, Manuela Giovannetti (2010). **Selection of infective arbuscular mycorrhizal isolates for field inoculation.** Italian Journal of Agronomy 3: 225-232.

Elisa Pellegrino, Luciano Avio, Ambrogio Costanzo, Enrico Bonari, Manuela Giovannetti (2008). **Field Functional Diversity of arbuscular mycorrhizal fungi in a crop rotation of *Trifolium alexandrinum* and *Zea mays*.** Italian Journal of Agronomy 3 (3): 233-234.

ARTICLES IN INTERNATIONAL CONFERENCE PROCEEDINGS WITH REFEREES

Rudy Rossetto, Aleassio Barbagli, Simona Bosco, I. Carloni, Valentina Ciccolini, Vittoria Giannini, Elisa Pellegrino, Chiara Pistocchi, Tiziana Sabbatini, Nicola Silvestri, A. Baiochetti, A. Difonzo, L. Giannecchini, Enrico Bonari (2014). **Large scale phyto-treatment for ecosystem Restoration: the San Niccolò experiment.** Flowpah 2014, National meeting on Hydrogeology: 78-79.

Elisa Pellegrino, Claudia Di Bene, Cristiano Tozzini, Enrico (2011). **New insights into giant reed biofuel crop: soil chemical and microbial traits under Mediterranean conditions.** ISAF 2011 – International Symposium on Alcohol Fuels, development and utilization of alcohol fuels to promote sustainability. 10-14 Oct. 2011, Verona, Italy. 4 pages.

Luciano Avio, Elisa Pellegrino, Enrico Bonari, Manuela Giovannetti (2008). **Natural biofertilizers for organic agriculture: productivity and nutrient uptake of *Medicago sativa* inoculated with different**

arbuscular mycorrhizal fungi. 16th IFOAM Organic World Congress, Modena, Italy, 16-20 June, 2008: 203-207.

Luciano Avio, Stefano Bedini, Elisa Pellegrino, Manuela Giovannetti (2008). Soil and inoculum infectivity evaluated during the early stage of mycorrhizal establishment. COST 870, 27-30 May, Danmark: 69.

ARTICLES/ABSTRACT IN NATIONAL CONFERENCES

Laura Ercoli, Alessandro Masoni, Elisa Pellegrino, Iduna Arduini (2014). **Determinanti genetici ed ambientali della produzione del frumento duro.** Atti del XLIII Convegno SIA, Pisa, 2014.

Alberto Mantino, Valentina Ciccolini, Elisa Pellegrino, Enrico Bonari (2014) **Impact on soil quality of a land-use gradient in a Mediterranean area.** Atti del XLIII Convegno SIA, Pisa, 2014.

Valentina Ciccolini, Elisa Pellegrino, Maarja Öpik, Enrico Bomari (2014). **Land use changes in a Mediterranean restored peatland: effects on arbuscular mycorrhizal fungal biodiversity.** Atti del XLIII Convegno SIA, Pisa, 2014

Chiara Vallebona, Elisa Pellegrino, Alberto Mantino, Enrico Bonari. **Perennial forage cover as soil conservation measure: a case study in southern Tuscany.** Atti del XLIII Convegno SIA, Pisa, 2014

Neri Roncucci, Nicoletta Nassi O Di Nasso, Elisa Pellegrino, Federico Triana, Giorgio Ragaglini, E.nricoBonari (2013). **Root and soil organic matter distribution in mature stands of Arundo donax and Miscanthus x giganteus.** Atti del XLII Convegno SIA 2013.

Claudia Di Bene, Elisa Pellegrino, Cristiano Tozzini, Enrico Bonari (2010). **Confronto tra la qualità del suolo in SRF di pioppo e in suoli non coltivati rispetto a frumento intensivo.** XXXIX Congress of the Italian Society of Agronomy, September 20-22, Roma, Italia: 43-44.

Elisa Pellegrino, Enrico Bonari, Manuela Giovannetti (2010). **Variabilità funzionale di isolati fungini micorrizici arbuscolari esotici e nativi inoculati in campo su Medicago sativa.** XXXIX Congress of the Italian Society of Agronomy, 20-22 September, Roma, Italia: 233-234.

Elisa Pellegrino, Chandra Kamatchi Ramasamy, Cristiana Sbrana, Paolo Barberi, Manuela Giovannetti (2009). **Selezione di funghi micorrizici arbuscolari per l’inoculazione in campo.** XXXVIII Congress of the Italian Society of Agronomy, September 21-23, Firenze, Italia: 43-44.

Elisa Pellegrino, Enrico Bonari, Manuela Giovannetti (2009). **Inoculazione in campo di *Cicer arietinum* con funghi micorrizici arbuscolari nativi e esotici.** XXXVIII Congress of the Italian Society of Agronomy, September 21-23, Firenze, Italia: 41-42.

Stefano Bedini, Elisa Pellegrino, Emanuele Argese, Manuela Giovannetti (2004). **Miglioramento del suolo e biostabilizzazione dei metalli pesanti mediati da glomalina.** 14th Meeting Italian Society of Ecology, October 4-6, Siena, Italia: 1-5.

**ABSTRACTS IN INTERNATIONAL CONFERENCES**

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Valentina Ciccolini, Maria Opik, Enrico Bonari, Elisa Pellegrino (2014). **Effects of land-use intensification and host identity on arbuscular mycorrhizal fungal communities in mediterranean peaty soils.** The First Global Soil Biodiversity Conference 2014.

Elisa Pellegrino, Neri Roncucci, Enrico Bonari (2014). **Functional traits and community structure of arbuscular mycorrhizal fungi in 10-year old rainfead Arundo donax and Miscanthus x giganteus energy crops under Mediterranean conditions.** The First Global Soil Biodiversity Conference 2014.

Elisa Pellegrino, Maria Opik, Enrico Bonari, Laura Ercoli (2014). **Do arbuscular mycorrhizal fungi improve productivity and nutrient uptake of field-grown wheat? A numerical analysis of published field trials from 1975 to 2013.** The First Global Soil Biodiversity Conference 2014.

Pellegrino E., Ciccolini V., Silvestri N., Bonari E. (2013). **New insights in Mediterranean peatlands: molecular phylotaxonomic diversity of bacteria, fungi, arbuscular mychorrizas and microorganisms linked to N cycle as affected by land use change.** FEMS 2013 5th Congress of European Microbiologists (2013)

Chiara Pistocchi, Simona Bosco, Valentina Ciccolini, Vitttoria Giannini, Elisa Pellegrino, Rudy Rossetto, Tiziana Sabbatini, Nicola Silvestri, L. Giannecchini, A. Baiocchetti, A. Di Fonzo, Enrico Bonari (2013). **Restoration Of A Mediterranean Drained Peatland: A Case Study In The Massaciuccoli Lake Basin (Tuscany, Italy).** Wetland Systems: ecology, functioning and management 2013.

Elisa Pellegrino, Federico Dragoni, Giorgio Ragaglini, Elisa Corneli, Enrico Bonari (2013)**. Molecular characterization and methane performances of archaea in anaerobic batch reactors feed with giant reed, a new promising feedstock.** FEMS 2013 5th Congress of European Microbiologists 2013.

Valentina Ciccolini, Elisa Pellegrino, Simona Bosco, Nicola Silvestri, Tiziana Sabbatini, Enrico Bonari. (2013). **Impact of intensive agriculture on arbuscular mychorrizal assemblages and CO2 flux partitiong in a Mediterranean peatland.** FEMS 2013 5th Congress of European Microbiologists 2013.

Elisa Pellegrino, Nicola Silvestri, Claudia Di Bene, Marta Debolini, Enrico Bonari (2012). **Impact of olive mill wastewater land spreading on soil chemical and biological properties.** Olive mill Wastes and Environmental Protection 2012.

Elisa Pellegrino, Alessandra Turrini, Hannes A. Gamper, Giovanni Cafa', Enrico Bonari, J. Peter W. Young, Manuela Giovannetti (2012). **A novel dna marker for field molecular genetic tracing of non-native *Funneliformis mosseae* inoculants.** 1st Molecular Mycorrhiza Meeting, Molecular ecology and evolution. Munich, Germany.

Elisa Pellegrino, Enrico Bonari. **The role of microorganisms in iodine biofortification of plants** (2012) Zurich, Workshop “Improving the composition of plant foods for better mineral nutrition”, COST ACTION 0905 “Mineral-improved crop production for healthy food and feed” - WG1 – Soil plant-interactions.

Elisa Pellegrino, Nicola Silvestri, Valentina Ciccolini, Enrico Bonari (2012). **Wetland management: microbial composition and structure in a peatland secondary succession.** Bari, Italy. Eurosoil 2012.

Elisa Pellegrino, Claudia Di Bene, Cristiano Tozzini, Enrico. 2011. **New insights into giant reed biofuel crop: soil chemical and microbial traits under Mediterranean conditions.** ISAF 2011 – International Symposium on Alcohol Fuels, development and utilization of alcohol fuels to promote sustainability. 10-14 Oct. 2011, Verona, Italy.

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