University Academic Curriculum Vitae

Personal information

Name: **Youry Pii**
Place and –date of birth:
Nationality: **Italian**
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Education since leaving school

- **2004** Master Degree in Biotechnology, mark 110/110 *cum Laude*; University of Bologna.
- **2009** Ph.D in Applied Biotechnology, Agro-Industrial curriculum; University of Verona.
- **2013-2019** Researcher on fixed-term (Assistant Professor) in the Scientific Disciplinary Sector - SSD AGR/13, Faculty of Science and technology, Free University of Bozano
- **2017** Habilitation as Associate Professor for the sector 07/E1 - Chimica Agraria, Genetica Agraria e Pedologia
- **2023** Habilitation as Full Professor for the sector 07/E1 - Chimica Agraria, Genetica Agraria e Pedologia

Present appointment

- Tenured Associate Professor, SSD AGR/13, since June 2020, Faculty of Agricultural, Environmental and Food Science.
- Member of the PhD Program "Food Engineering and Biotechnology" (DOT17C3077). Faculty of Science and Technology, Free University of Bolzano, Italy;
- Responsible of the Analytical Chemistry laboratory (E012) of the Faculty of Science and Technology at the Free University of Bolzano (since 2018);
- Reference professor (Docente di riferimento) for the master LM-70 "Food Sciences for Innovation and Authenticity";
- Quality Assurance Manager for the Faculty of Agricultural, Environmental and Food Science;
- Supervisor and co-supervisor of Bachelor (L-25), Master (LM-69) and PhD (DOT10C3958 and DOT17C3077) students for their thesis, Faculty of Science and Technology, Free University of Bolzano, Italy.

Professional experience

In Italy

From / to	Job title	Name of academic Institution	Academic level	Responsibilities
Apr 2004 – Dec 2005	Research fellow	University of Verona	Master Degree	Research activity in Plant Physiology and Agricultural Chemistry

Jan 2006 – Dec 2008	PhD Student	University of Verona	Master Degree	Research activity in Plant Physiology and Agricultural Chemistry
Mar 2009- Dec 2010	Research Fellow	University of Verona	Post-Doc	Research activity in Plant Physiology and Agricultural Chemistry
Feb 2011 - May 2013	Research Fellow	University of Verona	Post-Doc	Research activity in Agricultural Chemistry
May 2013- May 2016	RTD *junior*	Free University of Bolzano	Post-Doc	Research activity in Agricultural Chemistry
May 2016- May 2017	RTD *junior*	Free University of Bolzano	Post-Doc	Research activity in Agricultural Chemistry, teaching, supervisor of bachelor, master and PhD students.
June 2017 – May 2020	RTD *senior*	Free University of Bolzano	Post-Doc	Research activity in Agricultural Chemistry, teaching, supervisor of bachelor, master and PhD students.
Since June 2020	Tenured Associate Professor	Free University of Bolzano	Post-Doc	Research activity in Agricultural Chemistry, teaching, supervisor of bachelor, master and PhD students.

Abroad

From / to	Job title	Name of academic Institution	Academic level	Responsibilities
May 2016	Visiting Scientist (Fellowship Royal Society of Edinburgh – Accademia Italiana dei Lincei)	James Hutton Institute, Division of Plant Science, Dundee, UK	Post-Doc	Research activity in Agricultural Chemistry
Jun 2008	Visiting PhD Student	Technische Universität München, Wissenschaftszentrum Weihenstephan für Ernährung, Landnutzung und Umwelt Complementation (BiFC).	Master Degree	Research activity in Plant Physiology and Agricultural Chemistry

Experience in academic teaching

Youry Pii is carrying out didactic activities related to the field of Agricultural Chemistry (SSD AGR/13) since the academic year 2014/2015. He has been teaching in English within Bachelor, Master and PhD Programs, both in Italy and abroad. In detail:

Since Academic Year 2018/19

Course of "**Management and use of agrochemicals and their fate in the environment**" (3 CFU), Master in Viticulture, Enology and Wine Marketing, Free University of Bolzano within the Inter-Universities Consortium UniUD-UniPD-UniVR-UniBZ. Teaching language: English.

Since Academic Year 2018/19

Course of "**Elements of chemistry and biochemistry of agrochemicals**" (3 CFU), Master in International Horticulture Science (IMaHS), Free University of Bolzano within the Inter-Universities Consortium UniBZ-UniBO. Teaching language: English.

Since Academic Year 2017/18

Course of "**Environmental chemistry towards food processing**" (8 CFU), Master in Food Sciences for Innovation and Authenticity, Free University of Bolzano within the Inter-Universities Consortium UniBZ-UniUD-UniPR. Teaching language: English.

Since Academic Year 2020/21

Course of "**Molecular Techniques in Food Technologies: from Biotechnology to Authenticity**" (3 CFU), Master in Food Sciences for Innovation and Authenticity, Free University of Bolzano within the Inter-Universities Consortium UniBZ-UniUD-UniPR. Teaching language: English.

Academic Year 2016/17

Course of "**Bodenchemie und –fruchtbarkeit - Übungen**", (3 CFU) – Bachelor in Agricultural, Food and Mountain Environmental Sciences, Free University of Bolzano. Teaching language: German. *Course held in co-presence with Dr. Bruno Plasinger (responsible of the course).*

Academic Year 2014/2015 - 2015/16

Teaching assistant for the course of "**Biochemistry and physiology of agricultural plants**" - Bachelor in Agricultural and Agro-Environmental Sciences, Free University of Bolzano (SSD AGR/13) (6 Credits). *Course held in co-presence with Prof. Stefano Cesco (responsible of the course).*

Academic Year 2009/10 - 2010/11

Course of "**Plant Biology and Plant Physiology**", Bachelor in Viticultural and Oenological Science and Technology, University of Verona (SSD BIO/01; BIO/04) (6 Credits).

Academic Year 2008/09

Teaching assistant for the course of "**Cell Biology and Plant Biology**", Bachelor in Biotechnology, University of Verona.

Academic Year 2007/08 - 2008/09

Teaching assistant for the course of "**Biomolecular Technologies**", Bachelor in Biotechnology, University of Verona.

Didactic Activity at international PhD Schools

- AY 2022/23: Lecture "Plant-microbes-nanomaterials interactions in agro-ecosystems" at the 2nd Summer School "Nanotechnology in Agriculture", 29-30 June 2023, Udine (Italy). https://nanoagri.uniud.it/
- AY 2022/23: Lecture "Interactions at rhizosphere level: PGPR and plants mineral nutrition" at the Agricultural Chemistry PhD Winter School, 6-9 February 2023, Udine (Italy). https://www.acws.unito.it/programme

- AY 2016/17 Seminar entitled "Rhizosphere - The Middle-Earth of Plant-Soil-Microbes interaction" within the SICA PhD Winter School, 13-16 February 2017, Piacenza (Italy). Teaching language: English. http://www.chimicagraria.it/_files/congressi/170209_3rdCircularWinterSchool_SICA2017.pdf
- AY 2015/16 Seminar entitled "Influence of the nutritional status and substrate characteristics on the shoot ionome to predict the synergism and antagonism between nutrients in crops." within the SICA PhD Winter School, 15-18 February 2016, Piacenza (Italy). Teaching language: English. http://www.chimicagraria.it/_files/congressi/160210_3rdCircularWinterSchool_sica2016.pdf
- AY 2014/15 Seminar entitled "An underground tale: contribution of microbial activity to plant nutrients acquisition." within the International SICA PhD Winter School, 9-12 February 2015, Piacenza (Italy). Teaching language: English. http://www.chimicagraria.it/_files/congressi/150128_Program_SICA_Winter_School_2015.pdf
- AY 2013/14 Seminar entitled "Interactions between plants and microorganisms: towards a better nutrients use efficiency?" within the International SICA PhD Winter School, 17-20 February 2014, Piacenza (Italy). Teaching language: English. http://www.chimicagraria.it/_files/congressi/Program-Winter-School-SICA-2014.pdf

Didactic Activity at in foreign research Institution

- May 2016 Seminar entitled "The interactions between plant, microorganisms and soil affect iron acquisition in cucumber" within the PhD Program of The James Hutton Institute, Dundee (UK).

Bachelor and Master Thesis Supervision

- AY 2022/23 Candidate: Carmen Rebollo Vicioso. "Development of species specific SCAR marker based SCoT analysis for apple juice authentication". Supervisor: Youry Pii. Master in Food Innovation and Authenticity, Free University of Bolzano
- AY 2022/23 Candidate: Melanie Manuela Pagano. "Characterization of *Monilinia* spp. from South Tyrol with reference to resistance against fungicides belonging to succinate dehydrogenase inhibitors (SDHI), external quinone inhibitors (QoI) and anilinopyrimidines (AP)". Supervisor: Youry Pii. Master in Food Innovation and Authenticity, Free University of Bolzano
- AY 2022/23 Candidate: Letizia Bernardi. "Production of a fermented legume based product". Supervisor: Youry Pii. Master in Food Innovation and Authenticity, Free University of Bolzano
- AY 2021/22 Candidate: Pietro Antonini. "Canopy management to achieve the vegetative-productive balance of Riesling grapevine". Supervisor: Youry Pii. Master in Viticoltura, Enologia e Mercati Vitivinicoli, University of Udine.
- AY 2020/21 Candidate: Sonia Monterisi. "Application of High Resolution Melting Analysis to identify adulterations in Apple juice". Supervisor: Youry Pii. Master in Food Innovation and Authenticity, Free University of Bolzano
- AY 2020/21 Candidate: Daniel Lorenzoni. "Analysis of the aromatic profile of Pinot Gris grapes after fertilization with hydroxyapatite nanoparticles functionalized with urea". Supervisor: Youry Pii, Co-supervisor: Edoardo Longo. Bachelor in Agricultural Science And Agricultural Technology, Mountain Farming. Free University of Bolzano.
- AY 2018/19 Candidate: Foschini G. "Differential responses of rhizosphere microbial communities to grapevine cultivars resistant to *Plasmopara viticola*". Supervisor Prof. Stefano Cesco, Co-supervisors: Prof. Youry Pii, Prof. Luciano Cavani, Dr. Luigimaria

Borruso. Master in International Horticultural Science, University of Bologna.

- AY 2018/19 Candidate: Pondini S. "Pathogenic and phylogenetic strains analysis of *Fusarium tricinctum*". Supervisor Prof. Ornella Francioso Co-supervisors: Dr. Youry Pii, Dr Antonio Prodi, Dr. Maria Teresa Senatore. Master in International Horticultural Science, University of Bologna.
- AY 2018/19 Candidate: Rodegher G. "Characterization of hydroxyapatite nanoparticles uptake mechanisms and their effects on the aromatic profile of Pinot gris berries." Supervisor Dr. Youry Pii, Co-supervisors: Prof. Stefano Cesco, Dr. Edoardo Longo, Prof. Emanuele Boselli. Master in Viticoltura, Enologia e Mercati Vitivinicoli, University of Udine.
- AY 2018/19 Candidate: Tolotti A. "Determination of mineral elements distribution profile in *Vitis vinifera* leaves infected with *Plasmopara viticola*". Supervisor Dr. Youry Pii. Bachelor in Agricultural Science And Agricultural Technology, Mountain Farming. Free University of Bolzano.
- AY 2018/19 Candidate: Ioriatti E. "Effect of digestates on root morphology and plant nutrient uptake in maize and cucumber". Supervisor Prof. Tanja Mimmo, Co-supervisors: Dr. Youry Pii. Bachelor in Agricultural Science And Agricultural Technology, Mountain Farming. Free University of Bolzano.
- AY 2018/19 Candidate: Signorini M. "Influence of copper pollution on soil microbial diversity in a vineyard.". Supervisor Dr. Youry Pii, Co-supervisors: Prof. Stefano Cesco. Master in Viticoltura, Enologia e Mercati Vitivinicoli, University of Udine.
- AY 2018/19 Candidate: Bucci F. "Interaction between *Cucumis sativus* and *Azospirillum brasilense* in the iron acquisition process: a molecular perspective.". Supervisor Dr. Youry Pii Co-supervisors: Prof. Luciano Cavani. Master in International Horticultural Science, University of Bologna.
- AY 2018/19 Candidate: Castellani D. "Microalgae: a promising plant growth Biostimulant". Supervisor Prof. Ornella Francioso Co-supervisors: Dr. Youry Pii. Master in International Horticultural Science, University of Bologna.
- AY 2018/19 Candidate: Zanasi G. "Detection of deethylhydroxyatrazine (DEHA) by surface-enhanced Raman spectroscopy (SERS) and its interaction with humicacids (HA)". Supervisor Prof. Ornella Francioso Co-supervisors: Dr. Youry Pii. Master in International Horticultural Science, University of Bologna.
- AY 2017/18 Candidate: Kolega S. "Aromatic profiles of two hydroponically-grown sweet basil (*O. basilicum* L.) cultivars as affected by the composition of nutrient solution and the inoculation with Plant Growth-Promoting Rhizobacteria". Supervisor Dr. Youry Pii Co-supervisors: Dr. Luciano Cavani, Prof. Stefano Cesco. Master in International Horticultural Science, University of Bologna.
- AY 2017/18 Candidate: Baldo D. "Evaluating the efficacy of a biological formulate against Flavescence dorée phytoplasma". Supervisor Dr. Claudio Ratti Co-supervisors: Dr. Youry Pii e Dr. Matteo Colassanzio. Master in International Horticultural Science, University of Bologna.
- AY 2017/18 Candidate: Cappelletti E. "*Fusarium proliferatum*: phylogenetic and pathogenic strains analysis of a widespread species". Supervisor Dr. Claudio Ratti Co-supervisors: Dr. Youry Pii e Dr. Maria Teresa Senatore. Master in International Horticultural Science, University of Bologna.
- AY 2017/18 Candidate: Pedrazzi M. "Can spent coffee grounds be used as agricultural fertilizers? A brief study over their characterization and biostimulant activity". Supervisor Prof. Ornella Francioso Co-supervisors: Dr. Youry Pii e Dr. Michele di Foggia. Master in International Horticulture Science, University of Bologna.
- AY 2017/18 Candidate: Tiziani R. "Effect of glyphosate weeding and urea fertilization on Gewürtztraminer berry development". Supervisor Prof. Zeno Varanini. Co-supervisors: Dr. Anita Zamboni, Dr. Youry Pii. Master in Biotechnology, University of Verona.

- AY 2016/17 Candidate: Beber K. "The fate of Terbuthylazine (TBA) in soil: adsorption and degradation". Supervisor Prof. Tanja Mimmo. Co-supervisors: Prof. Stefano Cesco, Dr. Youry Pii. Bachelor in Agricultural Science And Agricultural Technology, Mountain Farming. Free University of Bolzano.
- AY 2016/17 Candidate: Graf H. "Wirkung von nützlichen Mikroorganismen auf das Wachstum und die Qualität von Erdbeeren". Supervisor: Prof. Tanja Mimmo. Co-supervisors: Prof. Stefano Cesco, Dr. Youry Pii. Bachelor in Agricultural Science And Agricultural Technology, Mountain Farming. Free University of Bolzano.
DOI: 10.17660/ActaHortic.2018.1217.29
- AY 2015/16 Candidate: Aldrighetti A. "Effects of *Azospirillum brasilense* on nitrate uptake in Maize (*Zea Mays* L.) seedlings". Supervisor: Prof. Stefano Cesco. Co-supervisor: Dr. Youry Pii. Bachelor in Agricultural Science And Agricultural Technology, Mountain Farming. Free University of Bolzano.
DOI: 10.1093/jxb/ery433
- AY 2013/14 Candidate: Hartmann F. "RNA-Seq approach to study iron and phosphorous deficiency in *Malus x domestica*". Supervisors Dr. Tanja Mimmo and Dr. Youry Pii. Bachelor in Agricultural Science And Agricultural Technology, Mountain Farming. Free University of Bolzano.
- AA 2013/14 Candidate: Springeth C. "Biochemical activities in cucumber plants as affected by *Azospirillum brasilense* inoculation: a spatial-temporal resolution". Supervisors Dr. Tanja Mimmo and Dr. Youry Pii. Bachelor in Agricultural Science And Agricultural Technology, Mountain Farming. Free University of Bolzano.
DOI: 10.1016/j.envexpbot.2016.06.011
- AA 2013/14 Candidate: Penn A. "Plant - soil - microorganisms interactions under Fe-deficiency using a soil based Rhizotest system". Supervisors Dr. Tanja Mimmo and Dr. Youry Pii. Bachelor in Agricultural Science And Agricultural Technology, Mountain Farming. Free University of Bolzano.
DOI: 10.1016/j.plaphy.2014.12.014
- AA 2011/12 Candidate: Castagnini G. "Aspetti fenotipici e fisiologici della Mg-carenza in piante di *Vitis vinifera* (cv Corvina) innestate su portinnesti a diversa suscettibilità". Supervisor Prof. Zeno Varanini, Co-supervisor Dr. Youry Pii. Bachelor in Viticultural and Oenological Science and Technology, University of Verona.
- AY 2010/11 Candidate: Franchi A. "Modificazioni fenotipiche e biochimiche indotte dalla carenza di Magnesio in *Vitis vinifera* cv. Corvina innestata su portinnesti a diversa suscettibilità al Magnesio". Supervisor Prof. Zeno Varanini, Co-supervisor Dr. Youry Pii. Bachelor in Viticultural and Oenological Science and Technology, University of Verona.
- AA 2010/11 Candidate: Malvezzi C. "Studio dell'espressione del gene *N5* di *Medicago truncatula* nel processo di nodulazione ed in risposta a molecole segnale coinvolte nella simbiosi". Supervisor: Dr. Tiziana Pandolfini, Co-supervisor Dr. Youry Pii. Bachelor in Biotechnology, University of Verona.
- AA 2010/11 Candidate: Bertolini J. "Coinvolgimento di *MtN5* nella trasduzione del segnale nella simbiosi *S. meliloti - M. truncatula*". Supervisor Dr. Tiziana Pandolfini, Co-supervisor Dr. Youry Pii. Bachelor in Biotechnology, University of Verona..
- AA 2006/07 Candidate: Tomizioli M. "Produzione di ossido nitrico nei batteri ad opera di NO sintasi". Supervisor Dr. Tiziana Pandolfini, Co-supervisor Dr. Youry Pii. Bachelor in Biotechnology, University of Verona.
- AA 2004/05 Candidate: Cremonese G. "Effetti dell'aumento di auxina prodotta nel nodulo radicale su piante leguminose". Supervisor Prof. Massimo Crimi, Co-supervisor Dr. Youry Pii. Master degree in Biotechnology, University of Verona.

PhD Thesis Supervision and Co-supervision

- Co-Supervisor of Alexandra Kokkali, PhD in Food Engineering and Biotechnology, 41° cycle, Free University of Bolzano.

- Supervisor of Thomas Pieri, PhD in Food Engineering and Biotechnology, 41° cycle, Free University of Bolzano.
- Supervisor of Amna Choudhry, PhD in Food Engineering and Biotechnology, 40° cycle, Free University of Bolzano.
- Supervisor of Alessandro Agostini, PhD in Food Engineering and Biotechnology, 39° cycle, Free University of Bolzano.
- Supervisor of Roberto Fattorini, PhD in Food Engineering and Biotechnology, 38° cycle, Free University of Bolzano.
- Supervisor of Marco Lucchetta, PhD in Food Engineering and Biotechnology, 37° cycle, Free University of Bolzano.
- Supervisor of Sonia Monterisi, PhD in Food Engineering and Biotechnology, 37° cycle, Free University of Bolzano.
- Supervisor of Sebastian Benedikt Feil, "Plant nutrients interaction within the Plant-Soil- Microorganism System", PhD in Food Engineering and Biotechnology, 34° cycle, Free University of Bolzano.
- Co-supervisor of Monica Yorlady Alzate Zuluaga, Universidade Estadual de Londrina, Londrina, Brazil. (AY 2018/19)
- Co-supervisor of Laura Marastoni, "Rhizosphere mechanisms alleviating copper toxicity in vineyard soils", PhD in Management of Mountain Environment, 31° cycle, Free University of Bolzano.
- Co-supervisor of Lessandro De Conti, Universidade Federal de Santa Maria, Santa Maria, Brazil. (AY 2017/18).

Alternanza Scuola-Lavoro

Tutoring of High-School students

- Daniel Tais, 23.07-03.08.2018, 27.08 – 04.09.18 Realgymnasium Peter Anich, Bolzano

Other activities related to didactic

AY 2022/23 Laboratorium "Projektwoche Rendezvous mit dem Traumberuf": Soil chemistry and biochemistry lab for High School Students.

AY 2019/20 Laboratorium "Projektwoche Rendezvous mit dem Traumberuf": Soil chemistry and biochemistry lab for High School Students.

AY 2018/19 Laboratorium "Projektwoche Rendezvous mit dem Traumberuf": Soil chemistry and biochemistry lab for High School Students.

AY 2017/18 Responsible for the internship of High School students within the "Alternanza Scuola Lavoro" project.

2016: member of the commission for the selection of a contract Professor for the course Bodenchemie und-fruchtbarkeit, within the bachelor in Agricultural Science and Agricultural Technology, Mountain Farming, Free University of Bolzano (L-25).

2016: member of the commission for the selection of a contract Professor for the course Soil Quality Environmental, within the master in Management of Mountain Areas, Free University of Bolzano (LM-69).

11 December 2019: Member of the commission for the final exam for the Master in Viticulture, Enology and Wine Marketing (LM-69).

02 October 2019: Member of the commission for the final exam for the Master in Viticulture, Enology and Wine Marketing (LM-69).

27 June 2018: Member of the commission for the final exam in the International

Master in Horticultural Science (LM-69).

15 February 2018: Member of the commission for the final exam in the International Master in Horticultural Science (LM-69).

2016: Member of the commission for the final exam in Agricultural Science and Agricultural Technology, Mountain Farming, Free University of Bolzano (L-25) – Rector's Decree 44/2016.

Since AY 2018/19: Reference professor (*docente di riferimento*) for the LM-70. "Food Sciences for Innovation and Authenticity".

2017: Tutor for the internship of Raphael Tiziani (University of Verona): "Acquisizione di metodiche analitiche per la determinazione qualitativa e quantitativa dei principali composti organici contenuti nelle bacche di vite."

Innovative didactic methods

The didactic material used for the lectures and supplementary materials inherent to the topics treated are made available on the on line repository "*Reserve collection*" at the Free University of Bolzano.

Other academic responsibilities

At the Free University of Bolzano

- Responsible of the Analytical Chemistry Lab (since 2018);
- Member of the PhD Program "Food Engineering and Biotechnology" (DOT17C3077). Faculty of Science and Technology, Free University of Bolzano, Italy;
- Reference professor (Docente di riferimento) for the master LM-70 "Food Sciences for Innovation and Authenticity";
- 2015 - 2017Representative for the Faculty of Science and Technology, Free University of Bolzano, within the PRIMA project
- Member of the following commissions at the Faculty of Science and Technology:
- Selection of a Research Assistant (AR) for the sector AGR/13 "Hydrothermal carbonization of biogas digestate for hydroponics: an innovative concept of bio-refinery - HB Ponics" – Recotr's Decree 36/2019.
- Selection of a Research Assistant (AR) for the sector AGR/13 "Optimised nutrients management from livestock production in Alto Adige (Life OPTIMAL)" - Recotr's Decree 366/2018.
- Selection of a Research Assistant (AR) for the sector AGR/13 "Sustainable grapevine nutrition strategies to enhance soil biodiversity and grapevine production (GRASP)" - Recotr's Decree 461/2017.
- Selection of a Research Assistant (AR) for the sector AGR/13 "Optimised nutrients management from livestock production in Alto Adige (Life OPTIMAL)" - Recotr's Decree 33/2017.
- Member of other commissions:
- President of the selection commission for a Research Fellow at CREA-VE for the project GESOVIT within the selection n. 21289 (02/01/2020).

Organization of events

Organizing and Scientific Committees member of Agricultural Chemistry PhD Winter School, "*Stresses* at the Rhizosphere: The Role of Agricultural Chemistry in Solving Challenges Occurring in the Plant-Soil System", 6-9 February 2023, Udine (Italy).

Organizing and Scientific Committees member of Agricultural Chemistry PhD Winter School, "Novel Approaches and Technologies for Current and Future Challenges in

Agricultural Chemistry", 14-17 February 2022, Udine (Italy).

Organizing and Scientific Committees member of Agricultural Chemistry PhD Winter School, "Interactions between biogeochemical cycles of elements in plant-soil-microbe systems", 8-11 February 2021, Torino (Italy).

Member of the scientific and organizing committee of the SICA International PhD Winter School "Plant-soil-microbe interactions and ecosystem dynamics in a changing environment" Torino, Italia, 10-13 February 2020. https://www.acws.unito.it/home

Member of the scientific and organizing committee of the SICA International PhD Winter School "The role of agricultural chemistry to reconcile soil and environmental quality with food needs" Palermo, Italia, 11-14 February 2019. http://www.chimicagraria.it/_files/congressi/181126_2ndCircular_SICAPhDWINTERSCHOOL2019.pdf

Member of the scientific and organizing committee of 11th World Congress on Plant Biotechnology and Agriculture, Paris (France), 05-07 March 2018. https://agriculture-horticulture.conferenceseries.com/europe/organizing-committee.php

Member of the scientific and organizing committee of SICA International PhD Winter School "The role of Agricultural Chemistry for a sustainable agricultural production and its traceability", Palermo, Italy, 12-15 February 2018. http://www.chimicagraria.it/_files/congressi/171113_2ndCircular_SICA_PhDWINTERSCHOOL_2018.pdf

Member of the scientific and organizing committee of "FUTURE IPM IN EUROPE: The largest international event on sustainable crop production and protection", Riva del Garda, Italy 15-20 October 2017. http://futureipm3.eu/

Member of the scientific and organizing committee of VIII International Symposium on Mineral Nutrition of Fruit Crops, Bolzano, 27-30 June 2017. http://mnutrition2017.events.unibz.it/committees/

Member of the scientific and organizing committee of SICA International PhD Winter School "Current challenges in agricultural ecosystems: the need for a multidisciplinary approach", Piacenza, Italy, 13-16 February 2017. http://www.chimicagraria.it/_files/congressi/170209_3rdCircularWinterSchool_SICA2017.pdf

Member of the scientific committee of SICA International PhD Winter School "Novel approaches to unravel the plant-soil-microbial systems in action" held in Piacenza, Italy, 15-18 February 2016. http://www.chimicagraria.it/_files/congressi/160210_3rdCircularWinterSchool_sica2016.pdf

Member of the scientific and organizing committee of European Society of New Methods in Agricultural Research (ESNA) Conference, Bolzano, 3-6 September 2014. http://pro.unibz.it/microsites-export-2016/www.unibz.it/en/sciencetechnology/events/esna2014/committees/default.html

Member of the scientific and organizing committee of XXXII Congress of Società Italiana di Chimica Agraria (SICA), Bolzano, 7-9 September 2014. http://pro.unibz.it/microsites-export-2016/www.unibz.it/it/sciencetechnology/events/sica/Documents/SICA_2014_Seconda_

circolare%20FINAL.pdf

Third mission

- February 16th, 2023. Participation as moderator to "Novel Farm Expo" at Fiera di Pordenone. Session "Genetica e selezioni varietali per il vertical farming". https://novelfarmexpo.it/eventi/genetica-e-selezioni-varietali-per-il-vertical-farming/
- 26-27 October 2022: Participation as invited speaker to the divulgation event "Nanotecnologie nel settore agro-alimentare", organized by CNR – Istituti per i Sistemi Biologici. "Impiego in agricoltura di nanoparticelle di idrossiapatite modificate con urea: dal laboratorio al pieno campo". Pii Y. https://www.disba.cnr.it/event/nanotecnologie-nel-settore-agro-alimentare/
- 4 March 2021: Participation as invited speaker to the divulgation event "2a Biostimolanti Conference". https://www.biostimolanticonference.com/programma/
- 4 March 2021: Lecturer for Assoenologi and Coordinamento Nazionale Corsi di Studio in Viticoltura and Enologia (CUVE) within the program "Formazione Nazionale Assoenologi". https://www.assoenologi.it/evento/ciclo-di-webinar-limpianto-del-vigneto/
- 15 November 2019: Participation as invited speaker to the technical day "Hypathia – Nuove tecnologie per un'agricoltura sostenibile" at University of Insubria, Como. https://www.hypatiagro.it/it/hypatia-final-meeting/
- 19-20 February 2020: Participation as invited speaker to the technical day "Novel Farm Expo" at Fiera di Pordenone. http://www.novelfarmexpo.it/programma-2020/
- Commissioned research activity (Project FERTFRUIT) and consultations for Cooperativa Sant'Orsola, Pergine Valsugana (TN)
- AY 2017/18 Laboratorium "Projektwoche Rendezvous mit dem Traumberuf": Soil chemistry and biochemistry lab for High School Students.
- AY 2018/19 Laboratorium "Projektwoche Rendezvous mit dem Traumberuf": Soil chemistry and biochemistry lab for High School Students.
- AY 2019/20 Laboratorium "Projektwoche Rendezvous mit dem Traumberuf": Soil chemistry and biochemistry lab for High School Students.
- AY 2017/18 Internship responsible for High School Students, within the "Alternanza Scuola Lavoro" program.

Memberships

Member of:

Società Italiana di Chimica Agraria (SICA)
Società Italiana di Biologia Vegetale (SIBV)
European Society of New Methods in Agricultural Research (ESNA)
International Society of Trace Element Biogeochemistry (ISTEB)
International Society of Horticultural Sciences (ISHS)

Editorial and referee activities

- Component of Editorial Board of:
  - *Scientific Reports*
  - *Access Journal of Biotechnology Research;*
  - *Journal of Botanical Sciences;*
  - *Frontiers in Plant Science;*
  - *Plant Nutrition & Soil Science International;*
  - *MDPI Agriculture (https://www.mdpi.com/journal/agriculture/editors).*
- Editor for:
  - *Scientific Reports*;
  - *MDPI Agriculture*
- Reviewer for the following scientific journals: BMC Research Note; African Journal

of Agricultural Research; Biologia; Catena; Molecules; Frontiers in Plant Science; Journal of Science, Food and Agriculture; International Journal of Tropical Biology and Conservation; Journal of Plant Physiology; Journal of Medicinal Plant Research; Journal of the Science of Food and Agriculture; Canadian Journal of Microbiology; Clean – Soil, Air, Water; Arid Land Research and Management; Functional Plant Biology; Plant Signaling & Behavior; Plant Molecular Biology, PLoS One; Journal of Plant Nutrition and Soil Science, Journal of Botanical Science.

- Project reviewer for the Provincia Autonoma di Bolzano.
- Listed in the "Albo degli Esperti del CREA" (https://www.crea.gov.it/altre-opportunit%C3%A0/albo-degli-esperti).
- Listed in the REPRISE database (MIUR scientific experts' database) in the section "*Ricerca di base*".

Research and scholarships

In the sector AGR/13, Youry Pii is responsible of the following projects:

Date granted	Award Holder(s)	Funding Body	Title	Amount received
2023-2025	Prof. Youry Pii (Unit coordinator)	MUR-PRIN 2022	From farm to glass: use of a winEmaking waste-derived coMpost as fERtilizer for GrapEvine plants: elucidation of the interaction between vine molecular response and microbial community for wine production (EMERGE)	82,943 €
2023-2026	Prof. Youry Pii (Unit coordinator)	INTERREG I-A 2021-2027	Creating a sustainable cross-border agro-ecosystem through root microbiome biodiversity (CEDRIC)	180,680 €
2021-2024	Prof. Youry Pii (PI)	Free University of Bolzano	From soil to glass: COMpost-based graPEvine nutriTIon sTrategIes to enhance soil quality, grapeVine productivity and winE quality - COMPETITIVE	75292.80 €
2019-2022	Dr. Youry Pii (Unit coordinator)	MIUR - PRIN	Use of Protein-Hydrolysates as biostimulants of vegetable crops: elucidating their mode of action and optimizing their effectiveness through a multidisciplinary approach - PHOBOS	130355 €
2016-2019	Dr. Youry Pii (PI)	Free University of Bolzano	Integration of ionomic and proteomic profiles of subcellular organelles to unravel mineral elements allocation and homeostasis in plants subjected to abiotic stresses (IMPRESS)	20000 €

In the sector AGR/13, Youry Pii is partner of the following projects:

Date granted	Award Holder(s)	Funding Body	Title	Amount received
2022-2026	Marco Gobbetti	MUR "Research and Innovation Network on food and nutrition Sustainability, Safety and Security (ONFoods)	ONFoods	1,675,913.34 €
2022-2026	Stefano Cesco	MUR "National Research Centre for Agricultural Technologies (Agritech) – Spoke 4	Agritech	2,048,694 €
2023-2025	Prof. Stefano Cesco (Unit coordinator)	MUR-PRIN 2022	CircuLar Economy and sustainable agriculture: hydrOxyaPAtite from biowasTes as smaRt nAnofertilizer (CLEOPATRA)	89,890 €

Collaborations

National collaborations

- **Prof. Stefania Astolfi**, Dipartimento di Scienze Agrarie e Forestali, Università degli Studi della Tuscia.
- **Prof. Gian Maria Beone**, Dipartimento di Scienze e Tecnologie Alimentari per una Filiera Agro-alimentare Sostenibile, Università Cattolica del Sacro Cuore Sede di Piacenza.
- **Prof. Carmine Crecchio**, Dipartimento di Scienze del Suolo, della Pianta e degli Alimenti, Università di Bari.
- **Prof. Luigi Lucini**, Dipartimento di Scienze e Tecnologie Alimentari per una Filiera Agro-alimentare Sostenibile, Università Cattolica del Sacro Cuore Sede di Piacenza.
- **Prof. Roberto Terzano**, Dipartimento di Scienze del Suolo, della Pianta e degli Alimenti, Università di Bari.
- **Prof. Nicola Tomasi**, Dipartimento di Scienze Agroalimentari, Ambientali e Animali, Università degli Studi di Udine.
- **Prof. Zeno Varanini e Prof. Anita Zamboni**, Dipartimento di Biotecnologie, Università degli Studi di Verona.
- **Prof. Gianpiero Vigani**, Dipartimento di Scienze della Vita e Biologia dei Sistemi, Università di Torino.

International Collaborations

- **Prof. Gustavo Brunetto**, Universidade Federal de Santa Maria, Santa Maria, Brasile.
- **Prof. Brett Robinson**, College of Science, University of Canterbury, New Zealand.
- **Prof. Niklas Letho**, Agriculture and Life Sciences, Lincoln University, New Zealand.

Interdisciplinary collaborations (national and international)

- **Dr. Davide Bulgarelli**, Division of Plant Sciences, College of Life Sciences, University of Dundee.
- **Prof. Norberto Masciocchi**
- **Prof. Giuseppe Colla**
- **Prof. Youssef Rouphael**
- **Dr. Federica Gaiotti**
- **Prof. Paolo Lugli**, Facoltà di Scienze e Tecnologie, Libera Università di Bolzano.
- **Prof. Fabrizio Mazzetto**, Facoltà di Scienze e Tecnologie, Libera Università di Bolzano.
- **Gruppo Prof. Tiziana Pandolfini e Dr. Barbara Molesini**, Dipartimento di Biotecnologie, Università degli Studi di Verona.
- **Prof. Paolo Sambo**, Dipartimento di Agronomia Animali Alimenti Risorse Naturali e Ambiente, Università degli Studi di Padova.
- **Dr. Gianluca Savini**, Cooperativa Sant'Orsola, Pergine Valsugana (TN).

Scientific production is documented by 113 Scopus-listed documents (04.22.2026, H-Index 36, Number of Citations: 4570) and more than 100 contributions at national and international congresses.

Main research topics: i) study of the interactions between plant, soil and microorganisms aimed at improving the uptake and use of mineral nutrients; ii) study of the physiological and molecular responses in plants subjected to variable nutrients availability; iii) processes involved in the development of the symbiosis between legume plants and soil rhizobia.

Awards

Best poster at national and international events

1. Best Poster Award at SICA National conference, Alghero 9-11 September 2024. Zuluaga MYA, Coppola M, de Oliveira Caretta T, Monterisi S, Fattorini R, Cesco S, Pii Y. Enhancing salt tolerance in tomato plants: Integrative roles of nitrogen fertilization and *Azospirillum brasilense* inoculation on growth dynamics and antioxidant defense
2. Best Poster Award at SICA National conference, Pisa 5-7 September 2022. Monterisi S., Alzate Zuluaga M.Y., Miras-Moreno B., Rouphale Y. Colla G., Lucini L., Cesco S., **Pii Y.** Plant-derived foliar biostimulants vs. root-colonizing plant growth-promoting rhizobacteria: ameliorative effects in salt-stressed tomato plants
3. Best Poster Award at SICA International PhD Winter School, Palermo 11-14 February 2019. Feil S.B., **Pii Y.,** Valentinuzzi F., Tiziani R., Mimmo T., Cesco S. Copper toxicity affects the uptake of phosphorus cucumber plants
4. Best Presentation Award at XLIV ESNA Meeting, Brno (Czech Republic), 3-6 September 2015. Valentinuzzi F., **Pii Y.**, Vigani G., Lehmann M., Cesco S., Mimmo T Metabolomics and root exudation traits of strawberries as affected by iron and phosphorus deficiency.
5. Best Poster Award XXXII at convegno nazionale Società Italiana di Chimica Agraria, Bolzano, 7-9 Settembre 2014. Fijan R., Terzano R., Gattullo C.E., Valentinuzzi F., **Pii Y**., Pinton R., Tomasi N., Medici L., Cesco S., Mimmo T. Ruolo degli essudati radicali nella mobilizzazione del Fe da un suolo calcareo: effetto carenza, substrato e specie vegetale.
6. Best Poster Award at XLIII ESNA Meeting, Bolzano, 3-6 September 2014. **Pii**

Y., Penn A., Mimmo T., Tomasi N., Terzano R., Crecchio C., Cesco S. Plant-microorganism-soil interactions influence the Fe acquisition process by cucumber plants.
7. Best Poster Award at XI AISSA Meeting, Piacenza, 2013. Fijan R., Terzano, R., Tomasi, N., Pinton, R., Cesco, S., **Pii, Y.,** Mimmo, T. La Fe carenza in piante di orzo (*Hordeum vulgare* L.): alterazioni mineralogiche indotte da essudati radicali.
8. Best Poster Award at X AISSA Meeting, Palermo 28-29 November 2012. Zamboni A., Zuchi S., **Pii Y.,** Astolfi S., Varanini Z. Modificazioni del trascrittoma di due linee pure di mais a diversa NUE durante l'induzione dell'assorbimento del nitrato
9. Best Poster Award at AGI-SIBV-SIGA Meeting, Assisi (PG) 19-22 September 2011. **Pii Y.**, Molesini B., Pandolfini T. Study of MtN5 transcriptional control and of its involvement in *Medicago truncatula* nodulation pathway.

Scientific Production

2015: the paper "**Pii Y**., Mimmo T., Tomasi N., Terzano R., Cesco S., Crecchio C. (2015). Microbial interactions in the rhizosphere: beneficial influences of plant growth-promoting rhizobacteria on nutrient acquisition process. A review. *Biology and Fertility of Soils*, 51: 403-415" was quoted among the 30 most relevant articles of the top ten journals in the category of SOIL SCIENCES - BIOLOGY AND FERTILITY OF SOILS (http://blogs.egu.eu/divisions/sss/2016/07/29/top-30-papers-in-the-top-10-journals-of-the-soil-sciences-category-iv-biology-and-fertility-of-soils/)

Publications

List of publications

1. Cesco, S., Alzate Zuluaga, M.Y., Cavani, L., Borruso, L., Laudicina, V.A., Mazzetto, F., Mimmo, T., **Pii, Y.***, Terzano, R., Astolfi, S. (2026). Roots and the rhizosphere: a perspective on the hidden engine of regenerative, antifragile, and digitally enabled agriculture. *Farming System*, 4 (2), art. no. 100199. DOI: 10.1016/j.farsys.2026.100199
2. Haydar, M.S., Alzate Zuluaga, M.Y.A., Astolfi, S., Cesco, S., **Pii, Y**. (2025). From synthesis to soil: transformations and impacts of nanoparticles in agroecosystems. *Science of the Total Environment*, 1000, art. no. 180374 DOI: 10.1016/j.scitotenv.2025.180374
3. Pagano, M.M., Oettl, S., Deltedesco, E., **Pii, Y.**, Spitaler, U. (2025). Variation in Growth, Morphology, and Fungicide Sensitivity Among Monilinia Species from South Tyrol's Alpine Orchards. *Journal of Fungi*, 11 (10), art. no. 690. DOI: 10.3390/jof11100690
4. El Chami, A., Ceccarelli, A.V., Monterisi, S., Giuseppe, G., El Nakhel, C., Rouphael, Y., **Pii, Y**., Cardarelli, M. (2025). Protein Hydrolysates Modulate Quality Traits of Tomato Fruit Under Salt Stress by Regulating the Expression Patterns of Genes Related to Sugar Metabolism. *Horticulturae*, 11 (9), art. no. 1108. DOI: 10.3390/horticulturae11091108
5. Monterisi, S., Rebollo Vicioso, C., Alzate Zuluaga, M.Y.A., Melchior, S., Senizza, B., Zengin, G., Fattorini, R., Lanza, U., de Oliveira Caretta, T., Manzocco, L., Lucini, L., Cesco, S., **Pii, Y.*** (2025). Optimizing *Valerianella locusta* L. Growth and Metabolism by Combining Red and Blue LED Light: Insights into Plant Physiology, Biochemistry, and Nutraceutical Value. *Plants*, 14 (12), art. no. 1887. DOI: 10.3390/plants14121887
6. Vos, J., Alessandrini, M., Trevisan, M., **Pii, Y.**, Mazzetto, F., Orzes, G., Cesco, S. (2025). One Health approach: Addressing data challenges and unresolved questions in agriculture. *Science of the Total Environment*, 977, art. no. 179312. DOI: 10.1016/j.scitotenv.2025.179312

7. Monterisi, S., Alzate Zuluaga, M.Y.A., Senizza, B., Cardarelli, M., Rouphael, Y., Giuseppe, G., Lucini, L., Cesco, S., **Pii, Y.** (2025). The integrated multi-omics analysis unravels distinct roles of Malvaceae-derived protein hydrolysate and its molecular fraction in modulating tomato resilience under limited nitrogen availability. *Plant Stress*, 15, art. no. 100771. DOI: 10.1016/j.stress.2025.100771
8. Pilotto, L., Scalera, F., Piccirillo, C., Marchiol, L., Alzate Zuluaga, M.Y.A., **Pii, Y.,** Cesco, S., Civilini, M., Fellet, G. (2025). Phosphorus Release from Nano-Hydroxyapatite Derived from Biowastes in the Presence of Phosphate-Solubilizing Bacteria: A Soil Column Experiment. *Journal of Agricultural and Food Chemistry*, 73 (7), pp. 3918 – 3929. DOI: 10.1021/acs.jafc.4c09325
9. Lucchetta, M., Alzate Zuluaga, M.Y.A., Monterisi, S., Fattorini, R., Gaiotti, F., Cesco, S., **Pii, Y**.* (2025). Innovative approaches to soil health: evaluating pruning waste compost, inoculated compost, and mineral fertilizer in a controlled growth chamber for sustainable vineyard practices. *Frontiers in Sustainable Food Systems*, 9, art. no. 1504761. DOI: 10.3389/fsufs.2025.1504761
10. Fattorini, R., de Oliveira Caretta, T., Benyahia, F., Zuluaga, M.Y.A., Monterisi, S., Agostini, A., Andreotti, C., Cesco, S., **Pii, Y.*** (2025). Double trouble belowground: grapevine rootstocks face drought and copper toxicity. *Frontiers in Agronomy*, 7, art. no. 1682753. DOI: 10.3389/fagro.2025.1682753
11. Alzate Zuluaga, M.Y.A., de Oliveira Caretta, T., Agostini, A., Monterisi, S., Fattorini, R., Cesco, S., **Pii, Y.*** (2025). Unlocking cucumber growth: exploring the impact of nutrient availability levels and bacterial inoculation on plant growth and mineral composition. *Horticulture Environment and Biotechnology*. DOI: 10.1007/s13580-025-00762-3
12. de Oliveira Caretta, T., Unterholzner, M., Alzate Zuluaga, M.Y.A., Spitaler, U., Ceccon, A., Cesco, S., **Pii, Y.*** (2025). Antifungal activity of surfactin produced by *Bacillus subtilis* against phytopathogenic fungi in apple and strawberry: an in vitro and in vivo study. *International Journal of Food Science and Technology*, 60 (1), art. no. vvaf087. DOI: 10.1093/ijfood/vvaf087
13. Valentinuzzi, F., Fracasso, I., Bani, A., Graf, H., **Pii, Y.**, Dumbrell, A., Cavani, L., Cesco, S., Borruso, L., Mimmo, T. (2024). Enhancing Soil-Grown Strawberry Fruit Quality through the Synergistic Influence of Beneficial Microorganisms and Digestate. *Journal of Soil Science and Plant Nutrition*, 24 (4), pp. 7696 – 7712. DOI: 10.1007/s42729-024-02068-2
14. Lozano-González, J.M., Alzate Zuluaga, M.Y.A., Lucena, J.J., López-Rayo, S., Monterisi, S., Cesco, S., **Pii, Y.** (2024). Cultivating resilience: Harnessing pyoverdine-producing *Pseudomonas* to contrast iron deficiency in cucumber plants. *Plant Stress*, 14, art. no. 100565. DOI: 10.1016/j.stress.2024.100565
15. Monterisi, S., Zhang, L., García-Pérez, P., Alzate Zuluaga, M.Y.A., Ciriello, M., El Nakhel, C., Buffagni, V., Cardarelli, M., Giuseppe, G., Rouphael, Y., Cesco, S., Lucini, L., **Pii, Y.*** (2024). Integrated multi-omic approach reveals the effect of a *Graminaceae*-derived biostimulant and its lighter fraction on salt-stressed lettuce plants. *Scientific Reports*, 14 (1), art. no. 10710. DOI: 10.1038/s41598-024-61576-4
16. Martín-García, B., Longo, E., Ceci, A.T., **Pii, Y.**, Romero-González, R., Garrido Frenich, A., Boselli, E. (2024). Pesticides and winemaking: A comprehensive review of conventional and emerging approaches. *Comprehensive Reviews in Food Science and Food Safety*, 23 (5), art. no. e13419. DOI: 10.1111/1541-4337.13419
17. Cardarelli, M., Ceccarelli, A.V., El Nakhel, C., Rouphael, Y., Salehi, H., Ganugi, P., Zhang, L., Luigi, L., **Pii, Y.**, Choi, S., Kim, H.-J., Colla, G. (2024). Foliar

applications of a *Malvaceae*-derived protein hydrolysate and its fractions differentially modulate yield and functional traits of tomato under optimal and suboptimal nitrogen application. *Journal of the Science of Food and Agriculture*, 104 (12), pp. 7603 – 7616. DOI: 10.1002/jsfa.13596

18. Pilotto, L., Alzate Zuluaga, M.Y.A., Scalera, F., Piccirillo, C., Marchiol, L., Civilini, M., **Pii, Y.**, Cesco, S., Fellet, G. (2024). Sustainable crop fertilization by combining biogenic nano-hydroxyapatite and P solubilizing bacteria: Observations on barley. *Plant Nano Biology*, 9, art. no. 100091. DOI: 10.1016/j.plana.2024.100091
19. Monterisi, S., García-Pérez, P., Buffagni, V., Alzate Zuluaga, M.Y.A., Ciriello, M., Formisano, L., El Nakhel, C., Cardarelli, M., Giuseppe, G., Rouphael, Y., Cristofano, F., Cesco, S., Lucini, L., **Pii, Y.*** (2024). Unravelling the biostimulant activity of a protein hydrolysate in lettuce plants under optimal and low N availability: a multi-omics approach. *Physiologia Plantarum*, 176 (3), art. no. e14357. DOI: 10.1111/ppl.14357
20. **Pii, Y.***, Orzes, G., Mazzetto, F., Sambo, P., Cesco, S. (2024). Advances in viticulture via smart phenotyping: current progress and future directions in tackling soil copper accumulation. *Frontiers in Plant Science*, 15, art. no. 1459670. DOI: 10.3389/fpls.2024.1459670
21. Alzate Zuluaga, M.Y.A., Fattorini, R., Cesco, S., **Pii, Y.*** (2024). Plant-microbe interactions in the rhizosphere for smarter and more sustainable crop fertilization: the case of PGPR-based biofertilizers. *Frontiers in Microbiology*, 15, art. no. 1440978. DOI: 10.3389/fmicb.2024.1440978
22. Lucchetta, M., **Pii, Y.**, Cagnin, A., Lovat, L., Romano, A., Correddu, F., Gaiotti, F. (2024). Controlled-release nitrogen technology as a sustainable nutrition management in lean-soil vineyards. *Acta Horticulturae*, (1387), pp. 135 – 142. DOI: 10.17660/ACTAHORTIC.2024.1387.18
23. Lucchetta, M., Romano, A., Alzate Zuluaga, M.Y.A., Fornasier, F., Monterisi, S., **Pii, Y.,** Marcuzzo, P., Lovat, L., Gaiotti, F. (2023). Compost application boosts soil restoration in highly disturbed hillslope vineyard. *Frontiers in Plant Science*, 14, art. no. 1289288. DOI: 10.3389/fpls.2023.1289288
24. El Nakhel, C., Cristofano, F., Giuseppe, G., Lucini, L., **Pii, Y.**, Rouphael, Y. (2023). Biostimulants as ecological horizon for a sustainable agriculture. *Acta Horticulturae*, 1377, pp. 831 – 835. DOI: 10.17660/ActaHortic.2023.1377.103
25. Zhang, L., Zuluaga, M.Y.A., **Pii, Y.**, Barone, A., Amaducci, S., Miras-Moreno, B., Martinelli, E., Bellotti, G., Trevisan, M., Puglisi, E., Lucini, L. (2023). A Pseudomonas Plant Growth Promoting Rhizobacterium and Arbuscular Mycorrhiza differentially modulate the growth, photosynthetic performance, nutrients allocation, and stress response mechanisms triggered by a mild Zinc and Cadmium stress in tomato. *Plant Science*, 337, art. no. 111873. DOI: 10.1016/j.plantsci.2023.111873
26. Zuluaga, M.Y.A., de Oliveira, A.L.M., Valentinuzzi, F., Jayme, N.S., Monterisi, S., Fattorini, R., Cesco, S., **Pii, Y.*** (2023). An insight into the role of the organic acids produced by Enterobacter sp. strain 15S in solubilizing tricalcium phosphate: in situ study on cucumber. *BMC Microbiology*, 23 (1), art. no. 184. DOI: 10.1186/s12866-023-02918-6
27. Tiziani, R., Pranter, M., Valentinuzzi, F., **Pii, Y.**, Borruso, L., Cesco, S., Mimmo, T. (2023). Unraveling plant adaptation to single and combined nutrient deficiencies in a dicotyledonous and a monocotyledonous plant species. *Plant Science*, 335, art. no. 111793. DOI: 10.1016/j.plantsci.2023.111793
28. El-Nakhel, C., Cristofano, F., Colla, G., **Pii, Y.**, Lucini, L., Rouphael, Y. (2023).A Graminaceae-derived protein hydrolysate and its fractions provide

differential growth and modulate qualitative traits of lettuce grown under non-saline and mild salinity conditions. *Scientia Horticulturae*, 319, art. no.112130. DOI: 10.1016/j.scienta.2023.112130

29. El-Nakhel, C., Cristofano, F., Colla, G., **Pii, Y.**, Secomandi, E., De Gregorio, M., Buffagni, V., Garcia-Perez, P., Lucini, L., Rouphael, Y. (2023). Vegetal-derived biostimulants distinctively command the physiological and metabolomic signatures of lettuce grown in depleted nitrogen conditions. *Scientia Horticulturae*, 317, art. no. 112057. DOI: 10.1016/j.scienta.2023.112057
30. Monterisi, S., Zuluaga, M.Y.A., Porceddu, A., Cesco, S., **Pii, Y.*** (2023). The Application of High-Resolution Melting Analysis to trnL (UAA) Intron Allowed a Qualitative Identification of Apple Juice Adulterations. *Foods*, 12 (7), art. no. 1437.DOI: 10.3390/foods12071437
31. Zuluaga, M.Y.A., Cardarelli, M., Rouphael, Y., Cesco, S., Pii, Y., Colla, G. (2023). Iron nutrition in agriculture: From synthetic chelates to biochelates. *Scientia Horticulturae*, 312, art. no. 111833. DOI: 10.1016/j.scienta.2023.111833
32. Cristofano, F., El-Nakhel, C., Colla, G., Cardarelli, M., **Pii, Y.**, Lucini, L., Rouphael, Y. (2023). Modulation of Morpho-Physiological and Metabolic Profiles of Lettuce Subjected to Salt Stress and Treated with Two Vegetal-Derived Biostimulants. *Plants*, 12 (4), art. no. 709. DOI: 10.3390/plants12040709
33. Feil, S.B., Zuluaga, M.Y.A., Cesco, S., **Pii, Y.*** (2023). Copper toxicity compromises root acquisition of nitrate in the high affinity range. *Frontiers in Plant Science*, 13, art. no. 1034425. DOI: 10.3389/fpls.2022.1034425
34. Zuluaga, M.Y.A., Monterisi, S., Rouphael, Y., Colla, G., Lucini, L., Cesco, S., **Pii, Y.*** (2023). Different vegetal protein hydrolysates distinctively alleviate salinity stress in vegetable crops: A case study on tomato and lettuce. *Frontiers in Plant Science*, 14, art. no. 1077140.DOI: 10.3389/fpls.2023.1077140
35. Cristofano, F., El-Nakhel, C., Colla, G., Cardarelli, M., **Pii, Y.**, Lucini, L., Rouphael, Y. (2023). Tracking the Biostimulatory Effect of Fractions from a Commercial Plant Protein Hydrolysate in Greenhouse-Grown Lettuce. *Antioxidants*, 12 (1), art. no. 107. DOI: 10.3390/antiox12010107
36. Alzate Zuluaga M.Y., Miras-Moreno B., Monterisi S., Rouphael Y., Colla G., Lucini L., Cesco S., **Pii Y**. (2022). Integrated metabolomics and morpho-biochemical analyses reveal a better performance of *Azospirillum brasilense* over plant-derived biostimulants in counteracting salt stress in tomato. *International Journal of Molecular Sciences*, 23(22): 14216. 10.3390/ijms232214216
37. Trentin E., Cesco S., **Pii Y**., Valentinuzzi F., Celletti S., Feil S.B., Zuluaga M.Y.A., Ferreira P.A.A., Ricachenevsky F.K., Stefanello L.O., De Conti L., Brunetto G., Mimmo T. (2022). Plant species and pH dependent responses to copper toxicity. *Environmental and Experimental Botany*, 196: 104791. DOI: 10.1016/j.envexpbot.2022.104791
38. Feil S.B., Rodegher G., Gaiotti F., Alzate Zuluaga M.Y., Carmona F.J., Masciocchi N., Cesco S., **Pii Y.*** (2021). Physiological and Molecular Investigation of Urea Uptake Dynamics in *Cucumis sativus* L. Plants Fertilized With Urea-Doped Amorphous Calcium Phosphate Nanoparticles. *Frontiers in Plant Science*, 12: 745581. DOI: 10.3389/fpls.2021.745581.
39. Valentinuzzi F., **Pii Y**., Borruso L., Mimmo T., Puglisi E., Trevisan M., Cesco S. (2021). Epiphytic Microbial Community and Post-Harvest Characteristics of Strawberry Fruits as Affected by Plant Nutritional Regime with Silicon.

Agronomy, 11 (12): 2407. DOI: 10.3390/agronomy11122407

40. Cesco S., Lucini L., Miras-Moreno B., Borruso L., Mimmo T., **Pii Y**., Puglisi E., Spini G., Taskin E., Tiziani R., Zangrillo M.S., Trevisan M. (2021). The hidden effects of agrochemicals on plant metabolism and root-associated microorganisms. *Plant Science*, 311: 111012. DOI: 10.1016/j.plantsci.2021.111012.
41. Signorini M., Borruso L., Randall K.C., Dumbrell A.J., **Pii Y**., Mimmo T., Cesco S. (2021). Soil heterogeneity within a vineyard impacts the beta but not the alpha microbial agro-diversity. *Applied Soil Ecology*, 166: 104088. DOI: 10.1016/j.apsoil.2021.104088.
42. Alzate Zuluaga M.Y., Milani K.M.L., Miras-Moreno M.B., Lucini L., Valentinuzzi F., Mimmo T., **Pii Y**., Cesco S., Rodrigues E.P., de Oliveira A.L.M. (2021). The adaptive metabolomic profile and functional activity of tomato rhizosphere are revealed upon PGPB inoculation under saline stress. *Environmental and Experimental Botany*, 189: 104552. DOI: 10.1016/j.envexpbot.2021.104552.
43. Alzate Zuluaga M.Y., Martinez de Oliveira A.L., Valentinuzzi F., Tiziani R., **Pii Y.***, Mimmo T., Cesco S. (2021). Can Inoculation With the Bacterial Biostimulant Enterobacter sp. Strain 15S Be an Approach for the Smarter P Fertilization of Maize and Cucumber Plants? *Frontiers in Plant Science*, 12: 719873. DOI: 10.3389/fpls.2021.719873.
44. Buffagni V., Ceccarelli A.V., **Pii Y.***, Miras-Moreno B., Rouphael Y., Cardarelli M., Colla G., Lucini L. (2021). The modulation of auxin-responsive genes, phytohormone profile, and metabolomic signature in leaves of tomato cuttings is specifically modulated by different protein hydrolysates. *Agronomy*, 11(8): 1524. DOI: 10.3390/agronomy11081524.
45. Gaiotti F., Lucchetta M., Rodegher G., Lorenzoni D., Longo E., Boselli E., Cesco S., Belfiore N., Lovat L., Delgado-López J.M., Carmona F.J., Guagliardi A., Masciocchi N., **Pii Y.** (2021). Urea-doped calcium phosphate nanoparticles as sustainable nitrogen nanofertilizers for viticulture: Implications on yield and quality of pinot gris grapevines. *Agronomy*, 11(6): 1026. DOI: 10.3390/agronomy11061026
46. Carmona F.J., Dal Sasso G., Ramírez-Rodríguez G.B., **Pii Y.**, Delgado-López J.M., Guagliardi A., Masciocchi N. (2021). Urea-functionalized amorphous calcium phosphate nanofertilizers: optimizing the synthetic strategy towards environmental sustainability and manufacturing costs. *Scientific Reports,* 11(1): 3419. DOI: 10.1038/s41598-021-83048-9.
47. Ceccarelli A.V., Miras-Moreno B., Buffagni V., Senizza B., **Pii Y**., Cardarelli M., Rouphael Y., Colla G., Lucini L. (2021). Foliar application of different vegetal-derived protein hydrolysates distinctively modulates tomato root development and metabolism. *Plants*, 10(2): 326. DOI: 10.3390/plants10020326.
48. Zuluaga M.Y.A., Milani K.M.L., Miras-Moreno B., Lucini L., Valentinuzzi F., Mimmo T., **Pii Y**., Cesco S., Rodrigues E.P., Oliveira A.L.M.D. (2021). Inoculation with plant growth-promoting bacteria alters the rhizosphere functioning of tomato plants. *Applied Soil Ecology*, 158: 103784. DOI: 10.1016/j.apsoil.2020.103784.
49. Cesco S., **Pii Y**., Borruso L., Orzes G., Lugli P., Mazzetto F., Genova G., Signorini M., Brunetto G., Terzano R., Vigani G., Mimmo T. (2021). A smart and sustainable future for viticulture is rooted in soil: How to face cu toxicity. *Applied Sciences*, 11(3): 907. DOI: 10.3390/app11030907.
50. Scagliola M., Valentinuzzi F., Mimmo T., Cesco S., Crecchio C., **Pii Y**.* (2021). Bioinoculants as Promising Complement of Chemical Fertilizers for a More

Sustainable Agricultural Practice. *Frontiers in Sustainable Food Systems*, 4: 622169. DOI: 10.3389/fsufs.2020.622169.

51. Tiziani R., **Pii Y**., Celletti S., Cesco S., Mimmo T. (2020). Phosphorus deficiency changes carbon isotope fractionation and triggers exudate reacquisition in tomato plants. *Scientific Reports*, 10(1): 15970. DOI: 10.1038/s41598-020-72904-9.
52. Feil S.B., **Pii Y**.*, Valentinuzzi F., Tiziani R., Mimmo T., Cesco S. (2020). Copper toxicity affects phosphorus uptake mechanisms at molecular and physiological levels in *Cucumis sativus* plants. *Plant Physiology and Biochemistry*, 157: 138-147. DOI: 10.1016/j.plaphy.2020.10.023.
53. Cesco S., Tolotti A., Nadalini S., Rizzi S., Valentinuzzi F., Mimmo T., Porfido C., Allegretta I., Giovannini O., Perazzolli M., Cipriani G., Terzano R., Pertot I., **Pii Y**.* (2020). *Plasmopara viticola* infection affects mineral elements allocation and distribution in *Vitis vinifera* leaves. *Scientific Reports*, 10(1): 18759. DOI: 10.1038/s41598-020-75990-x.
54. Kalcsits L., Lotze E., Tagliavini M., Hannam K.D., Mimmo T., Neilsen D., Neilsen G., Atkinson D., Biasuz E.C., Borruso L., Cesco S., Fallahi E., **Pii Y**., Valverdi N.A. (2020). Recent achievements and new research opportunities for optimizing macronutrient availability, acquisition, and distribution for perennial fruit crops. *Agronomy*, 10(11): 1738. DOI: 10.3390/agronomy10111738
55. Kolega S., Miras-Moreno B., Buffagni V., Lucini L., Valentinuzzi F., Maver M., Mimmo T., Trevisan M., **Pii Y**.*, Cesco S. (2020). Nutraceutical Profiles of Two Hydroponically Grown Sweet Basil Cultivars as Affected by the Composition of the Nutrient Solution and the Inoculation With *Azospirillum brasilense. Frontiers in plant Science*, 11: 596000. DOI: 10.3389/fpls.2020.596000.
56. Tiziani R., Mimmo T., Valentinuzzi F., **Pii Y**., Celletti S., Cesco S. (2020). Root Handling Affects Carboxylates Exudation and Phosphate Uptake of White Lupin Roots. *Frontiers in plant Science*, 11: 5845468. DOI: 10.3389/fpls.2020.584568.
57. Astolfi S., **Pii Y**., Mimmo T., Lucini L., Miras-Moreno M.B., Coppa E., Violino S., Celletti S., Cesco S. (2020). Single and combined Fe and S deficiency differentially modulate root exudate composition in tomato: A double strategy for Fe acquisition? *International Journal of Molecular Sciences*, 21(11): 4038. DOI: 10.3390/ijms21114038.
58. Celletti S., **Pii Y**., Valentinuzzi F., Tiziani R., Fontanella M.C., Beone G.M., Mimmo T., Cesco S., Astolfi S. (2020). Physiological responses to Fe deficiency in split-root tomato plants: Possible roles of auxin and ethylene? *Agronomy*, 10(7): 1000. DOI: 10.3390/agronomy10071000.
59. Maver M., Miras-Moreno B., Lucini L., Trevisan M., **Pii Y**., Cesco S., Mimmo T. (2020). New insights in the allelopathic traits of different barley genotypes: Middle Eastern and Tibetan wild-relative accessions vs. cultivated modern barley. *PLoS ONE*, 15: e0231976. DOI: 10.1371/journal.pone.0231976.
60. Astolfi S., Caddeu F., Coppa E., **Pii Y.**, Celletti S., Cesco S., Mimmo T. (2020). Preliminary evaluation of eggshells as a source of phosphate on hydroponically grown tomato (*Solanum lycopersicum* L.) seedling. *Journal of Plant Nutrition,* 42(12): 2852-1861. DOI: 10.1080/01904167.2020.1750641.
61. Valentinuzzi F., Cavani L., Porfido C., Terzano R., **Pii Y**., Cesco S., Marzadori C., Mimmo T. (2020). The fertilising potential of manure-based biogas fermentation residues: pelleted vs. liquid digestate. *Heliyon*, 6: e03325. DOI: 10.1016/j.heliyon.2020.e03325.
62. Valentinuzzi F., **Pii Y.***, Porfido C., Terzano R., Fontanella M.C., Beone G.M.,

Astolfi S., Mimmo T., Cesco S. (2020). Root-shoot-root Fe translocation in cucumber plants grown in heterogeneous Fe provision. *Plant Science,* 293: 110431. DOI: 10.1016/j.plantsci.2020.110431.

63. De Conti L., Cesco S., Mimmo T., **Pii Y.**, Valentinuzzi F., Bastos de Melo G.W., Ceretta C.A., Trentin E., Marques A.C.R., Brunetto G. (2020). Iron fertilization to enhance tolerance mechanisms to copper toxicity of ryegrass plants used as cover crop in vineyards. *Chemosphere,* 243: 128298. DOI: 10.1016/j.chemosphere.2019.125298.
64. Salehi H., Miras-Moreno B., Chehregani Rad A., **Pii Y.**, Mimmo T., Cesco S., Lucini L. (2020). Relatively low dosages of CeO_2 nanoparticles in the solid medium induce adjustments in the secondary metabolism and ionomic balance of bean (*Phaseolus Vulgaris* L.) roots and leaves. *Journal of Agricultural and Food Chemistry,* in press. DOI: 10.1021/acs.jafc.9b05107.
65. Di Iorio E., Colombo C., Angelico R., Terzano R., Porfido C., Valentinuzzi F., **Pii Y.**, Mimmo T., Cesco S. (2019). Iron oxide-humic acid coprecipitates as iron source for cucumber plants. *Journal of Plant Nutrition and Soil Science*, 182:921-933. DOI: 10.1002/jpln.201800207.
66. Marastoni L., Sandri M., **Pii Y.***, Valentinuzzi F., Cesco S., Mimmo T. (2019). Morphological root responses and molecular regulation of cation transporters are differently affected by copper toxicity and cropping system depending on the grapevine rootstock genotype. *Frontiers in Plant Science*, 10: 946. DOI: 10.3389/fpls.2019.00946.
67. Valentinuzzi F., Venuti S., **Pii Y.**, Marroni F., Cesco S., Hartmann F., Mimmo T., Morgante M., Pinton R., Tomasi N., Zanin L. (2019). Common and specific responses to iron and phosphorus deficiencies in roots of apple tree (*Malus x domestica*). *Plant Molecular Biology*, 101: 129-148. DOI: 10.1007/s11103-019-00896-w.
68. Marastoni, L., Tauber, P., **Pii, Y**., Valentinuzzi, F., Astolfi, S., Simoni, A., Brunetto, G., Cesco, S., Mimmo, T. (2019). The potential of two different *Avena sativa* L. cultivars to alleviate Cu toxicity. *Ecotoxicology and Environmental Safety*. 182: 109430. DOI: 10.1016/j.ecoenv.2019.109430.
69. Marastoni L., **Pii Y**.*, Maver M., Valentinuzzi F., Cesco S., Mimmo T. (2019). Role of *Azospirillum brasilense* in triggering different Fe chelate reductase enzymes in cucumber plants subjected to both nutrient deficiency and toxicity. *Plant Physiology and Biochemistry*, 136:118-126. DOI:10.1016/j.plaphy.2019.01.013.
70. **Pii Y**.*, Aldrighetti A., Valentinuzzi F., Mimmo T., Cesco S. (2019). *Azospirillum brasilense* inoculation counteracts the induction of nitrate uptake in maize plants. *Journal of Experimental Botany*, 70: 1313-1324. DOI:10.1093/jxb/ery433.
71. **Pii Y**.*, Marastoni L., Gemassmer E., Valentinuzzi F., Mazzetto F., Mimmo T., Cesco S. (2019). Phytotoxicity alleviation by bacterial species isolated from polycyclic aromatic hydrocarbons (PAHs) contaminated sites. *Environmental Technology and Innovation*, 13: 104-112. DOI:10.1016/j.eti.2018.11.001.
72. Marastoni L., Sandri M., **Pii Y**., Valentinuzzi F., Brunetto G., Cesco S., Mimmo T. (2019). Synergism and antagonisms between nutrients induced by copper toxicity in grapevine rootstocks: Monocropping vs. intercropping. *Chemosphere*, 214: 563-578. DOI:10.1016/j.chemosphere.2018.09.127.
73. Sambo P., Nicoletto C., Giro A., **Pii Y**., Valentinuzzi F., Mimmo T., Lugli P., Orzes G., Mazzetto F., Astolfi S., Terzano R., Cesco S. (2019). Hydroponic solutions for soilless production systems: issues and opportunities in a smart

agriculture perspective. *Frontiers in Plant Science*, 10: 923. DOI: 10.3389/fpls.2019.00923.

74. Coppa E., Celletti S., **Pii Y**., Mimmo T., Cesco S., Astolfi S. (2018). Revisiting Fe/S interplay in tomato: A split-root approach to study the systemic and local responses. *Plant Science*, 276: 134-142. DOI:10.1016/j.plantsci.2018.08.015.
75. **Pii Y**.*, Graf H., Valentinuzzi F., Cesco S., Mimmo T. (2018). The effects of plant growth-promoting rhizobacteria (PGPR) on the growth and quality of strawberries. *Acta Horticulturae*, 1217: 231-238. DOI:10.17660/ActaHortic.2018.1217.29.
76. Valentinuzzi F., Cologna K., **Pii Y**.*, Mimmo T., Cesco S. (2018). Assessment of silicon biofortification and its effect on the content of bioactive compounds in strawberry (*Fragaria × ananassa* 'Elsanta') fruits. *Acta Horticulturae*, 1217: 307-312. DOI:10.17660/ActaHortic.2018.1217.38.
77. Mimmo T., **Pii Y**., Valentinuzzi F., Astolfi S., Lehto N., Robinson B., Brunetto G., Terzano R., Cesco S. (2018). Nutrient availability in the rhizosphere: A review. *Acta Horticulturae*, 1217: 13:27. DOI:10.17660/ActaHortic.2018.1217.2.
78. Valentinuzzi F., Maver M., Fontanari S., Mott D., Savini G., Tiziani R., **Pii Y**.*, Mimmo T., Cesco S. (2018). Foliar application of potassium-based fertilizer improves strawberry fruit quality. *Acta Horticulturae,* 1217: 379-384. DOI:10.17660/ActaHortic.2018.1217.48.
79. Valentinuzzi F., **Pii Y**., Mimmo T., Savini G., Curzel S., Cesco S. (2018). Fertilization strategies as a tool to modify the organoleptic properties of raspberry (*Rubus idaeus* L.) fruits. *Scientia Horticulturae*, 240: 205-212. DOI:10.1016/j.scienta.2018.06.024.
80. Astolfi S., **Pii Y**., Terzano R., Mimmo T., Celletti S., Allegretta I., Lafiandra D., Cesco S. (2018). Does Fe accumulation in durum wheat seeds benefit from improved whole-plant sulfur nutrition? *Journal of Cereal Science*, 83: 74-82. DOI:10.1016/j.jcs.2018.07.010.
81. Vigani G., **Pii Y**., Celletti S., Maver M., Mimmo T., Cesco S., Astolfi S. (2018). Mitochondria dysfunctions under Fe and S deficiency: is citric acid involved in the regulation of adaptive responses? *Plant Physiology and Biochemistry*, 126: 86-96. DOI:10.1016/j.plaphy.2018.02.022.
82. Gattullo C.E., **Pii Y**., Allegretta I., Medici L., Cesco S., Mimmo T., Terzano R. (2018). Iron mobilization and mineralogical alterations induced by iron-deficient cucumber plants (*Cucumis sativus* L.) in a calcareous soil. *Pedosphere*, 28: 59-69. DOI:10.1016/S1002-0160(15)60104-7.
83. Crecchio C., Mimmo T., Bulgarelli D., Pertot I., **Pii Y**., Perazzolli M., Scagliola M., Cesco S. (2018). Beneficial soil microbiome for sustainable agriculture production. *Sustainable Agriculture Reviews*, 31: 443-481. DOI:10.1007/978-3-319-94232-2_9.
84. Santi C., Molesini B., Guzzo F., **Pii Y**., Vitulo N., Pandolfini T. (2017). Genome-wide transcriptional changes and lipid profile modifications induced by *Medicago truncatula* N5 overexpression at an early stage of the symbiotic interaction with *Sinorhizobium meliloti*. *Genes*, 8: 396. DOI:10.3390/genes8120396.
85. Mimmo T., Tiziani R., Valentinuzzi F., Lucini L., Nicoletto C., Sambo P., Scampicchio M., **Pii Y**.*, Cesco S. (2017). Selenium biofortification in *Fragaria × ananassa*: Implications on strawberry fruits quality, content of bioactive health beneficial compounds and metabolomic profile. *Frontiers in Plant Science*, 8: 1887. DOI:10.3389/fpls.2017.01887.

86. **Pii Y**.*, Zamboni A., Dal Santo S., Pezzotti M., Varanini Z., Pandolfini T. (2017). Prospect on ionomic signatures for the classification of grapevine berries according to their geographical origin. *Frontiers in Plant Science*, 8: 640. DOI:10.3389/fpls.2017.00640.
87. Celletti S., **Pii Y**., Mimmo T., Cesco S., Astolfi S. (2016). The characterization of the adaptive responses of durum wheat to different Fe availability highlights an optimum Fe requirement threshold. *Plant Physiology and Biochemistry*, 109: 300-307. DOI:10.1016/j.plaphy.2016.10.010.
88. **Pii Y**., Alessandrini M., Dall'Osto L., Guardini K., Prinsi B., Espen L., Zamboni A., Varanini Z. (2016). Time-resolved investigation of molecular components involved in the induction of NO_3^- high affinity transport system in maize roots. *Frontiers in Plant Science*, 7: 1657. DOI:10.3389/fpls.2016.01657.
89. Brunetto G., Bastos de Melo G.W., Terzano R., Del Buono D., Astolfi S., Tomasi N., **Pii Y**., Mimmo T., Cesco S. (2016). Copper accumulation in vineyard soils: Rhizosphere processes and agronomic practices to limit its toxicity. *Chemosphere*, 162: 293-307. DOI:10.1016/j.chemosphere.2016.07.104.
90. **Pii Y**.*, Marastoni L., Springeth C., Fontanella M.C., Beone G.M., Cesco S., Mimmo T. (2016). Modulation of Fe acquisition process by *Azospirillum brasilense* in cucumber plants. *Environmental and Experimental Botany*, 130: 216-225. DOI:10.1016/j.envexpbot.2016.06.011.
91. Celletti S., Paolacci A.R., Mimmo T., **Pii Y**., Cesco S., Ciaffi M., Astolfi S. (2016). The effect of excess sulfate supply on iron accumulation in three graminaceous plants at the early vegetative phase. *Environmental and Experimental Botany*, 128: 31-38. DOI:10.1016/j.envexpbot.2016.04.004.
92. Gattullo C.E., Allegretta I., Medici L., Fijan R., **Pii Y**., Cesco S., Mimmo T., Terzano R. (2016). Silicon dynamics in the rhizosphere: Connections with iron mobilization. *Journal of Plant Nutrition and Soil Science*, 179: 409-417. DOI:10.1002/jpln.201500535.
93. **Pii Y.***, Borruso L., Brusetti L., Cesco S., Mimmo T. (2016). How do plants - having different exudation patterns - shape a similar microbial community? *Research and Reviews: Journal of Botanical Science*, 5: 61-64.
94. **Pii Y**.*, Borruso L., Brusetti L., Crecchio C., Cesco S., Mimmo T. (2016). The interaction between iron nutrition, plant species and soil type shapes the rhizosphere microbiome. *Plant Physiology and Biochemistry*, 99: 39-48. DOI:10.1016/j.plaphy.2015.12.002.
95. Scagliola M., **Pii Y**., Mimmo T., Cesco S., Ricciuti P., Crecchio C. (2016). Characterization of plant growth promoting traits of bacterial isolates from the rhizosphere of barley (*Hordeum vulgare* L.) and tomato (*Solanum lycopersicon* L.) grown under Fe sufficiency and deficiency. *Plant Physiology and Biochemistry*, 107: 187-196. DOI:10.1016/j.plaphy.2016.06.002.
96. Alegria Terrazas R., Giles C., Paterson E., Robertson-Albertyn S., Cesco S., Mimmo T., **Pii Y**., Bulgarelli D. (2016). Plant-microbiota interactions as a driver of the mineral turnover in the Rhizosphere. *Advances in Applied Microbiology*, 95: 1-67. DOI:10.1016/bs.aambs.2016.03.001.
97. **Pii Y**.*, Cesco S., Mimmo T. (2015). Shoot ionome to predict the synergism and antagonism between nutrients as affected by substrate and physiological status. *Plant Physiology and Biochemistry*, 94: 48-56. DOI:10.1016/j.plaphy.2015.05.002.
98. Bocchini M., Bartucca M.L., Ciancaleoni S., Mimmo T., Cesco S., **Pii Y**., Albertini E., Del Buono D. (2015). Iron deficiency in barley plants:

Phytosiderophore release, iron translocation, and DNA methylation. *Frontiers in Plant Science*, 6: 514. DOI:10.3389/fpls.2015.00514.

99. **Pii Y**., Mimmo T., Tomasi N., Terzano R., Cesco S., Crecchio C. (2015). Microbial interactions in the rhizosphere: beneficial influences of plant growth-promoting rhizobacteria on nutrient acquisition process. A review. *Biology and Fertility of Soils*, 51: 403-415. DOI:10.1007/s00374-015-0996-1.
100. Valentinuzzi F., **Pii Y**., Vigani G., Lehmann M., Cesco S., Mimmo T. (2015). Phosphorus and iron deficencies induce a metabolic reprogramming and affect the exudation traits of the woody plant *Fragaria×ananassa*. *Journal of Experimental Botany*, 66: 6483-6495. DOI:10.1093/jxb/erv364.
101. **Pii Y**., Penn A., Terzano R., Crecchio C., Mimmo T., Cesco S. (2015). Plant-microorganism-soil interactions influence the Fe availability in the rhizosphere of cucumber plants. *Plant Physiology and Biochemistry*, 87: 45-52. DOI:10.1016/j.plaphy.2014.12.014.
102. Molesini B., Cecconi D., **Pii Y**., Pandolfini T. (2014). Local and systemic proteomic changes in *Medicago truncatula* at an early phase of *Sinorhizobium meliloti* infection. *Journal of Proteome Research*, 13: 408-421. DOI:10.1021/pr4009942.
103. **Pii Y**., Alessandrini M., Guardini K., Zamboni A., Varanini Z. (2014). Induction of high-affinity NO_3^- uptake in grapevine roots is an active process correlated to the expression of specific members of the *NRT2* and plasma membrane H^+-ATPase gene families. *Functional Plant Biology*, 41: 353-365. DOI:10.1071/FP13227.
104. Zamboni A., Astolfi S., Zuchi S., **Pii Y**., Guardini K., Tononi P., Varanini Z. (2014). Nitrate induction triggers different transcriptional changes in a high and a low nitrogen use efficiency maize inbred line. *Journal of Integrative Plant Biology*, 56: 1080-1094. DOI:10.1111/jipb.12214.
105. Portioli C., Benati D., **Pii Y**., Bernardi P., Crucianelli M., Santucci S., Bentivoglio M., Passacantando M. (2013). Short-term biodistribution of Cerium oxide nanoparticles in mice: Focus on brain parenchyma. *Nanoscience and Nanotechnology Letters*, 5: 1174-1181. DOI:10.1166/nnl.2013.1715.
106. **Pii Y**., Molesini B., Pandolfini T. (2013). The involvement of *Medicago truncatula* non-specific lipid transfer protein N5 in the control of rhizobial infection. *Plant Signaling and Behavior*, 8: e24836.1-e24836.4. DOI:10.4161/psb.24836.
107. **Pii Y**., Molesini B., Masiero S., Pandolfini T. (2012). The non-specific lipid transfer protein N5 of *Medicago truncatula* is implicated in epidermal stages of rhizobium-host interaction. *BMC Plant Biology,* 12: 233. DOI:10.1186/1471-2229-12-233.
108. Molesini B., Pandolfini T., **Pii Y**., Korte A., Spena A. (2012). *Arabidopsis thaliana* AUCSIA-1 regulates Auxin biology and physically interacts with a kinesin-related protein. *PLoS ONE*, 7: e41327. DOI:10.1371/journal.pone.0041327.
109. Molesini B., **Pii Y**., Pandolfini T. (2012). Fruit improvement using intragenesis and artificial microRNA. *Trends in Biotechnology*, 30: 80-88. DOI:10.1016/j.tibtech.2011.07.005.
110. **Pii Y**., Pandolfini T., Crimi M. (2010). Signaling LTPs: A new plant LTPs sub-family? *Plant Signaling and Behavior*, 5: 594-597. DOI:10.4161/psb.11499.
111. **Pii Y**., Astegno A., Peroni E., Zaccardelli M., Pandolfini T., Crimi M. (2009). The *Medicago truncatula N5* gene encoding a root-specific lipid

transfer protein is required for the symbiotic interaction with *Sinorhizobium meliloti*. *Molecular Plant-Microbe Interactions,* 22: 1577-1587. DOI:10.1094/MPMI-22-12-1577.

112. **Pii Y**., Crimi M., Cremonese G., Spena A., Pandolfini T. (2007). Auxin and nitric oxide control indeterminate nodule formation. *BMC Plant Biology,* 7: 21. DOI:10.1186/1471-2229-7-21.

113. Frascari D., Pinelli D., Nocentini M., Fedi S., **Pii Y**., Zannoni D. (2006). Chloroform degradation by butane-grown cells of *Rhodococcus aetherovorans* BCP1. *Applied Microbiology and Biotechnology*, 73: 421-428. DOI:10.1007/s00253-006-0433-3.

114. Frascari D., Zannoni A., Fedi S., **Pii Y**., Zannoni D., Pinelli D., Nocentini M. (2005). Aerobic cometabolism of chloroform by butane-grown microorganisms: Long-term monitoring of depletion rates and isolation of a high-performing strain. *Biodegradation*, 16: 147-158. DOI:10.1007/s10532-004-4877-9. ISSN 0923-9820..

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Further data Presentations at scientific conferences (invited or selected, keynote, nature and status of conference)

1. The Effects of Pruning Waste Compost on Growth and Nutrient Uptake in Rooted Pinot Gris Cuttings. Pii Y. XLII SICA Congress, 9-11 September 2024, Alghero
2. The Effects of Pruning Waste Compost on Growth and Nutrient Uptake in Rooted Pinot Gris Cuttings. Pii Y. X International Symposium on Plant Nutrition of Fruit Crops, 24-27 June 2024 Wenatchee (USA)
3. Vegetal-derived Protein Hydrolysates differently alleviate salinity and nitrogen stresses in Tomato and Lettuce plants. Monterisi S., Alzate Zuluaga M.Y., Rouphael Y., Colla G., Lucini L., Cesco S., Pii Y. International Agricultural Chemistry Winter School 2023. 6-9 Febbraio 2023, Udine.
4. Application of microbial and plant-derived biostimulants to enhance the resilience of crops against climate change-derived abiotic stresses. Pii Y. Workshop della Società Italiana di Chimica Agraria "New approaches to enhance crop resilience and sustainable production under a changing climate", 22 Giugno 2023, Viterbo.
5. Urea-doped hydroxyapatite nanoparticles and effects on crops: from lab to field scale. **Pii Y**. Nanoinnovation 2022. 19-23 September 2022, Rome (Italy).
6. *Azospirillum brasilense* induces different arrays of genes in cucumber plants depending on Fe nutrition. Monterisi S., Alzate Zuluaga M.Y., Valentinuzzi F., Cesco S., Pii Y. 20th International Symposium on Iron Nutrition and Interactions in Plants ISINIP 2022, 4-7 July 2022, Reims (France).
7. Comprensione dei meccanismi di azione delle sostanze biostimolanti attraverso l'integrazione della metabolomica e della trascrittomica. Lucini L., Pii Y. 2nd Biostimolanti Conference (2022).
8. Transcriptomic analysis for a better understanding of biostimulants-induced biological processes. Alzate Zuluaga MY, **Pii Y**. 1st International Electronic Conference on Agronomy. 10th May 2021
9. The induction of nitrate uptake in maize plants is counteracted by *Azospirillum brasilense* inoculation. **Pii Y**, Aldrighetti A, Valentinuzzi F, Mimmo T, Cesco S.

Rhizosphere 5 – Shining light on the World beneath our feet, Saskatoon, Saskatchewan, Canada, 7-11 July 2019.

10. *Azospirillum brasilense* contrasta l'induzione dell'assorbimento di nitrato in piante di mais. **Pii Y**, Aldrighetti A, Valentinuzzi F, Mimmo T, Cesco S. XXXVI Convegno Nazionale della Società Italiana di Chimica Agraria, Reggio Calabria, 24-26 September 2018.
11. Effect of plant growth-promoting rhizobacteria on the growth and quality of strawberry (*Fragaria x ananassa*). **Pii Y**, Graf H, Valentinuzzi F**,** Cesco S, Mimmo T. VIII ISHS Symposium on Mineral Nutrition of Fruit Crops, Bolzano, 27-30 June 2017.
12. Plant Growth-Promoting Rhizobacteria *Azospirillum brasilense* e processi di acquisizione del Fe in piante di cetriolo. **Pii Y**, Marastoni L, Springeth C, Fontanella MC, Beone GM, Cesco S, Mimmo T. XXXIV convegno nazionale Società Italiana di Chimica Agraria, Perugia, 5-7 October 2016.
13. Ionomic profile as a tool to assess the physiological status of different plant species. **Pii Y.**, Cesco S., Mimmo T. ICOBTE, Fukuoka (Japan), 10-17 July 2015.
14. Does MtN5 play a double role in the root response to symbiotic and pathogenic microorganisms? **Pii Y.**, Astegno A., Peroni E., Zaccardelli M., Pandolfini T., Crimi M. XLVII Congresso SIFV, Pisa, 30 June- 2 July 2008.
15. Effect of increased IAA synthesis in root nodule of *Medicago* plants. **Pii Y.,** Crimi M., Spena A., Pandolfini T. FISV, Riva del Garda, 22-25 September 2005.

Statement of interest

The scientific formation of Prof. Youry Pii, acquired during the academic studies and as research fellow and researcher with a fix-term contract in the disciplinary area of Agricultural Chemistry (SSD AGR/13), is mainly focused on plant nutrition and the rhizosphere processes underlying nutrients uptake. In particular, the study of the complex relationship between plant, soil and microorganisms in the process of nutrient acquisition is one of the central topics in the research activity of Prof. Youry Pii. He applied thereby interdisciplinary methodologies, such as molecular biology, genomics, genetics, biochemistry, analytical chemistry and plant physiology, aimed at identifying the molecular mechanisms that control important plant traits related to mineral nutrient acquisition, biotic and abiotic stress tolerance.

In details, the research activity of dr. Youry Pii has been focused on:

16. Physiological and molecular responses to nutritional deficiencies and heavy metal stresses in model plants (e.g. cucumber, barley, tomato) and in tree plants (e.g. strawberry, apple, grapevine).
17. Interaction between plants and PGPR to improve plant nutrients uptake/use efficiency.
18. Rhizosphere metagenomics;
19. Effects of biostimulants on crops physiology.

During his career, he was active in networking both at national and international level and fundraising activity applying for the national and international research calls.

Language competence

Italian: First Language
English: C1 (Certificate in Advanced English (CAE), University of Cambridge, ESOL Examinations)
German: B2 (telc Deutsch B2).