University Academic Curriculum Vitae

Personal information

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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 Science and Technology, Free University of Bolzano.
- 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";
- 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:

Academic Year 2022/23

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. *Less than 5 students have completed the evaluation form.*

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. *Less than 5 students have completed the evaluation form.*

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. *Are you generally satisfied with the way this course was taught?100% Generally Yes + Yes*

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. *Are you generally satisfied with the way this course was taught?100% Generally Yes + Yes*

Academic Year 2021/22

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. *Less than 5 students have completed the evaluation form.*

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. *Less than 5 students have completed the evaluation form.*

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. *Are you generally satisfied with the way this course was taught?100% Generally Yes + Yes*

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. *Are you generally satisfied with the way this course was taught?100% Generally Yes + Yes*

Academic Year 2020/21

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. *Less than 5 students have completed the evaluation form.*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. *Less than 5 students have completed the evaluation form.*

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. *Are you generally satisfied with the way this course was taught?100% Generally Yes + Yes*

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. *Are you generally satisfied with the way this course was taught?100% Generally Yes + Yes*

Academic Year 2019/20

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. *Less than 5 students have completed the evaluation form.*

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. *Are you generally satisfied with the way this course was taught?100% Generally Yes + Yes*

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. *Are you generally satisfied with the way this course was taught?100% Generally Yes + Yes*

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. *Are you generally satisfied with the way this course was taught? 89% Generally Yes + Yes*

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. *Are you generally satisfied with the way this course was taught? 100% Generally Yes + Yes*

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. *Are you generally satisfied with the way this course was taught? 100% Generally Yes + Yes*

Academic Year 2017/18

Course of "**Biochemistry and physiology of agricultural plants - Exercise**" (3 CFU) – Bachelor in Agricultural, Food and Mountain Environmental Sciences, Free University of Bolzano. Teaching language: English. *Course held in co-presence with Prof. Stefano Cesco (responsible of the course): course evaluation not foreseen.*

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. *For this course, less than five questionnaires have been completed.*

Academic Year 2016/17

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. *Are you generally satisfied with the way this course was taught? 87,5% Generally Yes + Yes*

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): course evaluation not foreseen.*

Academic Year 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): course evaluation not foreseen.*

Academic Year 2014/15
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): course evaluation not foreseen.*

Academic Year 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 2009/10

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.

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

Academic Year 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

- 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).

DOI: 10.1016/j.chemosphere.2019.125298

Alternanza Scuola-Lavoro

Tutoring of High-School students

- Daniel Tais, 23.07-03.08.2018, 27.08 – 04.09.18 Realgymnasium Peter Anich, Bolzano
- Ivan Domenici 29.05-15.06.2024 Realgymnasium Peter Anich, Bolzano

Other activities related to didactic

AY 2023/24 Laboratorium "Projektwoche Rendezvous mit dem Traumberuf": Soil chemistry and biochemistry lab for High School Students.

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).*
- Guest Editor for:
  - *Acta Horticolturae* (Special Issue VIII International Symposium on Mineral Nutrition of Fruit Crops);
  - *MDPI Agriculture* (Special Issue: Rhizosphere Research http://www.mdpi.com/journal/agriculture/special_issues/Rhizosphere_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**
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
2018-2021	Prof. Tammam Tillo – Dr. Roberto Confalonieri	FESR 2014-2020	Hyperspectral images for inspection applications – H2I	201878.50 €
2019-2021	Prof. Stephan A. Schmidt-Wulffen, Prof. Stefano Cesco	Free University of Bolzano	Scientific visualisation: impact on practice - VIP	100000€
2018-2021	Prof. Stefano Cesco	FESR 2014-2020	Hydrothermal carbonization of Biogas digestate for hydroPonics: an innovative concept of bio-refinery - HB Ponics	237150€
2018-2021	Prof. Tanja Mimmo	Free University of Bolzano	Spatial and temporal nutrient dynamics in the rhizosphere to unravel nutrient	97000 €

			mobilization and uptake processes in cultivated plants - NUMICS	
2017-2020	Prof. Tanja Mimmo	Free University of Bolzano	Rhizosphere processes affect copper bioavailability in vineyard soils - RHIZOPRO	70000 €
2017-2018	Prof. Stefano Cesco	Azienda Cooperativa Sant'Orsola, Pergine Valsugana - TN	Influence of fertigation solution composition of fruits quality - FERTFRUIT	7500 €
2016-2019	Prof. Stefano Cesco	Free University of Bolzano	Sustainable grapevine nutrition strategies to enhance soil biodiversity and grapevine production - GRASP	50000 €
2015-2017	Prof. Stefano Cesco	Free University of Bolzano	The role of nutrient availability on fruit quality parameters: molecular and chemical evaluation of strawberry fruits - BERRY	96000 €
2013-2019	Prof Tanja Mimmo	LIFE12 ENV/IT/000671 (progetto EU)	Optimised nutrients management from livestock production in Alto Adige - LIFE-OPTIMAL2012	230000€
2013-2016	Prof Tanja Mimmo	MIUR - FIRB	Rhizosphere management for sustainable crop production: processes and mechanisms involved in soil nutrient availability, plant uptake and translocation - RHIZOCROP	306344 €

Publications

Scientific production is documented by 91 Scopus-listed documents (23.01.2024, H-Index 28, Number of Citations: 3001) and more than 60 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, 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

2. 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
3. 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.
4. 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.
5. 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.
6. 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.
7. 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
8. 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/)

List of publications

1. 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

2. 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

3. Tiziani, R., Pranter, M., Valentinuzzi, F., **Pii, Y.,** Luigimaria, B., 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

4. 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

5. 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

6. 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

7. 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

8. 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

9. 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

10. 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

11. 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

12. 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

13. 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

14. 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.

15. 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

16. 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.

17. 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.

18. 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.

19. 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.

20. 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.

21. 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

22. 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.

23. 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.

24. 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.

25. 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.

26. 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.

27. 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.

28. 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.

29. 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.

30. 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

31. 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.

32. 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.

33. 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.

34. 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.

35. 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. Subject Category: Agricultural and Biological Science: Q1. IF 2.776. Number of citation: 0.

36. 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. *Subject Category: Agronomy and Crop*

Science, Q3. IF 0.753. Numbero of citations: 0

37. 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. *Subject Category: Multidisciplinary, Q1. IF 0.840. Number of citations: 0.*

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Further data

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

1. Urea-doped hydroxyapatite nanoparticles and effects on crops: from lab to field scale. **Pii Y**. Nanoinnovation 2022. 19-23 September 2022, Rome (Italy).
2. *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).
3. 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
4. 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.
5. *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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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:

a) 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).
b) Interaction between plants and PGPR to improve plant nutrients uptake/use efficiency.
c) Rhizosphere metagenomics;
d) 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).