University Academic Curriculum Vitae

Personal information Name: **Sonia Monterisi**

Education since leaving school

- **2018**, Bachelor's Degree in Biotechnology; University of Bari "Aldo Moro" (Italy). Mark: 99/110
- **2021**, Master's Degree in Food Sciences for the Innovation and Authenticity; Free University of Bozen-Bolzano (Italy). Mark: 110/110 *cum Laude*

Professional experience

From / to	Job title	Name of academic Institution	Academic level	responsibilities
October 2014-December 2018	Bachelor student	Università degli studi di Bari "Aldo Moro"	Bachelor degree	Set up of a RNA isolation protocol for a novel species of *Staphylococcus*
November 2021-present	PhD student	Free University of Bozen-Bolzano	PhD degree	Investigation of mode of action of protein hydrolysates on lettuce and tomato grown under optimal and abiotic stress conditions (i.e., salt and N deficiency)
October 2019-September 2021	Master student	Free University of Bozen-Bolzano	Master degree	Application of High Resolution Melting technique to trnL (UAA) Intron Allowed a Qualitative Identification of Apple Juice Adulterations

Experience in academic teaching

- **AY 2022/23.**Teaching assistant for the course of "**Environmental chemistry towards food processing**", Master in Food Science for Innovation and Authenticity, Free University of Bozen-Bolzano. Teaching language: English.

Bachelor and Master Thesis Supervision

- **AY 2022/23.** Candidate: Rebollo Vicioso Carmen. Title of the thesis: "Exploring the Impact of Red and Blue LED Light on Growth, Nutritional composition, and Antioxidant Properties of *Valerianella Locusta* (Lamb´s Lettuce)". Supervisor: Prof. Youry Pii. Second Supervisor: Sonia Monterisi. Master in Food Science for Innovation and Authenticity, Free University of Bozen-Bolzano.

Memberships

- Member of Italian Society of Agricultural Chemistry (SICA).

Research and scholarships

Date granted	Award Holder(s)	Funding Body	Title
November 2021-October 2024	Sonia Monterisi	Free University of Bozen-Bolzano	PhD scholarship

Publications

Scientific production is documented by 8 scientific papers listed in Scopus (H-index: 3, total citations: 37. Updated at 13/09/24) and 4 congress contribution

LIST OF PUBLICATIONS ON SCIENTIFIC JOURNALS:

1. Lozano-González J.M., Alzate Zuluaga M.Y., 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. https://doi.org/10.1016/j.stress.2024.100565 . ISSN: 2667064X
2. **Monterisi S.**, Zhang L., Garcia-Perez P., Alzate Zuluaga M. Y., Ciriello M., El-Nakhel C., Buffagni V., Cardarelli M., Colla 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. https://doi.org/10.1038/s41598-024-61576-4. ISSN: 20452322
3. **Monterisi S.**,Garcia-Perez P., Buffagni V., Alzate Zuluaga M. Y., Ciriello M., Formisano L., El-Nakhel C., Cardarelli M., Colla 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. https://doi.org/10.1111/ppl.14357 ISSN: 00319317
4. Lucchetta M., Romano A., Alzate Zuluaga M. Y., 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: 1289288. https://doi.org/10.3389/fpls.2023.1289288. ISSN: 1664462X.
5. Alzate Zuluaga M.Y., 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: 184. https://doi.org/10.1186/s12866-023-02918-6. ISSN: 14712180
6. **Monterisi S.**, Alzate Zuluaga M.Y., 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, 12:1437. https://doi.org/10.3390/foods12071437. ISSN: 23048158.
7. Alzate Zuluaga M.Y., **Monterisi S.**, Rouphael Y., Colla G., Lucini L., Cesco S. and 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., 14:1077140. https://doi.org/10.3389/fpls.2023.1077140. ISSN: 1664462X.
8. 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 Tomato. International Journal of Molecular Sciences. 23:14216. https://doi.org/10.3390/ijms232214216. ISSN:1422-0067.

CONFERENCE ABSTRACTS AND POSTERS:

1. **Monterisi S.**, Zhang L., Garcia-Perez P., Alzate Zuluaga M. Y., Ciriello M., El-Nakhel C., Buffagni V., Cardarelli M., Colla 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. XLII SICA Congress. 9-11 September, Alghero, Italy.
2. **Monterisi S.**, Alzate Zuluaga M.Y., Rouphael Y., Colla G., Lucini L., Cesco S., Pii Y. (2023) Vegetal-derived Protein Hydrolysates differently alleviate salinity and nitrogen stresses in Tomato and Lettuce plants. International Agricultural Chemistry Winter School 2023. 6-9 February, Udine, Italy.
3. **Monterisi S.**, Alzate Zuluaga M.Y., Miras-Moreno B., Rouphael Y., Colla G., Lucini L., Cesco S., Pii Y. (2022) Plant-derived foliar biostimulants vs. root colonizing plant growth-promoting rhizobacteria ameliorative effects in salt-stressed tomato plants. XL SICA Congress. 5-7 September, Pisa, Italy.
4. **Monterisi S.**, Alzate Zuluaga M.Y., Miras-Moreno B., Rouphael Y., Colla G., Lucini L., Cesco S., Pii Y. (2022) Plant-derived foliar biostimulants vs. root colonizing plant growth-promoting rhizobacteria ameliorative effects in salt-stressed tomato plants. III Convegno AISSA #under40. 14-15 July, Bolzano, Italy.
5. Alzate Zuluaga M.Y., **Monterisi S.**, Rouphael Y., Colla G., Lucini L., Cesco S., Pii Y. (2022). Plant-derived biostimulants differentially mitigate salinity stress in lettuce and tomato plants. III Convegno AISSA #under40, 14-15 July, Bolzano, Italy.
6. **Monterisi S.**, Alzate Zuluaga M.Y., Valentinuzzi F., Cesco S., Pii Y.(2022) *Azospirillum brasilense* induces different arrays of genes in cucumber plants depending on Fe nutrition. International Symposium on Iron Nutrition and Interactions in Plants (ISINIP). 4-8 July, Reims, France.

Awards

Best publication under 35 in food topic by Italian Society of Agricultural Chemistry (SICA). 2024 edition.
Monterisi S., Alzate Zuluaga M.Y., Porceddu A., Cesco S., Pii Y. The application of High-Resolution Melting Analysis to *trnL (UAA)* intron allowed a qualitative identification of apple juice adulterations

Best Poster Award at XL SICA Congress, Pisa 5-7 September 2022. **Sonia Monterisi**, Monica Yorlady Alzate Zuluaga, Begoña Miras-Moreno, Youssef Rouphael, Giuseppe Colla, Luigi Lucini, Stefano Cesco, Youry Pii “Plant-derived foliar biostimulants vs. root-colonizing plant growth-promoting rhizobacteria: ameliorative effects in salt-stressed tomato plants”

Statement of interest	The scientific interests of Dott. Sonia Monterisi are mainly focused on the study of interactions among plants and biostimulants (i.e., beneficial microorganisms and protein hydrolysates) aiming at understanding the molecular mechanisms underpinning the biostimulants effects on plants. In particular, her main focus is on the application of omics techniques (*i.e.*, transcriptomic, metabolomic and metagenomic) together with other molecular biology techniques (e.g., DNA and RNA extraction and purification, electrophoresis, PCR, RT-qPCR) to investigate the plant genes involved in the molecular response to the biostimulant application, either in optimal or abiotic stresses conditions. Moreover, the effects induced by biostimulants application were also investigated at the level of rhizosphere and phyllosphere microbiota. In addition, she also investigated the impact of growing conditions (e.g. exposure to Red and Blue LED lights) on plants yield (*i.e.*, root dry weight, shoot dry weight, leaf area), nutritional composition (*i.e.*, sugar, organic acids and phenols composition) and antioxidant properties (e.g., DPPH, ABTS, CUPRAC; FRAP) of leafy vegetable *Valerianella Locusta.*
Language competence	Italian: Native speaker. C1 English: C1 level, Free University of Bozen-Bolzano, 2021