University Academic Curriculum Vitae

Personal information Lucrezia Angeli
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Education since leaving school

- 2017 B.Sc. in Nutrition Sciences 110/110; (Università degli Studi di Urbino)
- 2019 M.Sc. in Human Nutrition Science110/110 cum laude (Università di Pisa)

Present appointment

- Research Assistant
- 15/03/2024
- Free University of Bozen-Bolzano, faculty for agricultural, environmental and food sciences
- Characterization of bioactive compounds from alpine plants with analytical approaches

Professional experience

Chronological list of all previous employments (each with job title, starting and finishing dates, level, employer, responsibilities)

From / to	Job title	Name of academic Institution	Academic level	responsibilities
12/2023 – 03/2024	Assistant Researcher	Free University of Bozen-Bolzano	AR	- Characterization of the composition and antioxidant activity of food products with LC-MS and antioxidant kinetics -Authentication of saffron with ^{1}H NMR
11/2020 – 10/2023	PhD candidate	Free University of Bozen-Bolzano	PhD	-Development and validation of kinetic methods to determine the antioxidant activity of food products, i.e., natural extracts from fruits, vegetables, herbs, spices. - Characterization of the bioactive compounds extracted from foods with analytical techniques such as HPLC-DAD, high-resolution mass spectrometry,

				and electrochemistry using targeted and untargeted, qualitative and quantitative approaches.
March 2023/June 2023	Visiting PhD student	Technical University of Munich	Visiting PhD student	-Untargeted metabolomics with UPLC-ESI-TOF MS to find biomarkers to determine the quality of italian saffron samples
April 2020/ October 2020	Qualified technician	Laimburg Research Centre	M.Sc.	-Recovery of volatiles from wine with different extraction techniques, such as LLE, SPE, QuEChERS. -Qualitative and quantitative analysis of volatiles from wine with GC-MS. -Analytical methods development, spectroscopic analyses with UV-Vis and NIR instruments.
March 2019/September 2019	Internship	Laimburg Research Centre	M.Sc.	Qualitative and quantitative analysis of volatiles, sugars, organic acids, and polyphenols extracted from apples with GC-MS, HPLC-PAD, HPLC-MS/MS. Production of my master thesis.
December 2016/March 2017	Internship	Anna Bezzeccheri Nutritionist	B.Sc.	Observation of patients and learning the job of a nutritionist.

Where applicable: Design competitions and awards received
-National Award “Premio giovani in memoria di Luigi Zerilli”, awarded by the Division of Mass Spectrometry of the Italian Chemistry Society for the best published article on italian research on mass spectrometry by a young researcher in 2021.

Experience in academic teaching

- Temporary contracts (Oct 2021/Sept 2023) as teaching assistant for the course of Food Chemistry in the M.Sc. in Food Sciences for Innovation and Authenticity, Free University of Bolzano
  -Preparation of procedures and experiments for the teaching activity

-Correct use of lab equipment, glassware and instruments; extraction of macro and micronutrients from different food matrices; quantitation of food components with classical spectrophotometric assays; quantitative analysis of small molecules from food with HPLC DAD

- Co-supervision of two different Master theses (SSD AGR/15): "Determination of the antioxidant activity of local south-Tyrolean whey vinegars by a stoichio-kinetic approach based on DPPH radicals" in 2021; "Antioxidant extraction and characterization from apple matrix" in 2022.

Memberships

Member of the "Società Chimica Italiana", "Divisione di Spettrometria di Massa"

Research and scholarships

- I was awarded a scholarship to go to the 5th International Mass Spectrometry School in Belfast, 2022

Date granted	Award Holder(s)	Funding Body	Title	Amount received
11/01/2022	Lucrezia Angeli	Divisione di spettrometria di massa, Società Chimica Italiana	Scholarship to attend the 5th mass spectrometry school	School fees (300 £) + 150 € for reimbursement
18/05/2022	Lucrezia Angeli	Divisione di spettrometria di massa, Società Chimica Italiana	Award for the best article published on mass spectrometry in 2021 by a young researcher, in memory of Luigi Zerilli	1000 €

Publications

▪ Comparative analysis of antioxidant activity and capacity in apple varieties: Insights from stopped flow DPPH• kinetics, mass spectrometry and electrochemistry, Lucrezia Angeli, Francesca Populin, Ksenia Morozova, Yubin Ding, Umme Asma, Sara Bolchini, Anka Cebulj, Nicola Busatto, Fabrizio Costa, Giovanna Ferrentino, Matteo Scampicchio, *Food Bioscience*, 2024 (DOI: 10.1016/j.fbio.2024.103729)

▪ A multifaced approach sheds light on the molecular details underlaying the mechanism preventing enzymatic browning in 'Majda'apple cultivar (*Malus domestica Borkh.*), Anka Cebulj, Francesca Populin, Domenico Masuero, Urska Vrhovsek, Lucrezia Angeli, KseniaMorozova, Matteo Scampicchio, Fabrizio Costa, and Nicola Busatto, *Scientia Horticulturae*, 2023 (DOI: 10.1016/j.scienta.2023.112137)

▪ A kinetic-based stopped-flow DPPH• method, Lucrezia Angeli, Ksenia Morozova, and Matteo Scampicchio, *Scientific Reports*, 2023 (DOI: 10.1038/s41598-023-34382-7)

▪ Ultrasound assisted extraction of oils from apple seeds: A comparative study with supercritical fluid and conventional solvent extraction, Alessandra Gasparini, Giovanna Ferrentino, Lucrezia Angeli, Ksenia Morozova, and Matteo Scampicchio, *Innovative Food Science & Emerging Technologies*, 2023(DOI: 10.1016/j.ifset.2023.103370)

▪ Effect of extraction treatments on the functional properties of free and bound phenols in apple seeds, Yubin Ding, Ksenia Morozova, Lucrezia Angeli, Alessandra Gasparini, Giovanna Ferrentino, and

Matteo Scampicchio, *Food Bioscience*, 2023 (DOI: 10.1016/j.fbio.2023.102602)
▪ HPLC-Triple detector (Coulometric array, diode array and mass spectrometer) for the analysis of antioxidants in officinal plants, Yubin Ding,Ksenia Morozova, Sebastian Imperiale, Lucrezia Angeli, Umme Asma, Giovanna Ferrentino, and Matteo Scampicchio, *LWT*, 2022 (DOI: 10.1016/j.lwt.2022.113456)
▪ A novel stoichio-kinetic model for the DPPH• assay: the importance of the side reaction and application to complex mixtures, Lucrezia Angeli, Sebastian Imperiale, Yubin Ding, Matteo Scampicchio, and Ksenia Morozova, *Antioxidants*, 2021 (DOI:10.3390/antiox10071019)

Further data

▪ March 2021: poster presentation at the international conference Frühjahssymposium (online), „A stoichio-kinetic model for the DPPH• assay: the importance of the side reaction".
▪ June 2021: oral talk at the national conference 9 th MS J Day (online), „Detection of products of the reaction between 2,2-diphenyl-1-picrylhydrazyl radical (DPPH•) and common antioxidants by high resolution mass spectrometry".
▪ September 2021: poster presentation at the national conference First Virtual Workshop on the Developments in the Italian PhD Research on Food Science, Technology and Biotechnology (online), „The synergism between antioxidants in herbs and spices on the inhibition of radical chain reactions through kinetic approaches".
▪ April 2022: selected for the oral talk at the 5th International Ma ss Spectrometry School, Belfast, UK „HPLC-HRMS validates a novel kinetic model for the reaction between the 2,2-diphenyl-1 picrylhydrazyl radical (DPPH•) and common antioxidants".
▪ June 2022: invited speaker at the national conference Massa 2022, as winner of the Young Researcher award from the mass spectrometry division of the Italian chemistry society, Carlentini (SR) „The detection of new products by HPLC-HRMS validates a novel stoichio-kinetic model for the reaction between the 2,2-diphenyl-1-picrylhydrazyl radical (DPPH•) and common antioxidants".
▪ September 2022: poster presentation at the 26 th Workshop on the Developments in the Italian PhD Research on Food Science, Technology and Biotechnology, Asti (AT) „Synergistic and antagonistic reactions between food antioxidants".
▪ May 2023: Poster presentation at the international conference on Antioxidants, Barcelona, ES „A standardized kinetic-based stopped-flow DPPH• assay to measure the antioxidant activity and capacity of ascorbic acid and fruit juices".
▪ September 2023: Oral presentation at the 27th Workshop on the Developments in the Italian PhD Research on Food Science, Technology and Biotechnology, Portici (NA), as a finalist for the What for award „Valorisation of South Tyrolean Food Products Through the Study of Their Antioxidant Behaviour".

Language competence

- Italian: mothertongue
- English: C1 (CAE - Certificate Advanced English)
- German: B1 (bilinguism patent from Province of Bolzano)

Date

07/03/2024

Signature