

## Curriculum Vitae - Giovanna Ferrentino

**SSD: AGR/15 (Food Science and Technology-Free University of Bozen-Bolzano)**

**ORCID:** <https://orcid.org/0000-0002-3208-6166>

**SCOPUS ID:** <https://www.scopus.com/authid/detail.uri?authorId=25225195000>

**Number of publications: 105**

**h index (SCOPUS): 25**

**Number of citations (SCOPUS): 1,755**

### Most important academic stations

- **From 01/05/2021 to date:** Associate Professor, Faculty of Science and Technology, Free University of Bozen-Bolzano.
- **28/09/2023:** Habilitation as Full Professor for the sector 07/F1 - Scienze e tecnologie alimentari
- **From 01/05/2018 to 01/05/2021:** Senior researcher on a fixed term contract (RTD senior), Faculty of Science and Technology, Free University of Bozen-Bolzano.
- **From 15/09/2015 to 01/05/2018:** Junior researcher on a fixed term contract (RTD junior) at the Faculty of Science and Technology, Free University of Bozen-Bolzano
- **01/03/2017:** Habilitation as Associate Professor for the sector 09/D3 – Impianti e processi chimici industriali
- **From 01/05/2010 to 01/05/2015:** Postdoc position at the Department of Industrial Engineering, University of Trento
- **From 01/02/2009 to 01/02/2010:** Postdoc position at the Department of Chemical Engineering, University of Salerno
- **15/02/2009:** Ph.D. in Chemical Engineering, University of Salerno
- **24/11/2005:** Master degree in Chemical Engineering, mark 110/110 cum Laude, University of Salerno

### Main research topics

- Valorisation of food by-products through the recovery of bioactive compounds with conventional and innovative extraction technologies
- Formulation of functional foods and protein based products (i.e. texturized meat analogs)
- Recovery and reutilization of plant based proteins
- Encapsulation of bioactive compounds using conventional and innovative techniques

### Teaching activities

- Food and wine science and technology and recovery methods of agro-food by-products. L-GASTR Enogastronomy in Mountain Areas
- Unit Operations in Food Engineering, L-25 Agricultural, Food and Mountain Environmental Sciences
- Innovative Food Technologies, LM-70 Food Sciences for Innovation and Authenticity

### Main research projects in the years 2015-2024

- Supercritical fluid chromatography as a green sustainable technique for the detection and isolation of biomolecules (AUTHENTICATE), internal funding (PI, 158.874,62 €)
- Cross-border cooperation to enhance alpine plants as a source of bioactive compounds (NETTLE), INTERREG I-A 2021-2027 (PI, 397.000,00 €)
- Rice by-products valorization: from the recovery of bioactive compounds to the regeneration of used frying oils (RAINDROP), PRIN 2022 PNRR (CO-I, 102.347,70 €)
- Novel extraction procedures for the detoxication of apple pomace (NEED), internal funding (PI, 80.000 €)
- Valorisation of apple seeds: from an industrial by-product to an essential oils (SEED), FUSION GRANT (PI, 50.000 €).
- Renewable proteins from by-products of oleaginous seeds (NOVEL), Fondazione Cariverona (PI, 100.000 €).

- Recovery of high valuable compounds from apple by-products processing (ApplebyPro), internal funding (PI, 19.316,03 €).
- Development of insect-based feed products for livestock production in regional cycles in South Tyrol (PROINSECT), FESR 2014-2020 (Member of the team, 135.224,00 €).
- Optimization of WOOD gasification chain in South Tyrol to produce bio-energy and other high-value green products to enhance soil fertility and mitigate climate change (WOOD-UP), FESR 2014-2020 (Member of the team, 60.600,00 €).
- From food waste to bio-degradable products, exploring the innovative potential of microbial cellulose (InnoCell), internal funding (Member of the team, 101.000,00 €).

#### **Most important awards**

- 2019: Research Award 2019 for under 40 age researchers for recent and excellent research studies awarded by the "Stiftung Südtiroler Sparkasse" (5.000 €).
- 2011: National prize "Lauro Ferrarini", First Edition, for the best research project in the field of food processing, project entitled "An innovative technology for the food industry: application of supercritical carbon dioxide pasteurization for shelf life extension of cooked ham" (32.000 €).

#### **Memberships**

- Member of Società Italiana di Scienze e Tecnologie Alimentari (SISTAL)
- Member of The Institute of Food Technologists (IFT)
- Member of Integrating Food Science and Engineering Knowledge into the Food Chain (ISEKI-Food Association)

#### **Third mission**

- Commissioned research activity (Projects OLICUT and CREAM) and consultations for Loacker S.p.A. (BZ)
- Commissioned research activity (Projects SEEDS and GIRASOX) and consultations for Cereal Docks S.p.A. (VI)
- Commissioned research activity (Project TextPro) and consultations for Dr. Schär AG (TS)
- Commissioned research activity (Project SuperConi) and consultations for Azienda Agricola Reppucci e Figli (TN)
- Commissioned research activity (Project MASTERCREAM and MASTERCREAM2) and consultations for Flavor Chimica S.n.c. (TN)
- Commissioned research activity (Project VISCOTEST) and consultations for LB LYOpharm srl (BZ)
- Commissioned research activity (Project SPID and PUFAMIX) and consultation for DSM Nutritional Products AG (Basel, Switzerland)
- Commissioned research activity (Project "Application of supercritical carbon dioxide pasteurization for the shelf life extension of cooked ham") and consultation for Ferrarini S.p.a. (Reggio Emilia)
- AY 2019/2020 Organization and participation to the Long Night of Research (LUNA)
- AY 2020/2021 Organization and participation to the JUNIOR UNI WORKSHOP at the Free University of Bolzano with children developing the laboratory activity "Natural colorants from fruits and vegetables by-products".
- AY 2019/2020 Organization and participation to the JUNIOR UNI WORKSHOP at the Free University of Bolzano with children developing the laboratory activity "Natural colorants from fruits and vegetables by-products".
- AY 2019/2020 Guided visit of Food Pilot Lab for 25 students of Istituto Tecnico per il Turismo e le Biotecnologie "Marie Curie" (Merano).
- AY 2019/2020 Project with High School Students of Istituto Istruzione Secondaria Superiore "Ghandi" (Merano, BZ). Title of the project: Valorization of Food Waste for a Sustainable Society. Number of hour: 20. Language: Italian. Period: 01.11.2019 – 01.03.2020.
- AY 2018/2019 Organization and participation of Mini-NOI at the NOI Technology Park as initiative and interaction for schools of all levels developing the laboratory activity "Perception of flavors stimulated by special recipes".

- AY 2018/2019 Project with High School Students of Istituto Istruzione Secondaria Superiore "Ghandi" (Merano, BZ). Title of the project: DolcePlus. Number of hours: 50. Language: Italian. Period: 01.11.2018 - 01.06.2019.
- AY 2018/2019 Participation to the radiophonic regional program of RAI held by Dr. Carmela Marsibilio on the topic "Valorization of spent coffee powder through extraction of antioxidants"
- June 21<sup>st</sup> 2018 Participation to the seminar entitled "Coltivare Innovazione – Seminario sulla Ricerca Industriale" organized by Cereal Docks S.p.a. (Camisano Vicentino, VI) with the presentation "Research activities and Innovative ideas at the Free University of Bolzano".
- AY 2016/2017 Organization and participation to the Long Night of Research (LUNA)

#### Patent

- Italian patent "Oleogel con capacità antiossidante". Number: 102018000009242. Released on 14/09/2020.

#### Selected publications

1. Gonzales, RO, Rajagukguk, YV, **Ferrentino, G\***, Morozova, K, Scampicchio, M, 2024. Detection of butter adulteration with palm stearin and coconut oil by differential scanning calorimetry coupled with chemometric data analysis. *Food Control* 110165. DOI: 10.1016/j.foodcont.2023.110165. IF: 6. Q1: Food Science and Technology.
2. Rajat, S, **Ferrentino, G**, Morozova, K, Zatelli, D, Scampicchio, M, Amorati, R, 2024. Antioxidant efficiency and oxidizability of mayonnaise by oximetry and isothermal calorimetry. *Food Chemistry* 137274. DOI: 10.1016/j.foodchem.2023.137274. IF: 8.8. Q1: Food Science and Technology.
3. Gasparini, A, **Ferrentino, G\***, Angeli, L, Morozova, K, Zatelli, D, Scampicchio, M, 2023. Ultrasound assisted extraction of oils from apple seeds: A comparative study with supercritical fluid and conventional solvent extraction. *Innovative Food Science and Emerging Technologies* 103370. DOI 10.1016/j.ifset.2023.103370. IF: 6.6. Q1: Food Science and Technology.
4. Procopio, FR, Klettenhammer, S, **Ferrentino, G\***, Scampicchio, M, do Amaral Sobral, PJ, Hubinger, MD, 2023. Comparative Study of Cinnamon and Paprika Oleoresins Encapsulated by Spray Chilling and Particles from Gas Saturated Solutions Techniques: Evaluation of Physical Characteristics and Oleoresins Release in Food Simulated Media. *Food and Bioprocess Technology* 16, 2147 – 2158. DOI 10.1007/s11947-023-03058-5. IF: 5.6. Q1: Food Science and Technology.
5. Mosibo, OK, Laopeng, S, **Ferrentino, G\***, Scampicchio, M, 2022. Oxidizability of Oils Recovered from Olive Seeds by Isothermal Calorimetry. *Foods* 1016. DOI:10.3390/foods11071016. IF: 5.561. Q1: Food Science and Technology.
6. Chel-Guerrero, LD, Castaneda-Corral, G, Lopez-Castillo, M, Scampicchio, M, Morozova, Oney-Montalvo, JE, **Ferrentino, G\***, Acevedo-Fernandez, JJ, Rodriguez-Buenfil, IM, 2022. In Vivo Anti-Inflammatory Effect, Antioxidant Activity, and Polyphenolic Content of Extracts from Capsicum chinense By-Products. *Molecules* 1323. DOI:10.3390/molecules27041323. IF: 4.297. Q2: Chemistry.
7. Klettenhammer, S, **Ferrentino, G\***, Zendehbad, HS, Morozova, K, Scampicchio, 2022. Microencapsulation of linseed oil enriched with carrot pomace extracts using Particles from Gas Saturated Solutions (PGSS) process. *Journal of Food Engineering* 110746. DOI: 10.1016/j.jfoodeng.2021.110746. IF: 6.203. Q1: Food Science and Technology.
8. **Ferrentino, G\***, Haman, N, Morozova, K, Tonon, G, Scampicchio, M, 2021. Phenolic compounds extracted from spruce (*Picea abies*) by supercritical carbon dioxide as antimicrobial agents against gram-positive bacteria assessed by isothermal calorimetry. *Journal of Thermal Analysis and Calorimetry*. Doi: 10.1007/s10973-020-10100-7. IF: 4.755. Q1: Chemistry.
9. **Ferrentino, G\***, Giampiccolo, S, Morozova, K, Spilimbergo, S, Scampicchio, M, 2020. Supercritical fluid extraction of oils from apple seeds: Process optimization, chemical characterization and comparison with a conventional solvent extraction. *Innovative Food Science and Emerging Technologies* 64, 102428. DOI: 10.1016/j.ifset.2020.102428. IF: 7.104. Q1: Food Science and Technology.

10. Valoppi, F, Haman, N, **Ferrentino, G\***, Scampicchio, M, 2020. Inhibition of lipid autoxidation by vegetable waxes. *Food and Function* 11, 6215-6225. DOI: 10.1039/d0fo01022g. IF: 6.317. Q1: Food Science and Technology.
11. Ndayishimiye, J, **Ferrentino, G\***, Haman, N, Scampicchio, M, 2020, Encapsulation of oils recovered from brewer's spent grain by particles from gas saturated solutions technique. *Food and Bioprocess Technology* 13, 256-264. DOI: 10.1007/s11947-019-02392-x. IF: 5.581. Q1: Food Science and Technology.
12. **Ferrentino, G\***, Ndayishimiye, J, Haman, N, Scampicchio, M, 2019. Functional activity of oils from brewer's spent grain extracted by supercritical carbon dioxide. *Food and Bioprocess Technology* 12, 789-798. DOI:10.1007/s11947-019-02249-3IF: 5.581. Q1: Food Science and Technology.
13. **Ferrentino, G\***, Morozova, K, Mosibo, OK, Ramezani, M, Scampicchio, M, 2018. Biorecovery of antioxidants from apple pomace by supercritical fluid extraction. *Journal of Cleaner Production* 186, 253-261. DOI: 10.1016/j.jclepro.2018.03.165. IF: 11.07. Q1: Engineering, Environmental.
14. **Ferrentino, G\***, Asaduzzaman, Md, Scampicchio, M, 2018. Current technologies and new insights for the recovery of high valuable compounds from fruits by-products. *Critical Reviews in Food Science and Nutrition* 58, 386-404. DOI: 10.1080/10408398.2016.1180589. IF: 11.208. Q1: Food Science and Technology.

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