Personal information
Name: **Dr. Olga Nikoloudaki**
E-Mail: olga.nikoloudaki@unibz.it,
Researcher identifiers: Scopus (57221563591), Orchid (0000-0002-2985-9033)

Current position 16/**03/2026**	**Researcher with fixed-term contract (RTT),** Free University of Bozen-Bolzano, Italy. Faculty of Agricultural, Environmental and Food Sciences. Disciplinary-scientific sector AGR/16 (Agricultural Microbiology) Project: "Fermented Food Microbiomes: Monitoring and Effects on Gut Microbiome Modulation" Supervisor: Prof. Raffaella Di Cagno
Other affiliations since 2024	*International Center on Food Fermentations, 39100, Bolzano, Italy*
Education	
2017 – 2021	**Ph.D Candidate** in Food Engineering and Biotechnology, Faculty of Science and Technology, Free University of Bozen-Bolzano, Bolzano, Italy. Supervisor: Prof. Marco Gobbetti
2018	**Visiting PhD Student**, School of Food and Nutritional Sciences (UCC), Cork, Related work *"Protein profile of raw cow milk and rheological properties for cheese making"* Supervisor: Prof. Paul McSweeney
2013-2015	**M.Sc**. Food Technology and Processing, Specialization: Food Biotechnology and Biorefining, Wageningen University, The Netherlands
2008-2012	**B.Sc.** Food Technology, Technological Educational Institute of Thessaly / TEI of Thessaly-Karditsa, Greece.
Past academic positions	**Researcher with fixed-term contract (RTDa),** Free University of Bozen-Bolzano, Italy. Faculty of Agricultural, Environmental and Food Sciences. Disciplinary-scientific sector AGR/16 (Agricultural Microbiology)
03/2023- 03/2026	Project: "Study of fermented food microbiome focusing on dairy ecosystem and construction of synthetic communities; *in vitro* study of fermented foods on the human colonic ecosystem" Supervisor: Prof. Raffaella Di Cagno
04/2022- 03/2023	**Post-doctoral Researcher**, Free University of Bozen-Bolzano, Italy. Project: "Unravelling the microbiome meta-community: the novel approach for steering cheese making (MICROMETACHEESE) + New Projects Development Fund – Gobbetti 2018" Supervisor: Prof. Marco Gobbetti
04/2021-03/2022	**Research Assistant**, Free University of Bozen-Bolzano, Bolzano, Italy. Project: "Innovations in Italian Dairy Industry for the enhancement of farm sustainability, milk technological traits and cheese quality (INNOVAMILK)" Supervisor: Prof. Marco Gobbetti

Experience in academic teaching

- **Oct 2023 – Current:** Professor, *B.Sc. in Enogastronomy in Mountain Areas*, Free University of Bozen-Bolzano Course: "Microbial Fermentations in Gastronomy and Methods of Recovery of Agro-Food By-Products" (48 hours/year). 1st Semester
- **Sept 2021 – March 2025:** Professor, *M.Sc. L-70 Program*, Free University of Bozen-Bolzano Course: "Fermentations as Tools for Making Traditional and Innovative Foods and Beverages" (63 hours/year). 2nd Semester
- **Jan 2022 – March 2025:** Lecturer, *Ph.D. Programs*, Free University of Bozen-Bolzano Course: "Meta-Omics Approaches to Study Food Fermentations" (48 hours/year). 2nd Semester
- **Oct 2020 – Sept 2022:** Teaching Assistant, *B.Sc. in Microbiology and Food Microbiology*, Free University of Bozen-Bolzano Responsibilities: Lecturing (28 hours/year), organizing and supervising practical courses. 1st Semester
- **Sept 2015 – June 2016:** Vocational Teacher, *Dairy and Milk Technologists*, Kavros-Crete, Greece Courses: Basic Microbiology, Dairy Science, and Dairy Production Processes (Total 280 hours)

Thesis supervisor

Co-supervisor Msc and Bsc Thesis

- Lara Gerbella "The new frontier of baked goods: functional sourdough fermented with probiotic lactobacilli strains to improve nutritional value and digestibility", 07/2023, Msc in Food Science in Innovation and authenticity
- Riccardo Scartozzi "Probiotics and prebiotics impacts on human health and food application", 09/24, Bsc in Sustainable Agriculture and Forestry in Mountain Environments

Supervisor Msc and Bsc Thesis

- Angela Rampanelli "Biotyping and identification of lactic acid bacteria from dairy sources", 07/2025, Bsc in Sustainable Agriculture and Forestry in Mountain Environments
- Dawid Chorzelewski "Probiotic potential in maintaining vaginal health: Screening and Characterization of Lactic Acid Bacteria", 07/2025, Msc in Food Science in Innovation and authenticity
- Dima El Janoudi "Comparative multimodal analysis of wheat flours for bakery applications: linking rheological, proteomic, and physicochemical profiles across quality levels", 10/2025, Msc in Food Science in Innovation and authenticity
- Asia Cigalotti "Development of a fermented non-alcoholic beverage from blueberry juice using lactic acid bacteria", 12/2025, Bsc in Enogastronomy in Mountain Areas

Internal co-supervision PhD thesis

- Federica Mastrolonardo "Insight into in vitro digestibility of leavened baked goods" 37 cycle International PhD in Food Engineering and Biotechnology
- Anastasia Palatzidi "The potential of the cheese microbiome to control cheese fermentation and its repercussions for the industry" 37 cycle International PhD in Food Engineering and Biotechnology
- Mushtaq, Bilal Sajid "Sourdough fermentation as a tool to increase the nutritional aspects of leavened baked goods" 38 cycle International PhD in Food Engineering and Biotechnology
- Francis Aheto "Microbiome–metabolome synergies: integrative approaches to steering food and human gut ecosystems for functional health outcomes" 38 cycle International PhD in Food Engineering and Biotechnology

- Konstantinos Theodosiadis Oulountag "Functional microorganisms, their metabolic capabilities and human health" 39th cycle PhD in Food Engineering and Biotechnology
- Cristina Aragón Ibáñez "Digestibility of sweet leavened baked goods" 40th cycle PhD in Food Engineering and Biotechnology
- Dima El Janoudi " From Whole to White Flour: Stability of Spontaneous Sourdough Microbiomes Across Refinement Levels" 41st cycle International PhD in Food Engineering and Biotechnology

Institutional assignments Technology transfer and research projects

Institutional assignments

- Admission commission for the admission procedure of the LM-70 Master for the academic year 2026/2027
- Tutor for the Bachelor program in Enogastronomy in Mountain Areas (L-Gastr) for the academic year 2026/2027
- Quality Assurance (QA) reference-person for the LM-70 Master Degre for the academic year 2026/2027
- Student Representative for the PhD program in Food Engineering and Biotechnology, Free University of Bozen-Bolzano, 2017-2020
- Member of the Joint Committee for the department of Science and Technology, Free University of Bozen-Bolzano, 2018-2019

Third Mission

- Guided visits to Micro4Food platform in occasion of the first kick-off meeting of the FESR (Infrastructure project) “Zero Residue” (2026)
- Participation at the Science Live 2025 “The Gardens of Knowledge” by UNIBZ.
- Participation at the Open Day for Schools by the NOI TechPark with guided tours of Micro4Food platform labs (Edition April 2025).
- Guided visits to Micro4Food platform in occasion of EUniverCities Network Conference (2025).
- Guided visits to Micro4Food platform at the NOI TechPark for Team Fraunhofer Italia, organized by NOI TechPark (2024).
- Guided visits to Micro4Food platform at the NOI TechPark for AdvantageAustria (Camera dell'Economia Austriaca - team of Italian offices in Milano, Roma, Padova and Bolzano) (2024).
- School Activities: Guided visits to Micro4Food platform at the NOI TechPark for Realgymnasium of Bozen (2024).
- Participation at the Open Day for Schools by the NOI TechPark with guided tours of Micro4Food platform labs (Edition March 2024).
- Guided visits to Micro4Food platform in occasion of the visit by the delegation of Camera di Commercio and IRE/WIFO led by the Director of NOI TechPark Dr. Ulrich Stofner (2024).
- Guided visits to Micro4Food platform in occasion of ERIAFF Annual Conference. Green and Climate Transition Plans in Agriculture and Agroforestry Systems (2023).
- Participation at the Open Day for Schools by the NOI TechPark with guided tours of Micro4Food platform labs (Edition March 2023).
- Guided Tours of Micro4Food platform for Master students of the University of Innsbruck – Institute of Microbiology, organised by NOI TechPark (2021 and 2022)

Research projects

I have collaborated with the PI on more than 22 funded research projects as investigator, co-investigator, or principal investigator, primarily supported by food and pharmaceutical industries as well as international research programmes. These projects addressed topics such as the development of probiotics for female health (Evonik Industries, Germany), in vivo evaluation of gluten-degrading probiotics and their effects on gut microbiota modulation (Evonik Industries, Germany), and the production of alternative plant-based dairy prototypes within the Horizon 2020 Smart Protein consortium (WP3.3.4). Additional collaborations include studies on the digestibility of sourdough-leavened baked goods and the reconstruction of fermentome-driven starter communities (Puratos, Belgium), investigations on the stability and microbial diversity of sourdoughs maintained in the Puratos Sourdough Library, and biomarker discovery for Alopecia Areata in collaboration with

Giuliani Pharma (Italy). Together, these projects reflect a sustained research activity at the interface of food fermentation, microbiome science, and translational applications for human health. I have collaborated with the PI on more than 22 funded research projects as investigator, co-investigator, or principal investigator, primarily supported by food and pharmaceutical industries as well as international research programmes. These projects addressed topics such as the development of probiotics for female health (Evonik Industries, Germany), in vivo evaluation of gluten-degrading probiotics and their effects on gut microbiota modulation (Evonik Industries, Germany), and the production of alternative plant-based dairy prototypes within the Horizon 2020 Smart Protein consortium (WP3.3.4). Additional collaborations include studies on the digestibility of sourdough-leavened baked goods and the reconstruction of fermentome-driven starter communities (Puratos, Belgium), investigations on the stability and microbial diversity of sourdoughs maintained in the Puratos Sourdough Library, and biomarker discovery for Alopecia Areata in collaboration with Giuliani Pharma (Italy). Together, these projects reflect a sustained research activity at the interface of food fermentation, microbiome science, and translational applications for human health. Since 2023, I also had an active role in building and developing the International Center on Food Fermentations (ICOFF), the international competence center lead Prof. Di Cagno, currently consisting of 11 team members (including technologists, technicians and researchers) coming from European and Asia countries, where researchers and 9 companies (local, national and international) work together to capitalize the most advanced innovations resulting from the research of Micro4Food.

Date granted	Role	Funding body or programme	Title of proposal	Grant (€)
2026–2028	Investigator	European Regional Development Fund (ERDF/FESR)	Infrastructure for the total valorization of agroindustrial waste (ZeroResidue)	2,400,536
2025–2028	Principal investigator	Company (Contract for research project since 2023 / Contracts and Contributions)	Digestibility of sourdough sweet baked goods (SDSweet)	200,000
2025–2028	Investigator	Internal (ID2025 / Interdisciplinary / unibz)	Data to Platform: AI-Powered Insights into Sourdough Bread Digestibility (IDigest)	200,000
2025-2026	Co-investigator	Company (Contract for research project since 2023 / Contracts and Contributions)	Complete Probiotic Blend for Women's Health & Wellness (FemVital)	70,000
2024–2027	Investigator	Company (Contract research project)	Design of potential formulation of yeasts probiotic or lysates with potential health benefits in human gut ecosystem	150,000
2024–2027	Investigator	Company (Contract research project)	Formulation of a consortium of probiotics in the regulation of intestinal barrier function and immune response	150,000
2024–2027	Investigator	Company (Contract research project)	Fermentation: A Sustainable Approach for the Development of plant-based Sausages	150,000
2024–2027	Investigator	Company (Contract research project)	Fermentation as an Effective and Sustainable Approach to Increase the Extractability and Bioactivity of apple phenolics	150,000
2024–2027	Investigator	Company (Contract research project)	Development of plant-based substitutes of meat, cheeses and eggs	150,000
2024–2027	Investigator	Company (Contract research project)	Exploring exotic experiences: Fermented snacks from around the world	150,000

2024–2027	Investigator	Company (Contract research project)	Unlocking the health and sensory benefits: exploitation of tailored fermentation and probiotics	150,000
2023–2026	Investigator	Company (Contract research project / Contracts and Contributions)	Gluten degrading-probiotic in the dietary management of symptomatic Celiac disease patients: a randomized placebo-controlled double-blinded study (Gluten-C)	85,000
2023–2024	Co-investigator	Company (Contract research project)	Investigation of sourdough stability originated from artisanal bakeries and maintained in the Sourdough Library (SD-stability)	45,000
2023–2024	Investigator	Company (Contract research project)	Sourdough breads: identification of the key-factors affecting digestibility and predictive modelling (Digest-predictivity)	20,000
2023-2026	Investigator	Internal infrastructure funding (unibz)	The use of GreenFeed to support the achievement of the climate targets of South Tyrol in mountain agriculture (NOMETAHNE)	69,968
2022–2025	Co-investigator	Company (Contract research project)	Microbial composition and diversity of spring water Bad Pedraces	20,000
2022-2023	Investigator	Company (Contract research project)	Microbiological and biochemical characterization of Helvetia sourdoughs	10,000
2022–2025	Investigator	National (Ministerial funding)	Pasta and baked goods: integrity, health and sustainability – process and product innovation (INTEGRI)	254,290
2022–2026	Investigator	International (Horizon Europe)	Innovative pulse and cereal-based food fermentations for human health and sustainable diets (HealthFerm)	550,450
2021–2022	Investigator	Company (Contract research project)	Metabolic characterization of selected microbial consortia during gluten and wheat bread digestion (Glutengut)	12,000
2020–2024	Investigator	International (Horizon 2020)	Smart Protein for a Changing World: alternative terrestrial protein sources	499,375
2018–2021	Investigator	Internal (Start-up fund)	Novel biotechnological options for the manufacture of functional cheeses with desirable organoleptic features (BIOFUNCHEESE)	70,000

External collaborations

-Bari University Aldo Moro, Italy (Prof. Maria De Angelis): multiple projects on gluten degrading consortia, probiotic formulas and sourdough synthetic microbial communities

-Torino University, Science and Technology department, Italy (Prof Chiara Cordero): untargeted and targeted two-dimension chromatography for volatiles in sourdough and sourdough breads

***-**Valencia University, Institute of Agrochemistry and Food Technology, Spain (Prof Cristina Rosell): rheological and structural properties of Bran-Tritordeum based sourdoughs*

Conference papers and abstracts

- Aheto F., Granehäll L., **Nikoloudaki O.,** Ben M., Mastrolonardo F., Plattner S., Di Cagno R., Gobbetti M., Polo A. 2024. The intake of Sambucus nigra extract can impact, in vitro, the human gut ecosystem. In the 38th EFFoST International Conference. Bruges, 12-14 November 2024.
- Ben M., Theodosiadis Oulountag K., **Nikoloudaki O.,** Polo A., Tlais A.Z.A., Gobbetti M., Di Cagno R. 2025. "Modulatory Effects of Sauerkraut Juice on the Gut Microbiome and Potential Impact on the Gut-Brain Axis". In "FEMS Micro 2025. Congress of European Microbiologists". FEMS, Milan, 14-17 July 2025.
- Aheto F., Granehäll L., **Nikoloudaki O.,** Ben M., Mastrolonardo F., Plattner S., Di Cagno R., Gobbetti M., Polo A. 2025. The intake of Sambucus nigra extract differentially impacts, in vitro, the human gut ecosystem. In "FEMS Micro 2025. Congress of European Microbiologists". FEMS, Milan, 14-17 July 2025.
- Theodosiadis O.K., Ben M., **Nikoloudaki O.,** Polo A., Tlais A.Z.A., Gobbetti M., Di Cagno R. 2025. Exploring the modulatory role of sauerkraut juice on gut microbiota and its possible implications for the gut-brain axis. In "Microbial Diversity 2025, Microbial diversity for empowering the ecological transition", Rome, 23-26 September 2025.
- Aheto F., **Nikoloudaki O.,** Granehäll L., Plattner S., Gobbetti M., Di Cagno R., Polo A. 2025. The in vitro intake of Sambucus nigra extract promisingly impacts the human gut ecosystem in an individual dependent way. In "International conference on fermented foods – book of abstracts", Bozen, 27-30 October 2025.

Speaker at the following conferences:

- "5th International Conference on Microbial Diversity". Microbial diversity as a source of novelty: function, adaptation and exploitation, 25-27 September 2019, Catania (Italy) Presentation title: "Functional microbiota of cows' milk and mechanistic understanding of drivers and shaping of milk microbiome"
- "6th International Conference on Foodomics". From Knowledge to Industry, from Industry to Knowledge, Cesena (Italy), 14-16 October 2020, Presentation title: "How multiple farming conditions correlate with the composition of the raw cow's milk lactic microbiome and its functionality for cheese making"
- "FEMS International online conference on microbiology". Novel aspects: Antimicrobial resistance, 28-31 October 2020, Online, Presentation title: "Role prediction of Gram-negative species in the resistome of raw cow's milk"
- "Management of breeding systems and environmental factors for the production and enhancement of natural starters in the cheesemaking processes – NATCASEI", November 26th, 2020, Online. Presentation title: "How multiple farming conditions correlate with the composition of the raw cow's milk lactic microbiome from Alto Adige farms and its functionality for cheese making."
- "8th International Symposium on Sourdough", Resilience, Sustainability, Wellness, 14-17 June 2022, Bolzano (Italy), Presentation title: "Gut microbiota modulation upon digestion of cereal-based products containing arabinoxylan-oligosaccharides (AXOS) using the simulator of the human intestinal microbial ecosystem (SHIME®)"
- "International Conference on Fermented Foods", 27-30 October 2025, Bolzano (Italy). Presentation title: "Ecological role-based assembly of synthetic sourdough ecosystems ensures robustness and reproducibility in sourdough fermentation"
- "7th International Conference in Food Science and Technology", Innovation and Sustainability challenges, 8-9 November 2025, Athens (Greece). Presentation title: "Ecological role-based design of synthetic microbial communities ensures stable and predictable microbiomes in fermented foods"

Poster Presentation at the following conferences:

- *"XXIII Workshop on the Developments in the Italian PhD Research on Food Science", Technology and Biotechnology*, 19 – 21 September 2018, Oristano (Italy), Poster title: "Functional microbiota diversity of cows' milk and mechanistic understanding of the shaping of non-starter lactic acid bacteria (NSLAB) microbiome assembly during cheese ripening"

- *"9th International Symposium on Sourdough"*, Forward with the past, 23-27 February 2026, Brussels (Belgium), Flash presentation/poster: "Sourdough fermentation of tritordeum and a tritordeum–bran composite: impacts on bread nutrition and proximal-colon microbiota in the SHIME® model"

Awards

- Best poster and flash presentation (1st place) award. *"9th International Symposium on Sourdough"*, Forward with the past, 23-27 February 2026, Brussels (Belgium), Flash presentation/poster: "Sourdough fermentation of tritordeum and a tritordeum–bran composite: impacts on bread nutrition and proximal-colon microbiota in the SHIME® model"

- Best publication of the year 2023 for the category young scientist by the Italian Society of Agro-Food and Environmental Microbiology (SIMTREA). Publication doi: https://doi.org/10.1016/j.foodres.2023.112743

Organizing committee

- "*8th International Symposium on Sourdough*", Resilience, Sustainability, Wellness, 14-17 June 2022, NoiTech park Bolzano (Italy)

- "International Conference on Fermented Foods", 27-30 October 2025, NoiTech park Bolzano (Italy) https://icff2025.webaimgroup.eu/

Memberships

- **SIMTREA :**"Società Italiana di Microbiologia Agraria, Alimentare e Ambientale" member since 2022
- Guest Editor for the Special Issue "Fermented Foods" by International Journal of Food Microbiology (Q1), 2025-26 https://www.sciencedirect.com/special-issue/327274/fermented-foods.

Reviewer for:

International Dairy Journal (Elsevier)
ERC 2025 Remote reviewer-ERC Advanced Grant "Environmental Biology, Ecology and Evolution"

Publications

1. **Nikoloudaki, O.,** Lemos Junior, W. J. F., Borruso, L., Campanaro, S., De Angelis, M., Vogel, R. F., Di Cagno, R., & Gobbetti, M. (2021). How multiple farming conditions correlate with the composition of the raw cow's milk lactic microbiome. Environmental Microbiology, 23(3), 1702–1716. https://doi.org/10.1111/1462-2920.15407
2. **Nikoloudaki, O.,** Lemos Junior, W. J. F., Campanaro, S., Di Cagno, R., & Gobbetti, M. (2021). Role prediction of Gram-negative species in the resistome of raw cow's milk. International Journal of Food Microbiology, 340, 109045. https://doi.org/10.1016/j.ijfoodmicro.2021.109045
3. Ameur, H., Cantatore, V., Filannino, P., Cavoski, I., **Nikoloudaki, O.,** Gobbetti, M., & Di Cagno, R. (2022). Date Seeds Flour Used as Value-Added Ingredient for Wheat Sourdough Bread: An Example of Sustainable Bio-Recycling. Frontiers in Microbiology, 13, 873432. https://doi.org/10.3389/fmicb.2022.873432
4. Arora, K., Carafa, I., Fava, F., Tuohy, K. M., **Nikoloudaki, O.,** Gobbetti, M., & Di Cagno, R. (2022). Sourdough performances of the golden cereal Tritordeum: Dynamics of microbial ecology, biochemical and nutritional features. International Journal of Food Microbiology, 374, 109725. https://doi.org/10.1016/j.ijfoodmicro.2022.109725
5. Calabrese, F. M., Ameur, H., **Nikoloudaki, O.,** Celano, G., Vacca, M., Junior, W. Jfl., Manzari, C., Vertè, F., Di Cagno, R., Pesole, G., De Angelis, M., & Gobbetti, M. (2022). Metabolic framework of spontaneous and synthetic sourdough metacommunities to reveal microbial players responsible for resilience and performance. Microbiome, 10(1). https://doi.org/10.1186/s40168-022-01301-3

6. Celano, G., Calasso, M., Costantino, G., Vacca, M., Ressa, A., **Nikoloudaki, O.,** De Palo, P., Calabrese, F. M., Gobbetti, M., & De Angelis, M. (2022). Effect of Seasonality on Microbiological Variability of Raw Cow Milk from Apulian Dairy Farms in Italy. Microbiology Spectrum, 10(5), e00514-22. https://doi.org/10.1128/spectrum.00514-22

7. Costantini, A., Da Ros, A., **Nikoloudaki, O.,** Montemurro, M., Di Cagno, R., Genot, B., Gobbetti, M., & Giuseppe Rizzello, C. (2022). How cereal flours, starters, enzymes, and process parameters affect the in vitro digestibility of sourdough bread. Food Research International, 159, 111614. https://doi.org/10.1016/j.foodres.2022.111614

8. Domingues Galli, B., **Nikoloudaki, O.,** Tonini, S., Helal, A., Di Cagno, R., Gobbetti, M., & Tagliazucchi, D. (2023). How starter cultures affect the peptidomic profile and bioactive activities of the Asiago-PDO cheese throughout ripening. Food Research International, 167, 112743. https://doi.org/10.1016/j.foodres.2023.112743

9. Polo, A., Albiac, M. A., Da Ros, A., Ardèvol, V. N., **Nikoloudaki, O.,** Verté, F., Di Cagno, R., & Gobbetti, M. (2023). The Effect of Hydrolyzed and Fermented Arabinoxylan-Oligo Saccharides (AXOS) Intake on the Middle-Term Gut Microbiome Modulation and Its Metabolic Answer. Nutrients, 15(3), 590. https://doi.org/10.3390/nu15030590

10. Galli, B. D., **Nikoloudaki, O.,** Granehäll, L., Carafa, I., Pozza, M., De Marchi, M., Gobbetti, M., & Di Cagno, R. (2024). Comparative analysis of microbial succession and proteolysis focusing on amino acid pathways in Asiago-PDO cheese from two dairies. International Journal of Food Microbiology, 411, 110548. https://doi.org/10.1016/j.ijfoodmicro.2023.110548

11. **Nikoloudaki, O.,** Aheto, F., Di Cagno, R., & Gobbetti, M. (2024). Synthetic microbial communities: A gateway to understanding resistance, resilience, and functionality in spontaneously fermented food microbiomes. Food Research International, 192(June), 114780–114780. https://doi.org/10.1016/j.foodres.2024.114780

12. **Nikoloudaki, O.,** Celano, G., Polo, A., Cappello, C., Granehäll, L., Costantini, A., Vacca, M., Speckmann, B., Di Cagno, R., Francavilla, R., De Angelis, M., & Gobbetti, M. (2024). Novel probiotic preparation with in vivo gluten-degrading activity and potential modulatory effects on the gut microbiota. Microbiology Spectrum, 12(7), e03524-23. https://doi.org/10.1128/spectrum.03524-23

13. **Nikoloudaki, O.,** Pinto, D., Acin Albiac, M., Celano, G., Da Ros, A., De Angelis, M., Rinaldi, F., Gobbetti, M., & Di Cagno, R. (2024). Exploring the Gut Microbiome and Metabolome in Individuals with Alopecia Areata Disease. Nutrients, 16(6), 858. https://doi.org/10.3390/nu16060858

14. Mastrolonardo, F., Costantini, A., Polo, A., Verni, M., Junior, W. J. F. L., Tlais, A. Z. A., **Nikoloudaki, O.,** Granehäll, L. B. M., Gobbetti, M., Pontonio, E., & Di Cagno, R. (2024). New fermented plant-based ingredients in sourdough breads enhanced nutritional value and impacted on gut microbiota. Future Foods, 10, 100498. https://doi.org/10.1016/j.fufo.2024.100498

15. Palatzidi, A., **Nikoloudaki, O.,** Torreiro, M. G., Matteucci, C., Ferrentino, G., Scampicchio, M. M., Di Cagno, R., & Gobbetti, M. (2024). Novel formulations for developing fresh hybrid cheese analogues utilizing fungal-fermented brewery side-stream flours. Current Research in Food Science, 9, 100829. https://doi.org/10.1016/j.crfs.2024.100829

16. Perri, G., Difonzo, G., Ciraldo, L., Rametta, F., Gadaleta-Caldarola, G., Ameur, H., **Nikoloudaki, O.,** De Angelis, M., Caponio, F., & Pontonio, E. (2025). Tailor-made fermentation of sprouted wheat and barley flours and their application in bread making: A comprehensive comparison with conventional approaches in the baking industry. Current Research in Food Science, 10, 101053. https://doi.org/10.1016/j.crfs.2025.101053

17. Mastrolonardo, F., Tonini, S., Granehäll, L., Polo, A., Zannini, E., Gobbetti, M., Cagno, R. D., & **Nikoloudaki, O.** (2025). Influence of bioactive peptides from fermented red lentil protein isolate on gut microbiota: A dynamic in vitro investigation. Future Foods, 12, 100772. https://doi.org/10.1016/j.fufo.2025.100772

18. Vacca, M., Celano, G., **Nikoloudaki, O.,** Speckmann, B., Calabrese, F. M., Gobbetti, M., & De Angelis, M. (2025). Metabolic characterization of selected probiotic consortia during gluten and wheat bread simulated digestion. Food Science and Human Wellness, 14(2), 9250033. https://doi.org/10.26599/FSHW.2024.9250033

19. Palatzidi, A., **Nikoloudaki, O.,** Tlais, A. Z. A., Zannini, E., O'Mahony, J. A., Tsakalidou, E., Gobbetti, M., & Di Cagno, R. (2025). Fermented plant-based cream cheese analogues formulated using legume flours and avocado pulp. Future Foods, 11, 100580. https://doi.org/10.1016/j.fufo.2025.100580

20. Mushtaq, B. S., **Nikoloudaki, O.,** Ben, M., Arora, K., Tlais, A. Z. A., Polo, A., Cagno, R. D., & Gobbetti, M. (2026). Development of nutritionally enhanced sourdough bread through Tritordeum bran incorporation and assessment in an in vitro gut simulation. Future Foods, 13, 100874. https://doi.org/10.1016/j.fufo.2025.100874

21. Aheto, F., Granehäll, L., **Nikoloudaki, O.,** Ben, M., Plattner, S., Gobbetti, M., Di Cagno, R., & Polo, A. (2026). The in vitro supplementation with Sambucus nigra extract promisingly impacts the human gut ecosystem in an individual-dependent way. Food Bioscience. https://doi.org/10.1016/j.fbio.2026.108442

Book chapters

1. **Nikoloudaki, O.,** Carafa, I., & Gobbetti, M. (2022). Microorganisms in Smear Cheeses. In Encyclopedia of Dairy Sciences (pp. 338–344). Elsevier. https://doi.org/10.1016/B978-0-08-100596-5.23003-5
2. **Nikoloudaki, O.,** Gobbetti, M., & Di Cagno, R. (2022). Lactic Acid Bacteria: Lactobacillus helveticus. In Encyclopedia of Dairy Sciences (pp. 198–205). Elsevier. https://doi.org/10.1016/B978-0-08-100596-5.23006-0
3. Costantini, A., **Nikoloudaki, O.,** & Di Cagno, R. (2024). In Vitro Determination of the Glycemic Index. In M. Gobbetti & C. G. Rizzello (Eds.), Basic Methods and Protocols on Sourdough (pp. 145–154). Springer US. https://doi.org/10.1007/978-1-0716-3706-7_15
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Statement of Interest

I aim to capitalize on the knowledge, research outcomes, funding capacity, and international collaborations developed during my previous work within the Micro4Food Platform at the Free University of Bozen-Bolzano to further strengthen both Micro4Food and the International Competence Centre on Food Fermentations (ICOFF). My research focuses on fermented food microbiomes, their ecological dynamics, and their interactions with the human gut microbiome, integrating advanced microbiome monitoring, multi-omics approaches, and experimental fermentation systems. Through these activities, I aim to contribute to establishing and reinforcing UNIBZ as an internationally recognized centre of excellence in food microbiology and innovative fermentation research. My goal is to generate new scientific knowledge and attract competitive research funding to develop innovative fermented food systems, particularly those able to modulate the gut microbiome and improve nutritional functionality. These activities will be carried out through interdisciplinary collaborations within the university and with national and international academic partners as well as with the food and biotechnology industries, with particular attention to topics relevant for regional food systems and sustainable production. In parallel, I aim to translate research advances into high-quality teaching by integrating current case studies, advanced analytical methods, and microbiome-based approaches into courses in food microbiology and fermentation science. Through teaching and supervision, I seek to train highly qualified students and young researchers, fostering an international and interdisciplinary academic environment. Overall, my objective is to contribute to the scientific growth and visibility of UNIBZ while supporting innovation, knowledge transfer, and the development of sustainable food systems.

Language requirements: C1 English, B2 Italian and B2 German (certificate from unibz-internal exam)

Olga Nikoloudaki consents the use of her personal data in compliance with the provisions of GDPR decree (EU) 2016/679

Date

06/03/2026