



PhD programme in FOOD ENGINEERING AND BIOTECHNOLOGY

Possible research projects and supervisors

(List of available projects, other topics dealing with the activity of the research groups can be matter of study)

Title	Supervisor/s
1. Extraction and isolation of natural antioxidants for food applications	Prof. Matteo Mario Scampicchio
2. Emerging product innovation demands in winemaking and ensuring quality: a bridge between precision enology and sustainability practices	Prof. Emanuele Boselli
3. Investigation of the role of novel pollutants as a vector of microbial genetic resistances under the One-Health vision	Dr. Lorenzo Brusetti
4. Structured lipids as fat substitute in food systems	Prof. Giovanna Ferrentino
5. Application of multi-omic approaches to investigate the relationships between synthetic microbial communities and crop plants to improve their resilience and yield traits	Prof. Youry Pii/ Prof. Stefano Cesco
6. Valorization of food wastes and food processing residues by means of innovative thermochemical conversion processes in a circular and polygenerative perspective	Prof. Francesco Patuzzi
7. Forefront solutions for integrated food waste biorefinery	Prof. Francesco Patuzzi
8. Nutritional aspects of the sourdough fermentation for making baked goods	Prof. Marco Gobbetti
9. Diet, probiotics and prebiotics to improve the composition and functionality of the human gut microbiome: invitro and in vivo challenges	Prof. Raffaella Di Cagno/ Prof. Marco Gobbetti
10. Cheese fermentation to improve the sensory and nutritional attributes and to decrease the time of ripening	Prof. Raffaella Di Cagno/ Prof. Marco Gobbetti
11. Metabolism of phenolic compounds and fatty acids during plant-based food fermentation	Prof. Raffaella Di Cagno
12. Selection of postbiotics and Study of their health effect (M.D. 630/2024, co-funded by THT S.A. (Techno-High-Technology)	Prof. Raffaella Di Cagno
13. Digestibility of sweet leavened baked goods (M.D. 630/2024, co-funded by Bauli S.p.A.)	Prof. Marco Gobbetti
14. Validation of culture collection in a high throughput screening system for different functionalities including antifungal properties (M.D. 630/2024, co-funded by Puratos NV)	Prof. Raffaella Di Cagno/ Prof. Marco Gobbetti

15. Exploring the Effects of Soilless Culture System on the Sensory Attributes and Physico-chemical Properties of Strawberry Varieties (funded by Laimburg research Centre)	Prof. Matteo Mario Scampicchio/ Dr. Elisa Vanzo
16. Antioxidant Potential of Maillard Reaction Products in Cooked Foods Using Advanced Spectroscopic Techniques (funded by Laimburg Research Center)	Prof. Matteo Mario Scampicchio/ Dr. Alberto Ceccon