

Research Doctorate in Agri-food Science, Technology and Biotechnology - STEBA

PhD Workshop – December 19th, 2025

Besta Pavilion, Room H0.3

Team “Workshop STEBA 2025” code: sb52gg2

8.30 – 8.45 Opening

Prof. Fabio LICCIARDELLO (Coordinator, STEBA Doctorate)

Prof. Lorena REBECCHI (Director, Dep. Scienze della Vita)

Chairpersons

Prof. Fabio LICCIARDELLO (Coordinator, STEBA Doctorate)

Prof. Luisa A. VOLPELLI (Secretary, STEBA Doctorate)

Dr. Marcello Brugnoli, Ph.D

Dr. Giovanni Caccialupi, Ph.D

Dr. Enrico Maurizzi, Ph.D

Dr. Camilla Menozzi, Ph.D

Dr. Carola Nicosia, Ph.D

8.45 – 9.00 List of the research topics of XL Cycle Ph.D students

9.00 – 9.45 Flash presentations by 2nd year Ph.D students (XXXIX Cycle)

- **Enrico BUSI:** Decoding host-microbiota communication through untargeted LC-MS metabolomics: characterization of signalling molecules in bacterial models under defined stress conditions (Maddalena Rossi; Francesco Candelieri; Stefano Raimondi)
- **Marianna CRISTOFOLINI:** Integrative analysis of microbial communities inhabiting natural whey starter in Parmigiano Reggiano (Lisa Solieri) (*)
- **Federico LASAGNI:** How microbial biodiversity impacts sustainable bioindustry: the role of selective sources to exploit bacterial diversity (Maria Gullo; Mattia Pia Arena)
- **Francesco LUNARDELLI:** Increase hoverfly (Diptera: Syrphidae) functional biodiversity to improve ecological services in agroecosystems (Lara Maistrello; Daniele Sommaggio)
- **Annamaria MASSAFRA:** Alternative methods to chemicals: effects on yield, physiology and quality of industrial tomato, and survey of effects on non-target organisms (Nicola Pecchioni; Irma Terracciano; Laura Righetti)
- **Elena MONARI:** Sustainable management of emerging pests: biological control approaches for *Eriosoma lanigerum* and strawberry aphids (Lara Maistrello; Elena Costi)
- **Alessandro MONTORSI:** Identification and characterisation of the carposphere microbial communities from pear orchards and their role against fungal pathogen *Stemphylium vesicarium*, the causal agent of the brown spot of pear (Davide Giovanardi; Emilio Stefani)
- **Melissa ZANNINI:** Molecular mechanisms of the protective effect of phenolic compounds and their metabolites on human health (Angela Conte; Davide Tagliazucchi)(*)

(*) online

9.45 – 13.30 Presentations by 3rd year Ph.D students (XXXVIII Cycle)

- **Valentina MUSI:** From waste to feed: development of a microbial starter fermenting an agro-food waste based feed for black soldier fly larvae (Andrea Pulvirenti; Luciana De Vero)
- **Elisa AIELLO:** Stress tolerance and adaptive responses during alcoholic fermentation: a comparative investigation of *saccharomyces* and non-*saccharomyces* wine yeast strains (Andrea Pulvirenti; Mattia Pia Arena)
- **Alan CARLETTI:** Enzyme-driven solutions for waste valorization: structural and functional insights into lytic polysaccharide monooxygenases (LPMOS) and pet hydrolases (Marco Sola, Giulia Di Rocco)
- **Matteo CARLONI:** Study and exploitation of Brassicales plant species attracting honeybees and other pollinators for providing and enhancing ecological services in agriculture (Nicola Pecchioni, Manuela Bagatta, Laura Bortolotti)

11.00 – 11.15 Break

- **Filipa Carolina DOS SANTOS SOUTO PEDRO:** Deciphering the metabolic response of *Komagataeibacter xylinus* to carbon substrates: a systems approach to optimize bacterial cellulose biosynthesis (Maria Gullo; Salvatore La China)(*)
- **Veronica FERRARI:** Chemometrics and green technologies for a low environmental impact agri-food system (Rosalba Calvini, Alessandro Ulrici)
- **Nida MUSHTAQ:** A new Nested Association Mapping (NAM) population and genomic tools for durum wheat breeding (Nicola Pecchioni, Salvatore Esposito)
- **Muhammad Fazail NASAR:** Sustainable production and management of barley and tomato under abiotic stress (Enrico Francia; Federica Caradonia, Justyna Anna Milc)(*)
- **Samuele PAGANELLI:** Biotechnology and functional genomics for the genetic improvement of *Cannabis sativa* L.: from in vitro systems to mutagenesis-based functional validation (Nicola Pecchioni; Roberta Paris)
- **Elisabetta POETA:** Smart sensing and data-driven approaches for food quality and safety in the agri-food chain (Andrea Pulvirenti; Veronica Sberveglieri)
- **Lara SIGNORELLO:** Microbial resources within SUS-MIRRI.IT project: handling microbiomes and cultivable microorganisms for enhancing fermented beverages valorization at the Unimore Microbial Culture Collection (UMCC) (Maria Gullo, Mattia Pia Arena)
- **Laura SOLA:** Integrating multi-omics and experimental approaches to characterise key gut bacterial players: from community-level modulation to single-strain function (Maddalena Rossi; Stefano Raimondi)
- **Luca BONISOLI:** Ultrasonic emissions in stressed plants: indoor and outdoor detection using a low-cost contactless microphone (Laura Arru; Luca Forti)

(*) online



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