



UNIVERSITÀ  
DI PARMA

**SIMTR3A**



# **7TH INTERNATIONAL CONFERENCE ON MICROBIAL DIVERSITY**

## **AGRIFOOD MICROBIOTA AS A TOOL FOR A SUSTAINABLE FUTURE**

*September 26-29 • 2023  
PARMA, ITALY*

# **PROGRAMME**





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## SESSIONS

- 01 FOOD microbiota as a tool for a sustainable future
- 02 HUMAN microbiota as a tool for a sustainable future
- 03 ENVIRONMENT microbiota as a tool for a sustainable future
- 04 Exploiting microbiomes for a sustainable future
- 05 A sustainable future has come

TUESDAY 26 | September  
2023

PALAZZO CENTRALE UNIVERSITÀ DI PARMA  
Via Università 12, 43121 Parma

- Ore 16:00 | Registration
- Ore 16:45 | Institutional greetings
- Ore 17:00 | Opening lecture: "How to manage with fermentation microbiomes: metabolic framework of spontaneous versus synthetic metacommunities"  
Marco Gobetti, (Free University of Bolzano, Italy)  
*Chair: Rosalba Lanciotti, Erasmo Neviani*

Ore 18:00



### WELCOME CEREMONY

*Atrio delle Colonne,  
Palazzo centrale Università  
di Parma*

*Via Università 12, 43121 Parma*



Ore 08:30 | Registration

SESSION 01 | **FOOD microbiota as a tool for a sustainable future**

*Chair: Paul Cotter, Eugenio Parente*

Ore 09:00 | Plenary lecture: "A MASTER Plan: Leveraging food and food chain microbiome data for a sustainable future" Paul Cotter, (Teagasc & SeqBiome, University of Cork, Ireland)

Ore 10:00 | Twenty years of investigation on riboflavin overproducing food-grade bacteria: Biotechnological applications and perspectives, **Pasquale Russo**, (University of Milano, Italy)

Ore 10:20 | Back to the complexity: the challenge of natural starter cultures development, **Luigi Chessa**, (Agris Sardegna, Italy)

Ore 10:40 | Dairy environment and seasons affect the microbiome of artisanal cheese, **Ilario Ferrocino**, (University of Torino, Italy)

Ore 11:00 | **COFFE BREAK**

Ore 11:15 | Poster session

Ore 11:45 | Dynamics and acidification properties of raw milk bacterial communities during serial fermentations, **Chloe Gapp**, (University of Lorraine, France)

Ore 11:55 | Variation of microbiota, chemical composition and B-vitamins in milk from alpine pasture and indoor dairy cows, **Elena Franciosi**, (Edmund Mach Foundation, Italy)

Ore 12:05 | Microbiome of kefir produced using Amiata donkey milk: characterization of the microbial communities and of fatty acid profile, **Matteo Daghio**, (University of Firenze, Italy)

Ore 12:15 | Characterization of lactic acid bacteria in pursue of potential candidates for starter, adjunct and probiotic cultures, **Maria Aspri**, (Cyprus University of Technology, Lemesos, Cyprus)

Ore 12:30 | **LUNCH**

SESSION 02 | **HUMAN microbiota as a tool for a sustainable future**

*Sarah Lebeer, Marco Gobbetti*

Ore 14:00 | Keynote: "The uniqueness of the microbiome of the human reproductive tract" Sarah Lebeer (University of Antwerp, Belgium)

Ore 14:30 | Environmental pollution drives adaptation in gut microbiome functions of highly exposed individuals, **Francesca De Filippis**, (University Federico II, Napoli, Italy)

Ore 14:50 | Development of inhalation powders containing lactic acid bacteria: a way to the lungs to possibly boost respiratory health, **Benedetta Bottari**, (University of Parma, Italy)

Ore 15:10 | Sourdough fermentation supports in vitro eubiotic effects of gluten-free bread fortified by insect flour, **Andrea Gianotti**, (University of Bologna, Italy)

Ore 15:30 | **COFFEE BREAK**

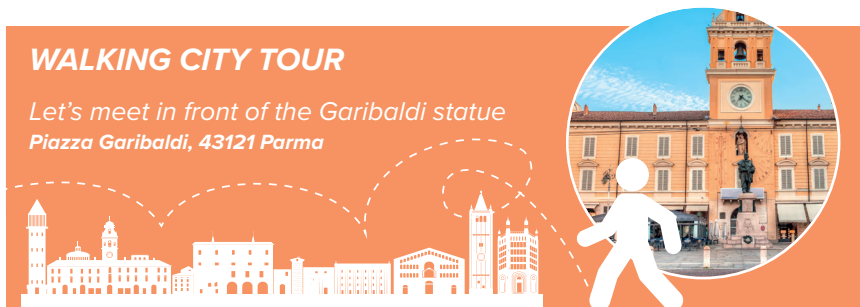
Ore 15:45 | Poster session

- Ore 16:15 The middle-term intake of hydrolyzed and fermented arabinoxylan-oligosaccharides (AXOS) modulates gut microbiome and its metabolic answer, **Andrea Polo**, (Free University of Bolzano, Italy)
- Ore 16:25 Food-associated *Lactiplantibacillus plantarum* for the development of innovative non-dairy fermented foods with a beneficial role in ameliorating intestinal inflammation, **Roberta Prete**, (University of Teramo, Italy)
- Ore 16:35 A dietary supplement based on Mediterranean diet beneficial ingredients modulates gut microbiome composition and activities, **Vincenzo Valentino**, (University Federico II, Napoli, Italy)
- Ore 16:45 Revitalizing the gut microbiome: unleashing the power of low-sugar fermented juices, **Tlais Ali Zein Alabide** (Free University of Bolzano, Italy)
- Ore 16:55 NAFLD: behind a statistical approach used for the inspection and association of omics and clinical data, **Francesco Maria Calabrese**, (University Aldo Moro, Bari, Italy)
- Ore 17:05 End of the scientific programme of the day

Ore 18:00

## WALKING CITY TOUR

Let's meet in front of the Garibaldi statue  
Piazza Garibaldi, 43121 Parma



THURSDAY 28 | September 2023

PAGANINI CONGRESSI  
Via Toscana 5/a, 43121 Parma

Ore 08:30 | Registration

SESSION 03 | ENVIRONMENT microbiota as a tool for a sustainable future  
Chair: Peiying Hong, Monica Agnolucci

- Ore 09:00 Plenary lecture: "Building a resilient and sustainable water system for our future urban farms", Peiying Hong, (Kaust, King Abdullah University of Science and Technology, Saudi Arabia)
- Ore 10:00 Ecology of soil bacterial communities and evaluation of rhizoremediation potential in a historical polychlorinated biphenyl polluted site, **Sara Borin**, (University of Milano, Italy)
- Ore 10:20 Molecular and functional diversity of culturable bacterial strains associated with *Tuber borchii* fruit bodies from different Italian sites, **Caterina Cristani**, (University of Pisa, Italy)
- Ore 10:40 GenBank mining reveals novel clues on rhizobium phylogeny: identical 16S is mostly uncoupled to species name, host plant and country of isolation. How these data suggested the definition of a bacterial h index", **Andrea Squartini**, (University of Padova, Italy)

Ore 11:00 **COFFE BREAK**

Ore 11:15 Poster session

Ore 11:45 Sabofleur: isolating and characterising the strawberry flower and bee microbiome for novel and improved microbial control of *Botrytis cinerea*, **Jari Temmermans**, (University of Antwerp, Belgium)

Ore 11:55 Fermented wasted bread and brewers' spent grain as next-generation soil amendments: unraveling the interaction with soil microbiota, **Michela Verni**, (University Sapienza, Roma, Italy)

Ore 12:05 Metagenome mining reveals how anaerobic and aerobic integrated treatments shape the resistome profile of municipal solid wastes, **Alessandra Fontana**, (University Cattolica del Sacro Cuore, Piacenza, Italy)

Ore 12:15 The importance of considering the 'plant microbiome factor' in engineering phytodepuration systems, **Valentina Riva**, (University of Milano, Italy)

Ore 12:30 **LUNCH**

SESSION **04** | **Exploiting microbiomes for a sustainable future**

*Chair: Daniele Daffonchio, Olimpia Pepe*

Ore 14:00 **Keynote: "Ecology of the thermal adaptation of microbial communities in time and space"**, **Daniele Daffonchio**, (Kaust, King Abdullah University of Science and Technology, Saudi Arabia)

Ore 14:30 Exploitation of microbial metabolic diversity to support human life in space, **Francesco Canganella**, (University of Tuscia, Italy)

Ore 14:50 Microbial consortium adaptation to improve shelf-life, sensorial and nutritional features in sprouted cereals, **Maria De Angelis**, (University Aldo Moro, Bari, Italy)

Ore 15:10 Mediterranean spontaneously fermented sausages as a source of lactic acid bacteria for new improved bio-protective cultures and functional starters, **Giulia Tabanelli**, (University of Bologna, Italy)

Ore 15:30 **COFFEE BREAK**

Ore 15:45 Poster session

Ore 16:15 Microbial dynamics and competition in the rhizosheath-root system of xerophytic plants, **Dr. Ramona Marasco**, (Kaust, King Abdullah University of Science and Technology, Saudi Arabia)

Ore 16:25 *Bacillus haynesii* WVC18 as a sustainable and eco-friendly solution for agricultural application, **Elia Pagliarini**, (University of Bologna, Italy)

Ore 16:35 Microorganisms for maize sustainable production: new practices in agriculture, **Maria Elena Antinori**, (University Cattolica del Sacro Cuore, Piacenza, Italy)

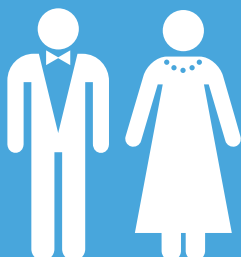
Ore 16:45 Effect of livestock manure vs digestate as organic fertilizers on bacterial communities of corn silage for dairy cow feed, with a focus on spore-forming bacteria, **Miriam Zago**, (Council for Agricultural Research, CREA Lodi, Italy)

Ore 16:55 Wooden shelves: an ancient tool for sustainable cheese ripening in future, **Gabriele Busetta**, (University of Palermo, Italy)

Ore 17:05 Group photo

Ore 17:30 End of the scientific programme of the day

Ore 20:30



## GALA DINNER

Palazzo Marchi

Strada della Repubblica 57, 43121 Parma



FRIDAY 29 | September 2023

PAGANINI CONGRESSI  
Via Toscana 5/a, 43121 Parma

### SESSION 05 | A Sustainable future has come

Chair: *Daniele Del Rio, Danilo Ercolini, Erasmo Neviani, Camilla Lazzi*

- Ore 09:00 keynote, “Research and innovation network on Food and Nutrition Sustainability, Safety and Security: the ONFOODS national partnership” Daniele Del Rio and “The National Center for the Development of New Technologies in Agriculture (Agritech): Microbiota as tools for a sustainable development of agri-food production”, Danilo Ercolini, (University of Parma, Italy -University Federico II, Napoli, Italy)
- Ore 10:00 TITAN project: Transparency Solutions for Transforming the Food System - Focus on 2 pilots related to microbes, **Antonio Del Casale**, (MICROBION srl, Italy)
- Ore 10:10 The need of a standard approach in microbiome science: the SUS-MIRRI.IT project, **Maghrebi Sahar**, (University of Torino, Italy)
- Ore 10:20 Innovative metabolomic and metagenomic approach applied to Parmigiano Reggiano PDO cheese to support traditional features, **Alessia Levante**, (University of Parma and Consorzio del Formaggio Parmigiano Reggiano, Italy)
- Ore 10:30 MinION sequencing of yeast mock communities to assess the effect of databases and ITS-LSU markers on the reliability of metabarcoding analysis, **Debora Casagrande Pierantoni**, (University of Perugia, Italy)
- Ore 10:40 **COFFE BREAK**
- Ore 10:55 Poster session
- Ore 11:25 Yeasts against grape pathogenic fungi: a sustainable alternative to agrochemicals, **Ileana Vigentini**, (University of Milano, Italy)
- Ore 11:35 *Hanseniaspora valbyensis*-bioprocessed pomegranate seeds to produce a novel food ingredient, **Fabio Minervini**, (University Aldo Moro, Bari, Italy)
- Ore 11:45 Exploiting of the agri-food waste and by-products potential to be used as substrate for bioplastic production through *Haloferax mediterranei* fermentation, **Angela Longo**, (Sapienza University of Roma, Italy)
- Ore 11:55 By-products fermentation: a step forward for the production of new antimicrobial, **Annalisa Ricci**, (University of Parma, Italy)
- Ore 12:10 Question and answer session of session 5

Ore 12:30 Closing ceremony and awards.

Ore 12:30 **END OF THE CONFERENCE AND LIGHT LUNCH**

Ore 14:00 SIMTREA meeting

## SOCIAL EVENTS



### WELCOME CEREMONY

**TUESDAY 26<sup>TH</sup>, 6:00 pm**

*Atrio delle colonne,  
Palazzo centrale Università di Parma,  
Via Università 12, 43121 Parma*



### PARMA WALKING TOUR • *prebooked people*

**WEDNESDAY 27<sup>TH</sup>, 6:15 pm**

During the Parma city tour we will walk through silent alleys and hidden squares getting to know the city from a local point of view. We will explore the city's most interesting monuments as the Cathedral, the Medieval Baptistry designed by Benedetto Antelami, the Pilotta monument, the Regio Theatre but also the local traditions, people, and styles!

*(We will not enter in the monuments)*

*time: 1,5h of tour*

**LET'S MEET IN FRONT OF THE GARIBALDI STATUE,  
Piazza Garibaldi, 43121 Parma**



### GALA DINNER • *prebooked people*

**THURSDAY 28<sup>TH</sup>, 8:30 pm**

*Palazzo Marchi,  
Strada della Repubblica 57, 43121 Parma*

**PLEASE BRING YOUR TICKET**







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