INTERNATIONAL
CONFERENCE
ON FERMENTED
FOODS

27–30TH
OF OCTOBER
2025

TECHPARK SÜDTIROL / ALTO ADIGE

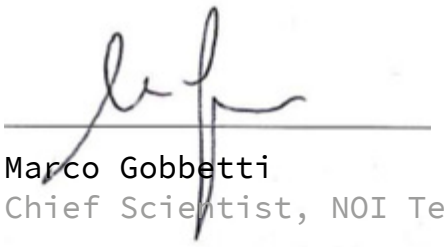
BOOK OF ABSTRACTS

Foreword

The 1st International Conference on Fermented Foods 2025 (ICFF 2025) is a unique worldwide opportunity that brings together leading experts, researchers, and industry professionals from all continents and many countries to delve into the latest advancements and innovations and future exploitation of the potential. Fermented foods, cornerstones of human nutrition for millennia, have witnessed a great resurgence of interest due to their profound impact on human health, food security and safety, nutrition, industrial business, and sustainability. Because of this importance, fermented foods still face evolving challenges, such as how to advance tradition into future foods with different perspectives; how to steer the processes and guide the microbiomes; how to develop innovative biotechnologies to impact human health, the global food safety, and security and precision; and how to exploit the potential for dignifying food waste and reducing food loss and create the next generation of sustainable foods, also responding to the need of using non-conventional protein sources. Sharing knowledge and best practices globally is vital for accelerating this transformative transition.

This dedicated conference on fermented foods is essential to address these challenges and capitalise on the growing opportunities. By bringing together researchers, industry professionals, and policymakers, we can foster collaboration, advance scientific knowledge, and drive innovation in the production and consumption of fermented foods. We are committed to fostering a vibrant exchange of ideas and knowledge sharing among attendees from diverse backgrounds. Through keynote presentations, oral and poster sessions, and interactive workshops, we aim to create a stimulating environment for sharing knowledge, establishing synergistic collaboration, and supporting networking.

ICFF will become a recurring event held every three years, with its permanent locations at NOI Techpark, aiming to be the unique reference for researchers and professionals in this sector. Because of the great relevance of fermented foods in human tradition, society, well-being and economy, ICFF will be the recurrent meeting where scientific achievements will be presented and discussed, and results transferred to industry.



Marco Gobbetti
Chief Scientist, NOI Techpark

Foreword

Dear participants,

Fermentation is one of humanity's oldest biotechnologies. For millennia, it has enabled us to preserve food, nourish communities, and create flavours that define cultures. Across the world – and especially here in South Tyrol – traditional dishes are rich with fermented ingredients, from cheeses and breads to cured meats and fermented vegetables. These foods are not only a testament to our heritage, but also to the ingenuity of generations who harnessed natural processes to ensure sustenance and safety.

Today, fermentation stands at the threshold of new opportunities. Thanks to advances in biotechnology, we can now understand and control fermentation processes with unprecedented precision. This opens the door to foods that are healthier, tastier, longer lasting, and more sustainable. By valorising by-products and optimising microbial activity, we are able to create products that meet the demands of modern consumers while respecting the environment.

Bozen/Bolzano has become renowned for its expertise in food fermentation. Our region's research centres and companies are at the forefront of innovation, blending tradition with cutting-edge science. It is therefore a great honour for us to host the very first ICFF Conference here in Bozen / Bolzano. With this new initiative, we are bringing together the world's leading experts in the field of fermented foods to share knowledge, spark new ideas, and build lasting collaborations in our region.

What awaits you at ICFF? Inspiring lectures from leading scientists and practitioners, engaging discussions on the future of fermented foods, and the chance to discover new approaches and solutions. The conference is not only a forum for exchanging expertise, but also a unique opportunity for networking – whether during the sessions, in informal conversations, or on our joint excursion, where you can experience South Tyrol's landscapes.

We hope you enjoy your time in South Tyrol, find inspiration in the diversity of perspectives, and leave with new connections and ideas that will shape the future of fermented foods.

With best wishes for a successful and memorable conference,

Philipp
Achammer
Provincial Minister
responsible for NOI

Helga
Thaler Ausserhofer
NOI President

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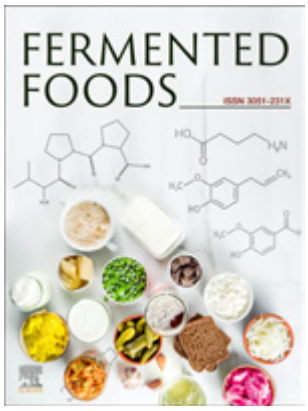
CONSORZIO PER LA TUTELA DEL LIEVITO MADRE DA RINFRESCO



GIULIANI INNOVATION

SACCO system

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Barilla
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Dr Schär

mila SÜDTIROL

NSPulse
Natural Smarter Pulse

Pan

VOG PRODUCTS

ORAL PRESENTATIONS

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Lactiplantibacillus plantarum as a model species for lactic acid bacteria volatilomics in food.

[1] Antonia Corvino
[2] Ester Presutto
[2] Fragasso Mariagiovanna
[1] Andrea Romano
[1] Iuliia Khomenko
[3] Vittorio Capozzi
[2] Giuseppe Spano
[1] **Franco Biasioli**

● Lactobacilli are a versatile heterogeneous group of lactic acid bacteria with applications ranging from fermentations to agricultural applications, from health concerns to biocontrol. The volatilomics of these lactobacilli is interesting because it allows complementing other omics in the study of these biological systems and provides information of interest to evaluate the protechnological role of lactobacilli in fermentations and agri-food systems. Proton transfer reaction time mass spectrometry (PTR-ToF-MS) has proven effective in large-scale screening and real-time monitoring of VOCs (in model conditions and different food matrices). It allows multiple measurements with high sensitivity due to basic sample preparation, without extraction and destruction, with standards oriented to the principles of green analytical chemistry. With its large and flexible genome, *Lactiplantibacillus plantarum* is a microorganism with a nomadic lifestyle in agro-food ecosystems, with significant protechnological, probiotic and biocontrol interest; for these reasons, it is considered a model species in this type of studies. Using PTR-ToF-MS as an analytical approach, we investigated the volatilomics of *L. plantarum* WCFS1 under model conditions (culture medium) and in different food matrices, including bovine milk, plant milk (soy, almond and oat), fruits and vegetables.

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