# INTERNATIONAL CONFERENCE ON FERMENTED FOODS

NOI TECHPARK BOLZANO, ITALY

27–30TH OF OCTOBER 2025

# MONDAY, 27.10.2025

11:00 REGISTRATION: NOI TECHPARK, BOLZANO, ITALY

14:00–14:25 ● Philipp Achammer

Provincial Minister for Research and Innovation

Vincent Mauroit
 Director of Innovation & Tech Transfer, NOI AG

Marco Gobbetti
 Chief Scientist, NOI AG, and Chair of the Conference

WELCOME ADDRESS AND CONFERENCE OPENING

14:25–15:00 ● Maria Marco

University of California, USA

OPENING LECTURE: DECONSTRUCTING THE COMPLEXITY OF HEALTH BENEFITS FROM FERMENTED FOODS

### **SESSION 1: PLANT FERMENTED FOODS**

Chairpersons ● Raffaella Di Cagno

Free University of Bozen-Bolzano, Italy

Pasquale Filannino
 University of Bari Aldo Moro, Italy

15:00−15:30 • Nam Soo Han

Chungbuk National University, South Korea INVITED SPEAKER: KIMCHI AND ITS INDUSTRIAL PRODUCTION

15:30-15:45 ● Erica Pontonio

University of Bari Aldo Moro, Italy

ENHANCING TECHNO-FUNCTIONAL PROPERTIES OF PEA FLOUR THROUGH COMBINED ENZYMATIC AND LACTIC ACID FERMENTATION FOR A NOVEL VEGAN SPREAD

15:45–16:00 ● Eugenio Parente

University of Basilicata, Italy

EXPLORING YEAST COMMUNITIES IN ALCOHOLIC
BEVERAGES USING THE FOODMICROBIONET DATABASE

#### 16:00-16:30 COFFEE BREAK & POSTER VIEWING

16:30–16:45 ● Raffaella Di Cagno

Free University of Bozen-Bolzano, Italy

 Matthias Fill NOI AG, Italy

FROM RESEARCH TO INNOVATION: ICOFF AND NOI TECHPARK

16:45-17:15 ● Jian Zhao

University of New South Wales, Australia

INVITED SPEAKER: FERMENTATION OF COFFEE BEANS AND ITS IMPACT ON THE FLAVOUR OF COFFEE

17:15–17:30 ● Nicola Pacher

BOKU University, Austria

BACILLACEAE IN ROPY BREAD SPOILAGE: TAXONOMIC DIVERSITY, VIRULENCE FACTORS AND SPOILAGE DYNAMICS

17:30–17:45 ● Ali Zein Alabiden Tlais

Free University of Bozen-Bolzano, Italy

BEYOND FATTY ACIDS: NEW INSIGHTS INTO BACTERIAL FATTY ACID DERIVATIVES USING AVOCADO FERMENTATION AS A MODEL SYSTEM

17:45–18:00 ● Benedetta Bottari

University of Parma, Italy

LACTIC FERMENTATION AS A BIOVALORISATION STRATE-GY FOR BLUE CRAB (CALLINECTES SAPIDUS): FROM GARUM PRODUCTION TO ANTIMICROBIAL EXTRACTS

18:00–18:15 ● Susanne Miescher Schwenninger

Zurich University of Applied Sciences, Switzerland BIO-VALORISATION OF SWISS YELLOW PEAS THROUGH FERMENTATION WITH FUNCTIONAL MICROORGANISMS FOR SUSTAINABLE FOOD APPLICATIONS

#### 18:15-18:40 FLASH PRESENTATIONS

18:15–18:20 ● Francesca Valerio

National Research Council, Italy

OKRA (ABELMOSCHUS ESCULENTUS L.) FLOUR INTE-GRATION IN WHEAT-BASED SOURDOUGH: EFFECT ON NUTRITIONAL AND TECHNOLOGICAL QUALITY OF BREAD

18:20–18:25 ● Fabienne Vertè

Puratos NV, Belgium

INNOVATIVE FOOD FERMENTATION: CASE STUDY ON FERMENTED TROPICAL MANGO FOR FRUIT FILLINGS

18:25–18:30 ● Markus Brandt

Ernst Böcker GmbH Co. KG, Germany

FERMENTED LEGUME-VEGETABLES AS A SEASONING INGREDIENT

18:30–18:35 ● Wannes van Beeck

University of Antwerp, Belgium

SONMAT: A CITIZEN-SCIENCE ENABLED KIMJANG KIMCHI CASE STUDY ON ASSOCIATIONS BETWEEN HAND AND KIMCHI MICROBIOTA

18:35–18:40 ● Nicola Mangieri

University of Milan, Italy

TECHNOLOGICAL CHARACTERISATION AND SAFETY EVALUATION OF ACETIC ACID BACTERIA ISOLATED FROM ARTISANAL KOMBUCHA

18:40−18:45 • Giuliana Garofalo

University of Palermo, Italy

VALORISING OLIVE OIL MILL WASTEWATER AS A FUNCTIONAL INGREDIENT IN TRADITIONAL ITALIAN BREAD TO MITIGATE OXIDATIVE STRESS ASSOCIATED WITH RED MEAT CONSUMPTION

18:45 WELCOME APERITIF

# TUESDAY, 28.10.2025

#### SESSION 2: ANIMAL FERMENTED FOODS

Chairpersons ● Stefan Weckx

Vrije Universiteit Brussel, Belgium

• Yong-Su Jin

University of Illinois, USA

08:30-09:00 ● Luca Simone Cocolin

University of Torino, Italy

INVITED SPEAKER: THE CHALLENGE OF MICROBIOME BIOBANKING AND STORAGE: THE CASE OF FERMENTED **SAUSAGES** 

09:00-09:15 ● Françoise Leroi

Ifremer, France

THE SUCCESS OF COLD-SMOKED SALMON BIO-PRESER-VATION DEPENDS ON THE PROTECTIVE CULTURE AND MICROBIOME SIGNATURE OF THE PROCESSING PLANT

09:15-09:30 ● Jerome Mounier

INRAE, France

MICROBIOTA ASSOCIATED WITH COMMERCIAL DRY-AGED BEEF IN FRANCE

09:30-10:00 ● Effie Tsakalidou

Agricultural University of Athens, Greece

INVITED SPEAKER: DAIRY FOODS: FROM OLD TRADITIONS TO NEW CHALLENGES

#### 10:00-10:25 FLASH PRESENTATIONS

10:00–10:05 ● Véronique Zuliani

Novonesis, France

INNOVATIVE USE OF FOOD CULTURES FOR MEAT AND OTHER READY-TO-EAT PRODUCTS

10:05–10:10 ● Vincent Herve

Université Paris-Saclay, France

SCRATCHING ON FRENCH PDO CHEESE SURFACES SHEDS LIGHT ON UNEXPLORED MICROBIAL GENOMIC AND

METABOLIC DIVERSITY

10:10−10:15 • Iuliia Khomenko

Fondazione Edmund Mach, Italy

MONITORING THE EFFECT OF RAW MILK REFRIGERATION ON KEFIR FERMENTATION: IMPLICATIONS FOR QUALITY AND SAFETY

10:15-10:20 ● Miriam Zago

Research Council for Agriculture and Economics, Italy PRODUCTION AND COMPOSITION OF A CACIOTTA WITH HIGH RATIO OF CA/P FOR POSSIBLE USE IN PATIENTS WITH CHRONIC RENAL FAILURE

10:20-10:55 COFFEE BREAK & POSTER VIEWING

10:55–11:25 ● Alan Kelly

University College Cork, Ireland

INVITED SPEAKER: IMPACT OF COAGULANT SELECTION ON FLAVOUR. TEXTURE AND FUNCTIONALITY OF CHEESE

11:25-11:40 • Christian Coelho

Université Clermont Auvergne, France

RAW COW MILK FROM PASTURE IN THE PDO MASSIF CENTRAL CHEESE REGION - TO WHAT EXTENT CAN ORIGIN BE KEPT DURING FERMENTATION?

11:40–11:55 ● Vincent Somerville

Université Laval, Canada

PHAGE AND BACTERIAL HOST CO-EVOLUTION IN NATURAL WHEY STARTER CULTURE OVER AN ENTIRE CHEESEMAKING SEASON

### **SESSION 3: FOOD MICROBIOMES**

Chairpersons ● Effie Tsakalidou

Agricultural University of Athens, Greece

• Eddy J. Smid

Wageningen University, The Netherlands

11:55–12:25 ● Luc de Vuvst

INVITED SPEAKER: FERMENTED FOOD MICROBIOTA: COMPLEX INTERRELATIONSHIPS VS. OPPORTUNISTIC **INVADERS** 

#### 12:25-13:55 LUNCH & POSTER VIEWING

13:55-14:25 ● Nicholas Bokulich

ETH Zürich, Switzerland

INVITED SPEAKER: MULTI-OMICS INTERROGATION OF FERMENTED FOOD MICROBIOMES

14:25-14:40 ● Olga Nikoloudaki

Free University of Bozen-Bolzano, Italy

ECOLOGICAL ROLE-BASED ASSEMBLY OF SYNTHETIC SOURDOUGH ECOSYSTEMS ENSURE ROBUSTNESS AND REPRODUCIBILITY IN SOURDOUGH FERMENTATION

14:40–14:55 ● Thomas Gettemans

Vrije Universiteit Brussel, Belgium

**EXPLORATION OF THE MICROBIAL AND METABOLITE** DIVERSITY OF HOUSEHOLD AND ARTISAN BAKERY SOUR-DOUGHS THROUGH A CITIZEN SCIENCE APPROACH

14:55–15:10 ● Lorenza Conterno

Laimburg Research Centre, Italy

TIME-COURSE METAGENOMICS ANALYSIS DEFINING SUSTAINABLE FOOD FLAVOURING PRODUCTION

15:10-15:25 ● Francesca Cristetti

University of Turin, Italy

VINEYARD EFFECT ON MICROBIAL COMMUNITIES AND FERMENTATION DYNAMICS OF NEBBIOLO GRAPES: A MICROBIAL PERSPECTIVE ON TERROIR

15:25–15:40 ● Annina Meyer

ETH Zurich. Switzerland

MAPPING THE BIOGEOGRAPHY OF SOURDOUGH MICRO-BIOMES THROUGH NEXT-GENERATION CITIZEN SCIENCE

15:40–15:55 ● Pier Sandro Cocconcelli

Università Cattolica del Sacro Cuore, Italy

THE EVOLVING SAFETY LANDSCAPE OF FOOD FERMENTING MICROORGANISMS: FROM TRADITIONAL ASSESSMENT TO GENOME EDITING

15:55–16:10 ● Tania Kostic

Austrian Institute of Technology & Microbiome Support Association, Austria

FERMENTED FOODS AND THE FOOD SYSTEM: WHY A HOLISTIC PERSPECTIVE MATTERS

#### 16:10-16:40 COFFEE BREAK & POSTER VIEWING

16:40–17:10 ● Danilo Ercolini

University of Naples Federico II, Italy

INVITED SPEAKER: FOOD MICROBIOMES: THEIR IMPORTANCE FOR FOOD QUALITY AND THE CONNECTION TO THE GUT ECOSYSTEM

17:10–17:25 ● Iva Fernandes

Universidade do Porto, Portugal

FERMENTED FRUIT JUICES AS A SOURCE OF BIOACTIVE ORGANIC ACIDS: UNVEILING THEIR ROLE IN ADIPOGENESIS AND METABOLIC HEALTH

#### 17:25-17:45 FLASH PRESENTATIONS

17:25–17:30 ● Ayité Adama Hondegla

Université Paris-Saclay, France

ASSEMBLING MICROBIAL CONSORTIA FOR LEGUME-BASED MATRIX FERMENTATION

17:30−17:35 • Rachelle Alhosry

University of Montpellier, France

MICROBIAL SPECIES DIVERSITY IN KAAK PRODUCTION: INSIGHTS INTO THE ROLE OF CHICKPEA-SOAKED WATER

17:35-17:40 ● Alessia Levante

University of Parma, Italy

HAS LACTOBACILLUS HELVETICUS CHANGED OVER 50 YEARS? A GENOMIC AND TECHNOLOGICAL CHARACTERI-ISATION OF RECENT AND OLD STRAINS

17:40–17:45 ● Neža Čadež

Univerza v Ljubljani, Slovenia

INSIGHTS INTO THE DEVELOPMENT OF NOVEL BREWING YEAST STRAINS THROUGH ADAPTIVE LABORATORY **EVOLUTION** 

19:00 **LIGHT DINNER** 

## WEDNESDAY, 29.10.2025

### SESSION 4: FERMENTED FOODS AND HEALTH

Chairpersons ● Maria Marco

University of California, USA

Nam Soo Han

Chungbuk National University, South Korea

09:00-09:30 ● Douwe van Sinderen

University College Cork, Ireland

INVITED SPEAKER: BIFIDOBACTERIA AS BENEFICIAL MICROBES DURING EARLY LIFE: WHERE, WHAT AND HOW?

09:30-09:45 ● Vimac Nolla Ardevol

Puratos, Belgium

ADVANCING GUT HEALTH IN BAKERY WITH POSTBIOTIC-ENRICHED SOURDOUGHS

09:45–10:00 ● David Rodriguez-Lazaro

University of Burgos, Spain

INVITED SPEAKER: THE GOOD, THE BAD AND THE UGLY: STORY OF FERMENTED FOODS AND (GLOBAL) HEALTH

10:00–10:15 ● Elisa Salvetti

University of Verona, Italy

REDUCED BIOCIDE SUSCEPTIBILITY IN COMPANILACTO-BACILLUS: A GENOME-TO-PHENOTYPE STUDY WITH IMPLICATIONS FOR THE INTEGRATED SAFETY ASSESS-MENT OF LACTIC ACID BACTERIA

10:15-10:30 ● Paola Roncaglia

SciBite, BioData Innovation Centre, United Kingdom

A FUNCTIONAL FOODS ONTOLOGY: SYSTEMATISING BIOACTIVE INGREDIENTS OF FOODS FOR SPECIFIED HEALTH USES (FOSHU) IN JAPAN

10:30–10:45 ● Davide Gottardi

University of Bologna, Italy

TARGETED FERMENTATION OF CHICKPEA FLOUR ENHANCES NUTRITIONAL VALUE AND GUT HEALTH-PROMOTING PROPERTIES

10:45–11:00 ● Yong-Su Jin

University of Illinois, USA

GENOME EDITING OF YEAST AND LACTIC ACID BACTERIA FOR SAFER, TASTIER AND HEALTHIER FERMENTED FOODS

11:00-11:30 COFFEE BREAK & POSTER VIEWING

11:30–12:00 ● Christophe Courtin

KU Leuven, Belgium

INVITED SPEAKER: GRAIN-BASED FOOD FERMENTATIONS AS A TOOL TO PRODUCE HEALTH-PROMOTING FOODS

12:00-12:20 FLASH PRESENTATIONS

12:00−12:05 • Rosangela Limongelli

University of Bari Aldo Moro, Italy

PROBIOTICS COMBINED WITH PRICKLY PEAR SEED FLOUR AS A MEANS TO FORTIFY FERMENTED MILK-BASED BEVERAGES

12:05–12:10 ● Merve Sena Topkaya

University of Health Sciences, Türkiye

DOES MATERNAL CONSUMPTION OF FERMENTED FOODS AFFECT NEONATAL HEALTH?

12:10−12:15 • Celine Verdonck

KU Leuven, Belgium

SOURDOUGH STARTER CULTURE AND BREADMAKING PROCESS IMPACT WHOLEMEAL BREAD CHARACTERISTICS ASSOCIATED WITH STARCH DIGESTIBILITY

12:15–12:20 ● Roberta Prete

University of Teramo, Italy

ENRICHMENT OF FERMENTED OLIVE PATÈ WITH LACTI-PLANTIBACILLUS PLANTARUM AS A BIOLOGICAL STRATEGY TO ENHANCE ANTI-INFLAMMATORY ACTIVITY AND GUT MODULATION

12:20-13:45 LUNCH & POSTER VIEWING

13:45 SOCIAL PROGRAMME

19:30 CONFERENCE DINNER

# THURSDAY, 30.10.2025

### SESSION 5: ALTERNATIVE FERMENTED FOODS

Chairpersons ● Rosalba Lanciotti

University of Bologna, Italy

David Rodriguez-Lazaro
 University of Burgos, Spain

09:00-09:30 ● Eddy J. Smid

Wageningen University, The Netherlands

INVITED SPEAKER: SOLID-STATE FUNGAL FERMENTATION OF PLANT-BASED SUBSTRATES IMPROVES THE OVERALL PROTEIN QUALITY

09:30-09:45 ● Joshman Villa Macas

Wageningen University, The Netherlands

BIOPURIFICATION OF PULSE PROTEIN CONCENTRATES
BY LACTIC ACID BACTERIA

09:45–10:00 ● Laura Nyhan

University College Cork, Ireland

LACTIC ACID BACTERIA FERMENTATION FOR THE VALORI-SATION OF BREWER'S SPENT YEAST: ENHANCING NUTRI-TIONAL, FUNCTIONAL AND SENSORY CHARACTERISTICS

10:00–10:15 ● Melania Casertano

Wageningen University, The Netherlands

BIOPROCESSING FOOD SIDE STREAMS: FERMENTATION AS A SUSTAINABLE TOOL FOR FUNCTIONAL INGREDIENT DEVELOPMENT

10:15-10:45 ● Carlo G. Rizzello

Sapienza University of Rome, Italy

INVITED SPEAKER: UPCYCLING OF AGRI-FOOD SIDE STREAMS VIA FERMENTATION: ADVANCING TOWARDS "ZERO-WASTE" SUPPLY CHAINS IN PLANT FERMENTED FOODS

#### 10:45-11:15 COFFEE BREAK & POSTER VIEWING

11:15–11:45 ● Emanuele Zannini

Sapienza University of Rome, Italy

INVITED SPEAKER: CRAFTING FUTURE FOODS: THE TRANSFORMATIVE ROLE OF FOOD FERMENTATION

11:45–12:00 ● Òscar Boronat Nielsen

CETT Barcelona School of Tourism, Hospitality and Gastronomy

FLAVOUR-DRIVEN FERMENTATION: UNLOCKING OKARA'S POTENTIAL

12:00-12:30 ● Shao Quan Liu

National University of Singapore, Singapore

INVITED SPEAKER: MICROALGAE AS ALTERNATIVE PROTEIN-RICH MICROBIAL BIOMASS

#### 12:30-12:55 FLASH PRESENTATIONS

12:30–12:35 ● Oscar van Mastrigt

Wageningen University, The Netherlands

FERMENTED HYBRID CHEESE: SUSTAINABLE, TASTY AND NUTRITIOUS

12:35–12:40 ● Herwig Bachmann

NIZO Food Research, The Netherlands

SENSORY QUALITY AND SAFETY OF PLANT-BASED AND HYBRID FOODS: THE ROLE OF FERMENTATION, MICROBIAL GROWTH AND SUBSTRATE AVAILABILITY

12:40–12:45 ● Antonio Del Casale

Microbion, Verona, Italy

BOOSTERS AND HURDLES TOWARD INNOVATION IN FERMENTED FOODS

12:45-12:50 ● Cornelia Bär

Agroscope, Bern, Switzerland

DEVELOPMENT OF FUNCTIONAL FERMENTED FOODS TO UPPORT HUMAN HEALTH

12:50-12:55 ● Chin Xin Hui

National University of Singapore, Singapore
MODULATING THE AROMA AND TASTE PROFILE OF
SOYBEAN USING NOVEL STRAINS FOR FERMENTATION

12:55-13:15 BEST ORAL PRESENTATION AND BEST POSTER AWARDS

13:15-13:25 CLOSING REMARKS, ACKNOWLEDGEMENTS AND
ANNOUNCEMENT OF THE 2ND INTERNATIONAL
CONFERENCE ON FERMENTED FOODS

13:25 LIGHT LUNCH



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