

# 8<sup>th</sup> INTERNATIONAL SYMPOSIUM ON SOURDOUGH

Resilience, Sustainability, Wellness



Bozen-Bolzano, Italy  
14—17 June 2022

TUESDAY, 14<sup>th</sup> JUNE

11:00 Registration NOI Techpark, Bolzano, Italy

14:00 Welcome and Opening of Symposium

Paolo Lugli — Rector of the Free University of Bozen-Bolzano  
Marco Gobetti, Emanuele Zannini — Scientific responsables of 8<sup>th</sup> International Symposium on Sourdough

14:20 Rudi F. Vogel — Technische Universität München, München, Germany — *Fructi/Lactobacillus sanfrancisc/o/ensis in decades of sourdough research*

SECTION 1 — THE SOURDOUGH "OME" META-COMMUNITY: SHAPING, ASSEMBLY AND FUNCTIONALITY — Chair: Michael G. Gänzle, Emanuele Zannini

14:50 Luc De Vuyst — Vrije Universiteit Brussel, Brussel, Belgium — *Sourdough production, an interplay of dedicated microbial species*

15:15 Antoine H.P. America — Wageningen University and Research, Wageningen, Netherlands — *Proteomics and metabolomics analysis of flours, doughs and breads from wheat, emmer and spelt and using yeast and sourdough fermentation processes*

15:30 Olga Nikoloudaki — Free University of Bozen-Bolzano, Italy — *Gut microbiota modulation upon digestion of cereal-based products containing arabinoxylan-oligosaccharides using the Simulator of Human Intestinal Microbial Ecosystem (SHIME)*

15:45 – 16:20 Coffee Break and Poster Viewing

16:20 Delphine Sicard — INRA, Montpellier, France — *Yeasts domestication in sourdough: insight from genomics and high-throughput phenotyping*

16:45 Víctor González-Alonso — Vrije Universiteit Brussel, Brussel, Belgium — *Microbial ecology and metabolite dynamics of back-slopped triticale sourdough productions and the impact of scale*

17:00 Elisa Salvetti — University of Verona, Verona, Italy — *Lactic acid bacteria in dough fermentations for breadstick production: lessons learned from an industrial setting*

17:15 Francesco M. Calabrese — University of Bari "Aldo Moro", Bari, Italy — *Sourdough lactic acid bacteria detoxification pathways and metabolism of trace elements*

17:30 Marco Gobetti — Free University of Bozen-Bolzano, Bolzano, Italy — *Design of synthetic microbial communities to reconstruct a stable and resilient sourdough*

18:30 Evening Event "Welcome Aperitif" at NOI Techpark

WEDNESDAY, 15<sup>th</sup> JUNE

SECTION 2 — HOW THE SOURDOUGH PHENOME DIFFER AND MATTER? — Chair: Luc De Vuyst, Hassina Ait-Abderrahim

09:00 Michael G. Gänzle — University of Alberta, Edmonton, Canada — *Do names matter? Phenotypes of sourdough lactobacilli and their effect on bread quality*

09:25 Maria Calasso — University of Bari "Aldo Moro", Bari, Italy — *Microbial ecology dynamics in spontaneous sourdoughs made from native and sprouted wheat and lentil flour*

09:40 Yohanes R. Wardhana — Vrije Universiteit Brussel, Brussels,

Belgium — *Impact of minerals on the microbial species diversity and metabolite kinetics during spontaneous back-slopped wheat sourdough productions*

09:55 Carla Graça — University of Helsinki, Helsinki, Finland — *Development of functional polysaccharide/protein extracts by bioprocessing of cereal sidestreams*

10:10 Fabio Tuccillo — University of Helsinki, Helsinki, Finland — *Influence of fermentation conditions on acidification and dextran production of faba bean concentrate fermented by Weissella confusa A16*

10:25 – 11:00 Coffee Break and Poster Viewing

11:00 Kati Katina — University of Helsinki, Helsinki, Finland — *Bioprocessing induced flavour modification of grain based raw materials*

11:25 Susanne Miescher Schwenninger — Zurich University of Applied Sciences, Wädenswil, Switzerland — *A multifunctional starter culture of indigenous lactic acid bacteria for improved rheological properties and extended shelf life of Kunuzaki — A cereal-based Nigerian fermented beverage*

11:40 Jin Xie — University of Alberta, Edmonton, Canada — *The role of  $\gamma$ -glutamyl cysteine ligases from Limosilactobacillus reuteri in the formation of  $\gamma$ -glutamyl dipeptides during sourdough fermentation*

11:55 Ömer Şimşek Yıldız — Technical University, Istanbul, Turkey — *Insights of functional features of glucanotransferases from sourdough lactobacilli*

SECTION 3 — SOURDOUGH AS A FUTURE PROOF BIOTECHNOLOGY: SUSTAINABLE SIDE STREAMS UPCYCLING — Chair: Christophe Courtin, Stefan Cappelle

12:10 Carlo G. Rizzello — "Sapienza" University of Rome, Rome, Italy — *Fermentation and zero-waste strategies for the cereal industry: from functional foods to bioplastics*

12:35 Emma Neylon — University College Cork, Cork, Ireland — *Fermentation as a tool to revitalise brewers' spent grain and elevate techno-functional properties and nutritional value in high fibre bread*

12:50 – 14:40 Lunch and Poster Viewing

14:40 Inés Pradal — Vrije Universiteit Brussel, Brussel, Belgium — *Lactic acid bacteria and yeast dynamics in Type 3 sourdoughs*

14:55 Mikko Immonen — University of Helsinki, Helsinki, Finland — *The potential of dextran and maltosylisomalto-oligosaccharides to enable recycling of surplus bread*

15:10 Erica Pontonio — University of Bari "Aldo Moro", Bari, Italy — *Sourdough fermented hemp: food innovation for an unexploited ingredient*

15:25 Raimondo Gaglio — University of Palermo, Palermo, Italy — *Reuse of almond by-products: functionalization of traditional semolina sourdough bread with almond skin*

15:40 Lorenzo Siroli — University of Bologna, Bologna, Italy — *Improvement of functional and technological characteristics of pre-fermented ingredients obtained from milling by-products fermented by selected consortia of lactic acid bacteria and yeasts*

15:55 Michela Verni — University of Bari "Aldo Moro", Bari, Italy — *Up-cycling strategies for brewers' spent grain: effect of the lactic acid bacteria metabolism on technological and functional properties and use as food ingredient*

16:10 – 16:40 Coffee Break and Poster Viewing

**SECTION 4 — THE INDUSTRY AND SOURDOUGH ALLIANCE: HOW TO ENSURE RESILIENCE AND PERFORMANCE** — Chair: Maria De Angelis, Ömer Şimşek Yıldız

- 16:40 **Karl De Smedt** — R&D Puratos nv, Brussels, Belgium — *The Quest for Sourdough, a unique discovery of sourdough in the world*
- 17:00 **Celine Verdonck** — KU Leuven, Leuven, Belgium — *Comparing and modelling the impact of baker's yeast and sourdough-based leavening strategies and process parameters on the specific volume of wheat wholemeal bread*
- 17:15 **Markus Brandt** — Ernst Böcker GmbH & Co. KG, Minden, Germany — *The current European legislation on sourdough*
- 17:35 **Oana Iacob-Le Roy** — Federation of European Manufacturers and Suppliers of Ingredients to the Bakery, Confectionery and Patisseries Industries, Brussel, Belgium — *Understanding Sourdough: building a common ground*
- 17:50 **Corinne Lesens** — Lesaffre International, Marcqen-Baroeul, France — *Nutritional benefits of sourdoughs: Lesaffre's scientific position*
- 18:10 **Annabelle Vera** — Philibert Savours, Lyon, France — *Real-life use of an industrial active wheat sourdough: influence of baking process and packaging on metabolic activity and sourdough shelf life*
- 19:50 Evening Event Dinner

THURSDAY, 16<sup>th</sup> JUNE

**SECTION 5 — SOURDOUGH IN TOMORROW'S MENU: ROLE IN THE CONSUMER DIETARY SHIFT** — Chair: Fabio Minervini, Susanne Miescher Schwenninger

- 09:00 **Furio Brighenti** — University of Parma, Parma, Italy — *Health benefits of sourdough through control of postprandial metabolism*
- 09:25 **Andrea Polo** — Free University of Bozen-Bolzano, Bolzano, Italy — *Feeding with sustainably sourdough bread promotes healthy microbiota metabolism at the colon level*



- 09:40 **Denise C. Müller** — Zurich University of Applied Sciences, Wädenswil, Switzerland — *Functional sourdough applied in clean label and sugar-reduced soft buns*
- 09:55 **Emanuele Zannini** — University College Cork, Cork, Ireland — *What's for dinner? Role of sourdough in the food dietary transition*
- 10:20 – 10:50 Coffee Break
- 10:50 **Viola Galli** — University of Florence, Florence, Italy — *Technological characteristics and aromatic profile of bread produced with pepper and blueberry purees fermented by selected autochthonous microorganisms*
- 11:05 **Giacomo Braschi** — University of Bologna, Bologna, Italy — *Use of Yarrowia lipolytica RO25 cricket-based hydrolysates to produce high quality sourdough*
- 11:20 **Kashika Arora** — Free University of Bozen-Bolzano, Bolzano, Italy — *Sourdough performances of the golden cereal Tritordeum: dynamics of microbial ecology, biochemical and nutritional features*
- 11:35 Best Poster Awards
- 12:05 Optional tour to Micro4Food Labs
- 12:50 – 14:00 Lunch
- 14:30 Departure for South Tyrol Tour and Gala Dinner\*

FRIDAY, 17<sup>th</sup> JUNE

**SECTION 6 — SOURDOUGH AND WELLNESS ERA: THE MULTI-FACETED VALUE** — Chair: Delphine Sicard, Raffaella Di Cagno

- 09:00 **Lilit Ispiryan** — University College Cork, Cork, Ireland — *Biotechnological approaches to reduce FODMAPs in cereal products*
- 09:25 **Georgia Chatonidi** — KU Leuven, Leuven, Belgium — *Sourdough bakery products may modulate appetite by impacting post-prandial metabolic responses: a systematic review*
- 09:40 **Fred Brouns** — Maastricht University, Maastricht, Netherlands — *Resistant starch in sourdough bread: sufficient for reduced glycemia claims?*
- 09:55 **Yuqi Shao** — University of Alberta, Edmonton, Canada — *Characterization of the glucan-branching enzyme glgB gene from swine intestinal bacteria and potential role in low digestible oligosaccharides production*

10:10 – 10:40 Coffee Break

- 10:40 **Luca Settanni** — University of Palermo, Palermo, Italy — *Sourdough as a secretly healthy biotechnology*
- 11:05 **Yamina De Bondt** — KU Leuven, Leuven, Belgium — *The techno-functionality of sourdough during wheat breadmaking: a fresh perspective on more than 100 years of research*
- 11:20 **Lauriane Mietton** — University of Montpellier, Montpellier, France — *Dynamic of installation of microbial community in sourdough and bread quality: impact of bakers and grain milling*
- 11:35 Best Oral Presentation Award
- 11:45 Concluding Remarks
- 11:55 Announcement of 9<sup>th</sup> International Symposium on Sourdough
- 12:05 Acknowledgements
- 12:15 Light Lunch (Take Away)

**Organisation and Administration**  
Faculty of Science and Technology,  
Free University of Bozen-Bolzano  
Bozen-Bolzano, Italy



**Symposium Venue**  
NOI Techpark  
Bozen-Bolzano, Italy



**Sponsors**

