

VII INTERNATIONAL SYMPOSIUM ON SOURDOUGH

“SOURDOUGH FOR HEALTH” 6 - 8 June 2018, Cork Ireland



School of
**Food and
Nutritional Sciences**

Symposium Programme

6th June 2018

- 8:00 to 9:00 Early Registration - Kingsley Hotel, Cork, Ireland
- 9:00 to 9:15 Welcome and Opening of Symposium
Dr. Paul Ross - *Head of College, University College Cork, Western Road, Cork, Ireland*
- 9:15 to 12:00 **Session no. 1: Nutritional properties of sourdough bakery products**
Chairperson: Emanuele Zannini School of Food and Nutritional Sciences, University College Cork, Western Road, Cork, Ireland - Marco Gobetti, Faculty of Sciences and Technology, Libera Università di Bolzano, 39100 Bolzano, Italy
- 9:15 to 9:45 **Dr Gerard Clarke** - *Department of Psychiatry, University College Cork, Western Road, Cork, Ireland*
The Gut Microbiome, Brain Function and Behaviour: Towards a Psychobiotic Revolution? - Keynote lecture
- 9:45 to 10:15 **Prof. Elke Arendt** - *School of Food and Nutritional Sciences, University College Cork, Western Road, Cork, Ireland*
Sourdough improving the nutritional properties of cereal products- Keynote lecture
- 10:15 to 10:30 **Prof. Carlo Rizzello** - *Department of Soil, Plant and Food Science, University of Bari Aldo Moro, Bari, Italy*
Sourdough fermentation and bread digestibility: an in vivo perspective
- 10.30 - 11.00 **Coffee break & poster viewing**
- 11:00 - 11:15 **Qing Li** - *University of Alberta, Dept. of Agricultural, Food and Nutritional Science, Edmonton, Canada*
The effects of glutaminase on acid resistance in host-adapted lactobacilli
- 11:15 - 11:30 **Annabelle Vera** - *Philibert Savours, Institut R&D, Lyon, France*

Use of wheat germ sourdough to improve nutritional value of bread and reduce salt intake

11:30 - 11:45

Aylin W. Sahin - *School of Food and Nutritional Sciences, University College Cork, Western Road, Cork, Ireland*

Leuconostoc citreum TR116: In-situ production of mannitol in sourdough and its application to reduce sugar in burger buns

11:45 - 12:00

Dr. Jorge Gil-Martinez - *Anheuser-Busch InBev nv/sa, Global Innovation & Technical Development, Gitec, Brouwerijplein 2, B-3000 Leuven, Belgium*

Fermented brewer's spent grains with sourdough and nutritional perspectives

12:00 - 14:30

Section no.2 - Gluten-free and FODMAP-free sourdough for celiac and IBS patients

Chairperson: *Luc De Vuyst - Research Group of Industrial Microbiology and Food Biotechnology, Department of Bioengineering Sciences, Faculty of Sciences and Bioengineering Sciences, Vrije Universiteit Brussel, Belgium - Kati Katina, Department of Food and Nutrition, University of Helsinki, Helsinki, Finland*

12:00 - 12:30

Dr Muir JG - *Department of Gastroenterology, Central Clinical School, The Alfred Centre, Monash University, Melbourne, Australia*

Gluten free and low FODMAP sourdoughs for celiac and IBS patients: a biomedical prospective - Keynote lecture

12:30 -12:45

Jussi Loponen, *Head of Research, Fazer Group, POB 4, FI-00941 Helsinki*

Zero-FODMAP sourdough technology

12:45 - 13:00

Lilit Ispiryan - *School of Food and Nutritional Sciences, University College Cork, Western Road, Cork, Ireland*

Impact of sourdough and yeast-fermentation on the FODMAP profile of whole-wheat bread

13.00 - 14.15

Lunch & poster viewing

14:15 - 14:30

Stefan Horstmann - *School of Food and Nutritional Sciences, University College Cork, Western Road, Cork, Ireland*

Impact of different *S. cerevisiae* yeast strains on gluten-free dough and bread quality parameters

14:30 - 15:00

Section no. 3 - Sourdough and consumer perception

Chairperson: *Raffaella Di Cagno Faculty of Sciences and Technology, Libera Università di Bolzano, 39100 Bolzano, Italy - Hassina Ait-Abderrahim, Lesaffre International, Marcq-en-Baroeul France*

14:30 - 15:00

Speaker to be confirmed

Developments in the sourdough marketplace - a consumer perception
Title to be confirmed - invited speaker

- 15:00 - 15:15 **Héliciane Clément** - *Biofournil, Le Puiset Doré, Montrevault-sur-Evre, France - Flavor team, Matrix and Food, Process/properties - Oniris, LUNAM University, Nantes, France ,INRA, Biopolymères, Interactions & Assemblages (BIA), Nantes, France, Food and Industrial Microbiology Laboratory, Oniris, LUNAM University, Nantes, France*
- Can instrumental characterization help predicting sour taste perception in sourdough bread?
- 15:15 - 17:00 **Section no. 4 - Sourdough ecology and sourd-omic**
- Chairperson:** **Rudi Vogel** - *Lehrstuhl für Technische Mikrobiologie, Technische Universität München Freising - Carlo Rizzello - Department of Soil, Plant and Food Science, University of Bari Aldo Moro, Bari, Italy*
- 15:15 - 15:45 **Prof Luc De Vuyst** - *Research Group of Industrial Microbiology and Food Biotechnology, Department of Bioengineering Sciences, Faculty of Sciences and Bioengineering Sciences, Vrije Universiteit Brussel, Belgium*
- Omics approaches to understand sourdough fermentation processes - Keynote lecture
- 15:45 -16:15 **Coffee break & poster viewing**
- 16:15 -16:30 **Simon Van Kerrebroeck** - *Research Group of Industrial Microbiology and Food Biotechnology, Faculty of Sciences and Bioengineering Sciences, Vrije Universiteit Brussel Brussels, Belgium*
- A meta-analysis of the sourdough species diversity as a function of the process conditions
- 16:30 - 17:15 **Sourdough bread sensory section**
- 19:00 **Evening Event (included in registration fee)**
- “Traditional Irish Evening” at the Aula Maxima in UCC

7th June 2018

- 8:30 -9:45 **Section no. 4 - Sourdough ecology and sourd-omic**
- Chairperson:** **Luc De Vuyst** - *Research Group of Industrial Microbiology and Food Biotechnology, Department of Bioengineering Sciences, Faculty of Sciences and Bioengineering Sciences, Vrije Universiteit Brussel, Belgium - Bernard Onno, Food and Industrial Microbiology Laboratory, Oniris, LUNAM University, Nantes, France*
- 8:30 - 9:00 **Prof F. Rudi Vogel** - *Lehrstuhl für Technische Mikrobiologie, Technische Universität München Freising*
- Stories from comparative genomics of *Lactobacillus sanfranciscensis* and *Lactobacillus lindneri* - Keynote lecture
- 9:00 - 9:15 **Elisa Michel** - *Oniris, Laboratoire de Microbiologie Alimentaire et Industrielle, Nantes, France - INRA, SupAgro, Université de Montpellier, France Montpellier*

- Role of agronomic and bread-making practices in sourdough microbial diversity and bread nutritional and organoleptic properties
- 9:15 - 9:30 **Maria De Angelis** - *Department of Soil, Plant and Food Science, Via G. Amendola 165/a, 70126 Bari, University of Bari Aldo Moro*
Bran and particle size of wheat flour drive the microbiome and functional features of wheat sourdoughs
- 9:30 - 9:45 **Dr Erica Pontonio** - *Department of Soil, Plant and Food Sciences, University of Bari A. Moro, Bari, Italy*
Quantitative Real Time PCR (qPCR) method to authenticate traditional/typical breads
- 9:45 - 11:30 **Section no. 5 - Industrial production of sourdough - competitiveness and functionality**
Chairperson: Dr. Jorge Gil-Martinez - Anheuser-Busch InBev nv/sa, Global Innovation & Technical Development, Leuven, Belgium - Bernard Genot, Puratos, Groot-Bijgaarden, Belgium
- 9:45 - 10:00 **Markus Brandt** - *Ernst Böcker GmbH & Co. KG, Minden, Germany*
Specialty sourdoughs for specialty baked goods - Invited speaker
- 10:00 - 10:30 **Prof. Michael G. Gänzle** - *University of Alberta, Dept. of Agricultural, Food and Nutritional Science, Edmonton, Canada*
Lifestyles of sourdough lactobacilli - implications for competitiveness and functionality of sourdough microbiota - Keynote lecture
- 10:30 - 11:00 **Coffee break & poster viewing**
- 11:00 - 11:15 **Gulten Yagmur** - *Lesaffre International, France*
Synergy between selected yeast and bacteria couples in stiff sourdough
- 11:15 - 11:30 **Dr. Christian Faber** - *Zeppelin Systems GmbH, Rödermark, Deutschland*
Further development of a moistening principle as pre-mixer for batch-wise or continuously produced sourdoughs
- 11:30 - 12:15 **Section no. 6 Improvement of cereal quality through sourdough LAB/yeast fermentation properties**
Chairperson: Muir JG - Department of Gastroenterology, Central Clinical School, The Alfred Centre, Monash University, Melbourne, Australia - Markus Brandt - Ernst Böcker GmbH & Co. KG, Minden, Germany
- 11:30 - 12:00 **Prof Marco Gobetti** - *Faculty of Sciences and Technology, Libera Università di Bolzano, 39100 Bolzano, Italy*

Novel insights on the functional/nutritional features of the sourdough fermentation -Keynote lecture

12:00 - 12:15

Karoline Schreiber - *Ernst Böcker GmbH & Co. KG, Minden, Germany*

Sourdough as an optimization tool in baking processes influenced by different flour qualities

12:15 - 13:00

Sourdough bread sensory section

13:00 - 14:00

Lunch & poster viewing

14:00

Departure for Inchydoney Island Lodge & Spa (not included in registration fee)

19:00

Gala dinner (not included in registration fee)

8th June 2018

9:00 -13:00

Section no. 6 Improvement of cereal quality through sourdough LAB/yeast fermentation properties

Chairperson: **Michael G. Gänzle**, University of Alberta, Dept. of Agricultural, Food and Nutritional Science, Edmonton, Canada- **Maria De Angelis** - *Department of Soil, Plant and Food Science, University of Bari Aldo Moro, Bari*

9:15 - 9:45

Dr. Emanuele Zannini - *School of Food and Nutritional Sciences, University College Cork, Cork, Ireland*

Sourdough LAB as “farm to fork” bio protection system - Keynote lecture

9:45 - 10:00

Bowen Yan - *University of Alberta, Department of Agricultural, Food and Nutritional Science, Edmonton, AB, Canada* - *School of Food Science and Technology, Jiangnan University, Wuxi, China*

Contribution of γ -Glutamyl Cysteine Ligase in *Lactobacillus reuteri* to γ -Glutamyl Dipeptides Biosynthesis in Sourdough Fermentation

10:00 - 10:15

Stephanie Jeske - *School of Food and Nutritional Sciences, University College Cork, Cork, Ireland*

Polyol producing lactic acid bacteria isolated from sourdough and their application to reduce sugar in quinoa-based milk substitutes

10:15 - 10:30

Yan Xu - *Department of Food and Nutrition, University of Helsinki, Helsinki, Finland*

Impact of in situ produced exopolysaccharides on rheology and texture of fava bean protein concentrate

- 10:30 - 11:00 **Coffee break & poster viewing**
- 11:00 -13:00 **Section no. 6 Improvement of cereal quality through sourdough LAB/yeast fermentation properties**
Chairperson: Elke Arendt School of Food and Nutritional Sciences, University College Cork, Western Road, Cork, Ireland - Marco Gobetti, Faculty of Sciences and Technology, Libera Università di Bolzano, 39100 Bolzano, Italy
- 11:00- 11:15 **Prof. Kati Katina - Department of Food and Nutrition, University of Helsinki, Helsinki, Finland**
Influence of in situ produced dextran on sensory profile of and texture wheat bread enriched with *faba* bean flour - Invited speaker
- 11:15 - 11:30 **Hümeyra İspirli - Yıldız Technical University, Chemistry-Metallurgical Faculty, Department of Food Engineering, Turkey**
Effects of glucan type exopolysaccharides (EPS) production on physicochemical properties of sourdough and textural characteristics of sourdough bread
- 11:30 - 11:45 **Thibaut Thery - School of Food and Nutritional Sciences, University College Cork, Cork, Ireland**
Design of antimicrobial peptides in a clean label approach to extend the shelf-life of sourdough bread
- 11:45 - 12:00 **Andrea Comasio - Research Group of Industrial Microbiology and Food Biotechnology, Faculty of Sciences and Bioengineering Sciences, Vrije Universiteit Brussel, Belgium**
Fermentation strategies with lemon and apple juices to produce innovative sourdoughs
- 12:00 - 12:15 **Fabio Minervini - Department of Soil, Plant and Food Science, University of Bari Aldo Moro, Bari**
Does tap water affect microbiota of de novo sourdough and/or bread quality?
- 12:15- 12:30 **Michela Palla - Department of Agriculture, Food and Environment, University of Pisa, Italy**
Molecular, pro-technological and functional characterization of yeasts isolated from Tuscan sourdoughs to be used as potential starters
- 12:30 - 12:45 **Denise Müller - Zurich University of Applied Sciences, Institute for Food and Beverage Innovation**

Breakfast cereals from milling by-products: Lactic acid bacteria fermentation of barley white bran and low-grade wheat flour

- 12:45 - 13:00 **VII Sourdough Symposium conclusion**
- 13:00 **Light lunch**
- 14:00 - 17:00 **Optional tour at UCC Bakery facilities**