Program

Tuesday 28th October

11.00 - 14:00 Registration, uploading lectures and set up posters

14.00 - 14.10 Welcome
Jessika De Clippeleer, KU Leuven, Belgium
Simon Jackson, IBD, United Kingdom

14.10 - 14.40 Keynote lecture Prof. Ludwig Narziß

Session 1: Process innovations in malting and brewing

Chair: Rudolf Michel, GEA Group, Germany

14:40 - 15:05 L1.1: Cake resistance of horizontal filter layers of lautering spent grain cakes
Jörg Engstle, Chair of process engineering of disperse systems, Technische Universität München, Weihenstephan, Germany

15:05 - 15:30 L1.2: Impacts of steam injection technology on volatile formation and stripping during wort boiling
Calum Holmes, The University of Nottingham, United Kingdom

15:30 - 15:55 L1.3: Gallotannins - a tool to reduce the gushing potential and to improve oxidative and colloidal beer stability
Jan Ole Schneidereit, Chair of Brewing Science, Technische Universität Berlin, Germany

15.55 - 16:30 Break

Session 2: Raw materials for brewing and distilling

Chair: Paul Hughes, Yasigiworld, United Kingdom

16:30 - 16:55 L2.1: Malting potential of different Irish spring barleys and suitability for gluten-free beer production
Joshua P. Taylor, University College Cork, Ireland

16:55 - 17:20 L2.2: Nanoscale differences of class II hydrophobins and their effect on primary gushing: Physico-chemical aspects
David Santiago Riveros, Molecular and microbial systems, KU Leuven, Belgium

17:20 - 17:45 L2.3: Use of sugarcane syrup as adjunct in lager and ale beers
Raquel Aizemberg, School of Engineering of Lorena, University of São Paulo, Brazil

17:45 - 18:05 L2.4: The influence of storage conditions on hallertauer mittelfruh hops used in dry-hopped lager beer
Daniel Vollmer, Oregon State University, USA

18:05 - 19:30 Poster session

19.30 - 22:00 Welcome party (including tasting of beers from the low countries)
Wednesday 29th October

Session 3: Yeast technology and innovations in fermentations

Chair: Dirk Iserentant, VIB – UGent, Belgium

09:00 - 10:15
L3.1: Unraveling the complex trait of ethyl acetate production in *Saccharomyces cerevisiae*
Sylvester Holt, Laboratory of Molecular Cell Biology, KU Leuven; VIB, Belgium

L3.2: Development of interspecies yeast hybrids to introduce aromatic diversity in lager beers
Stijn Mertens, Laboratory for Genetics and Genomics, KU Leuven; Laboratory for Systems Biology, VIB, Belgium

L3.3: Self-cloning brewing yeast: new possibilities for optimized wort fermentation
Susann Fischer, Department of brewing and beverage technology, Technische Universität München, Germany

L3.4: High-throughput phenotypic characterization of *Brettanomyces bruxellensis* using phenotype microarrays
Sam Crauwels, Laboratory for Process Microbial Ecology and Bioinspirational Management, KU Leuven, Belgium

10:15 - 11:10
Break

Chair: David Cook, University of Nottingham, United Kingdom

L3.5: Fermentation performance and characterization of specialty beers produced by South American wild *Saccharomyces cerevisiae* strains
Gabriela Gontijo Montandon, Institute of Biological Sciences (ICB), Federal University of Minas Gerais (UFMG), Brazil

L3.6: An improved model for prediction of fermentation progress and total diacetyl profile
Kristoffer Krogerus, VTT Technical Research Centre of Finland, Finland

L3.7: Development of a continuous fermentation system and evaluation of aroma production in a non-immobilized cell system
Brecht De Causmaecker, Laboratory for Enzyme-, Fermentation - and Brewing Technology, KU Leuven - Technology Campus Gent, Belgium

11:10 - 13:40 Lunch and poster session

Session 4: Novel analytical methods for raw materials and beverages

Chair: Joeri Vercammen, Interscience, Belgium

13:40 - 14:05
L4.1: GCxGC-TOF-MS a novel and powerful tool to establish the beer volatile profiling
Cátia Martins, Chemistry Department, University of Aveiro, Portugal

L4.2: Aroma production in wheat beer wort during fermentation – real-time analysis of dynamic changes
Corinna Keupp, Chair of Food Packaging Technology, Technische Universität München, Germany

L4.3: From concept to functional tool: how bound-state aldehydes can influence beer flavor instability
Jeroen Baert, Laboratory for Enzyme-, Fermentation - and Brewing Technology, KU Leuven - Technology Campus Gent, Belgium

14:05 - 15:25 Break
Session 5: Microbiology and hygiene

*Chair: Luc De Cooman, KU Leuven, Belgium*

15:25 - 15:50
L5.1: Characterisation of antifungal lactic acid bacteria and their application in malting and brewing
*Lorenzo Peyer, School of Food and Nutritional Sciences, University College Cork, Ireland*

15:50 - 16:15
L5.2: Individual-based modeling for fermentation processes in liquid and semi-solid food products
*Ignace Tack, BioTeC – Chemical and Biochemical Process Technology and Control, KU Leuven, Belgium*

16:15 - 17:15
Poster session

17:15 - 18:15 Transport to Rodenbach Brewery
18:30 - 20:15 Guided tour at the unique historical Rodenbach brewery
20:30 - 22:00 Dinner at the Rodenbach site
22:00 - 23:00 Transfer to Ghent
Thursday 30th October

Session 6: Experimental design, measurement and uncertainties

Chair: Jan Van Impe, KU Leuven, Belgium

09:00 - 09:25
L6.1: Predictive models to describe the effect of environmental conditions on microbial kinetics
Simen Akkermans, Flemish Cluster Predictive Microbiology in Foods, KU Leuven, Belgium

09:25 - 09:50
L6.2: ‘ROBOFILL’ – A robot-based bottling concept for the production of personalised beverages
Romy Eichler, Chair of food packaging technology, Technische Universität München, Germany

09:50 - 10:15
L6.3: Operational state related energy data analysis in bottling plants
Isabel Anna Osterroth, Chair of food packaging technology, Technische Universität München, Germany

10:40 - 10:45
Break

Session 7: Flavour and sensory properties of beverages

Chair: Filip Van Opstaele, KU Leuven, Belgium

10:45 - 11:10
L7.1: Development and application of an enhanced HPLC method for the analysis of hop bitter acids in beer
Olayide Oladokun, The University of Nottingham, United Kingdom

11:10 - 11:35
L7.2: The journey of oxygenated sesquiterpenoids: from kettle to cask
Tatiana Praet, Laboratory for Enzyme-, Fermentation - and Brewing Technology, KU Leuven - Technology Campus Gent, Belgium

11:35 - 12:00
L7.3: Changes in hop volatile concentration in beer during fermentation by S. cerevisiae
Grant Ruehle, New Belgium Brewing Co., USA

12:00 - 12:25
L7.4: The influence of different dry hopping methods on the flavour characteristics of dry hopped beers
Mark Zunkel, Barth Innovations, Germany

12:25 - 13:40
Lunch and poster session

13:40 - 14:05
L7.5: The use of alternative sweeteners in beer
Monika Van Holsbeek, Laboratory for Enzyme-, Fermentation - and Brewing Technology, KU Leuven - Technology Campus Gent, Belgium

14:05 - 14:30
L7.6: Towards a better understanding of oxygen permeation through crown caps and the kinetics of its consumption by the liquid
Ruslan Hofmann, Versuchs- und Lehranstalt für Brauerei in Berlin (VLB), Germany

14:30 - 14:55
L7.7: Emotional response to the sensory properties of beer
Curtis Eaton, The University of Nottingham, United Kingdom

Session 8: Poster Discussions

Chair: Guido Aerts, KU Leuven, Belgium

14:55 - 17:00
Poster Discussions*

17:00 - 18:15
Guided tasting of beers and spirits from the low countries

18:20 - 18:30
Closing session
Guido Aerts, KU Leuven, Belgium

18:30 - 20:30
Symposium dinner including a guided tasting of Scottish whisky**
Simon Jackson, IBD, United Kingdom

20:30 - 22:30
Farewell party with live music

22:30 - ...
After party with bouncing beats and funky bleeps
*Poster Discussions*

**Sub session 1: Process innovations in malting and brewing**

**P1.1** The volatility of dimethylsulfide in water  
*Hans Scheuren, Ingenieurbüro Dr.-Ing. Hans Scheuren, Bad Kreuznach, Germany*

**P1.2** Quantification of wort homogeneity  
*Hans Scheuren, Ingenieurbüro Dr.-Ing. Hans Scheuren, Bad Kreuznach, Germany*

**P1.3** Increasing the shelf-life of non-filtered beer using high hydrostatic pressure (HHP)  
*Blanka Kotlíková, Institute of Chemical Technology, Department of Biotechnology, Prague, Czech Republic*

**P1.4** Improved bitter substance yield by recovery from hot break and yeast washing solution  
*Francisco Pereira, Technische Universität Berlin, Department of Food Technology and Food Chemistry, Chair of Brewing Science, Berlin, Germany*

**P1.5** Filtration from the particle side of view  
*Alexander Scheidel, TUM School of Life Sciences Weihenstephan, Chair of process engineering of disperse systems, Freising, Germany*

**P1.6** Innovative hopping to improve the oxidative beer stability  
*Kord Depenau, Technische Universität Berlin, Department of Food Technology and Food Chemistry, Chair of Brewing Science, Berlin, Germany*

**Sub session 2: Raw materials for brewing and distilling**

**P2.1** Sorghum malt/adjunct in beer: optimizing FAN and yield  
*Alexander Merz, Novozymes Switzerland AG, Dittingen, Switzerland*

**P2.2** Brewing with chios PDO mastic products  
*Panagiotis Tataridis, Technological Educational Institute of Athens, Department of Enology & Beverage Technology, Athens, Greece; Pan-Hellenic Union of Registered Enologists (PANEPO), Athens, Greece*

**P2.3** Esters and higher alcohols in ale and lager beers with sugarcane syrup as an adjunct  
*Raquel Aizemberg, University of São Paulo, School of Engineering of Lorena, Department of Biotechnology, Lorena, São Paulo, Brazil*

**Sub session 3: Yeast technology and innovations in fermentations**

**P3.1** Impact factor maturation: how does it influence the aroma profile of wheat beer  
*Hubertus Schneiderbanger, TU München, Research Center Weihenstephan for Brewing and Food Quality, Freising, Germany*

**P3.2** Identification of Brewer’s strains by MALDI-TOF-MS  
*Jana H. Gierds, Research and Teaching Institute for Brewing in Berlin (VLB Berlin), Berlin, Germany*

**P3.3** Influence of active dried yeast on fermentation profiles and beer characteristics  
*Annick Boeykens, Odisee, University college Ghent, Chemistry, Ghent, Belgium*

**P3.4** The relationship between very high gravity fermentations and brewing yeast stress  
*Alexander Mott, University of Nottingham, UK*

**P3.5** Alcohol-free wheat beer with maltose-negative yeast strain Saccharomyces ludwigII  
*Tim Meier-Dörnberg, TU München, Research Centre for Brewing and Food Quality, Weihenstephan, Freising, Germany*

**P3.6** Digital holographic microscopy (DHM): a new tool for yeast assessment?  
*Anne-Catherine Vandevelle, Institut Meurice, Department of Brewing Sciences and Fermentation Technology, Anderlecht, Belgium*

**P3.7** Phenotypic evaluation of Saccharomyces yeasts for the detection of potential bioethanol strains  
*Vaskar Mukherjee, KU Leuven, Technology Campus De Nayer, Laboratory for Process Microbial Ecology and Bioinspirational Management (PME&BIM), Sint-Katelijne-Waver, Belgium*

**Sub session 4: Novel analytical methods for raw materials and beverages**

**P4.1** Rapid photometric determination of high molecular weight beta-glucan in malt
**Sub session 5: Microbiology and hygiene**

P5.1 Metabolic strategies of beer spoilage lactic acid bacteria  
*Andreas J. Geißler, Technische Universität München, Technische Mikrobiologie, München, Germany*

A new approach to bacterial identification in a point-of-care format  

P5.2 *Jennifer Koob, TU München, Research Center Weihenstephan for Brewing and Food Quality, Freising, Germany*

Investigation of the thermo tolerance of three different beer spoiling bacteria  

P5.3 *Maximilian Michel, TU München, Research Center Weihenstephan for Brewing and Food Quality, Freising, Germany*

**Sub session 6: Experimental design, measurement and uncertainties**

P6.1 Automatic generation of manufacturing execution systems in the food and beverage industry  
*Stefan Flad, Technische Universität München, Chair of food packaging technology, Freising, Germany*

P6.2 Dissolved silicon content in Belgian beers  
*Anneleen Decloedt, Ghent University, Ghent, Belgium*

P6.3 Application of quantitative descriptive analysis in product development  
*Lindsay Guerdrum, New Belgium Brewing Company, Fort Collins, CO, USA*

**Sub session 7: Flavour and sensory properties of beverages**

P7.1 Aroma stabilization using a novel biosurfactant  
*Mohammadreza Khalesi, Department of Microbial and Molecular Systems (M2S), KU Leuven, Heverlee, Belgium*

Flavour interactions between the ‘estery’ and ‘mature/woody’ characters of aged spirits  

P7.2 *Ivonne Gonzalez-Robles, Brewing Science Section, Division of Food Sciences, The University of Nottingham, Sutton Bonington Campus, Loughborough, Leicestershire, UK*

P7.3 Thermodesorptions-GC/MS: new chance for spirit analysis  
*Johannes Fuchs, Research and Teaching Institute for Brewing in Berlin (VLB Berlin), Berlin, Germany*

The effect of the availability of amino acids, oxygen and iron on the formation of staling aldehydes in buffered model solutions  

P7.4 *Philip Wietstock, Technische Universität Berlin, Department of Food Technology and Food Chemistry, Chair of Brewing Science, Berlin, Germany*

Flavour descriptors on beer labels: a hop too far?  

P7.5 *Hannah Lemar and Barnaby Hoare, Campden BRI, Centenary Hall, Nutfield, Surrey, UK*

Volatile of aroma components during evaporation  

P7.6 *Magdalena Mueller, Technical University Munich, Institute of Brewing and Beverage Technology, Freising, Germany*

Measuring temporally dominant sensations in beer  

P7.7 *Zenia Jappinen, Brewing Science, University of Nottingham, UK*