

## **EBC BREWING SCIENCE GROUP**

**Chairman:** Erna Storgårds  
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### **OBJECTIVES**

- To promote, direct and influence scientific and technical development and innovation in the brewing industry.
- To provide a forum for scientific networking in malting and brewing related areas.
- To promote joint research activities, thereby avoiding overlap.
- To promote knowledge transfer from other industries.

### **MEETINGS**

- Biennial Technical Meetings are held in alternate years to EBC Congresses
- Group members and their colleagues present and discuss their scientific and technical work
- Abstracts of the papers presented are circulated within the Group

### **MEMBERSHIP**

The members have expertise in brewing research or quality control and represent the brewing industry, its supply chain, brewing research institutes and universities. There are presently 57 members from 20 countries in Europe and in North and in South America

### **SUB-GROUPS**

Much of the work is carried out by sub-groups which are:

#### **FOAM AND PHYSICAL STABILITY**

Chairman Peter Wilde, Institute of Food Research, UK

The subgroup is interested in all aspects of foam formation, stability and appearance. Common themes of interest are: methods of analysis, foam physics and chemistry, raw materials, composition and processing effects, novel foam improvement strategies and consumer perception. At last business meeting in May 2007, it was decided that the scope should be broadened to '*Foam and physical stability*' thereby including also filtration aids and similar topics as well as the effect of dispense.

Anyone interested in beer foam research should contact the chairman ([contact details with link to be added](#))

#### **EMERGING YEAST SYSTEMS**

Chairman Frank Nitzsche, Easyproof Laborbedarf, Germany

The objectives of the subgroup are

- molecular biology to understanding yeast physiology and behaviour
- improving the efficiency of fermentation
- biotransformation of flavours by fermentation systems
- flavour compound formation and sugar fermentation
- primary/secondary fermentation systems and immobilized cell/enzyme systems

Those interested in joining the subgroup should contact the chairman ([contact details with link to be added](#))

## **MICROBIAL CONTAMINANTS**

Chairman Tadhg O'Sullivan, Heineken, The Netherlands

The objectives of the subgroup are

- detection of microbial contaminants in the malting and brewing process
- new and rapid detection methods
- validation of rapid microbiological methods in brewery laboratories
- dissemination of proficiency testing in Microbiology QC laboratories

Those interested in joining the subgroup should contact the chairman ([contact details with link to be added](#))

## **MALTING BARLEY GENETICS AND PHYSIOLOGY**

Chairman Annika Wilhelmson, VTT, Finland

The general objective of the subgroup is to bring together research workers from within and outside the industry to communicate research findings in those fields which have a bearing on the development and assessment of new barley varieties for malting. We want to be active in the interface between barley science and brewing, so that we can benefit from the advances in this area of research.

The group recently met in Lleida on 13 November 2006, prior to the EUCARPIA meeting and in Venice on 7 May 2007, in connection to the EBC Congress. At these meetings the subgroup has identified about 12 potential members and agreed about working plans. A secure web site is planned for discussions and exchange of information. Next meeting is planned to take place in 2008, preferably in connection with some other meeting such as the Plant Genomics European Meeting (Plant GEM) or the International barley Genetics Meeting.

Anyone who is interested in participating in this sub-group should contact Annika Wilhelmson ([annika.wilhelmson@vtt.fi](mailto:annika.wilhelmson@vtt.fi) or +358 20 722 7113)

## **FLAVOUR AND FLAVOUR STABILITY**

Chairman Patrick Boivin, IFBM, France

The present objectives of the subgroup are to define a staling marker or collection of marker compounds in raw materials, wort and beer to predict flavour stability of beer, to

define sensory descriptors of stale beer and, especially important, to harmonise and standardise analytical methods to determine and predict flavour stability of beer.

Those interested in joining the subgroup should contact the chairman ([contact details with link to be added](#))

### **BEER SAFETY**

Chairman Patrick Boivin, IFBM, France

The objectives of the subgroup are

- to review and foresee the possible contaminants in the barley-malt-beer chain with emphasis on the prevention and curative methods as well as possible future legislations
- to ensure that the Brewers of Europe are alerted to emerging issues which might impact on the real or perceived safety of brewing raw materials, beer, packaging or co-products in order that they can respond in a timely and authoritative manner to minimize the potential damage to brewing companies

For further information concerning the work of the group, please contact the chairman ([contact details with link to be added](#)).

### **HYGIENE**

Chairman Frank-Jürgen Methner, TU Berlin

The objectives of the subgroup are

- Improving hygienic design and establishing basic principles of constructive details
- Improving networking to other areas of food and beverage industry
- Establishing standard cleaning concepts and methods for monitoring hygiene
- Understanding the basics of biofilm formation and its prevention

Anyone who is interested in participating in this sub-group should contact Frank-Jürgen Methner ([methner@vlb-berlin.org](mailto:methner@vlb-berlin.org))

### **MODELLING**

Chairman Paul Hughes, Heriot-Watt University

Advances in mathematical and computational sciences have found applications in diverse fields such as biochemical pathway modelling, pharmaceutical drug design and bioinformatics. These approaches are termed *in silico* methods, and have been referred to as the third-way in scientific and technological research. Examples of brewing applications include

- Kinetic modelling of Maillard reactions
- Computational chemistry approaches
- Mathematical models of fluid flow in commercial fermenters

Membership is open to anyone from the global brewing and brewing-related fraternity with expertise and/or interest. All members are expected to actively participate and contribute by presenting and discussing their work with other members of the sub-group. If interested in joining this sub-group, please contact Paul Hughes ([p.s.hughes@hw.ac.uk](mailto:p.s.hughes@hw.ac.uk)).