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# *9th European Young Cereal Scientists and Technologists Workshop*

*25-27 May 2010, Budapest*

**PROGRAM**



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## **MONDAY, 24 MAY**

15:00-20:00 Registration at Flóra Martos Student Hostel

19:00 Welcome party at the Club of Flóra Martos Student Hostel

## **TUESDAY, 25 MAY**

7:30 Bus transfer from the hotels

**Location: Agricultural Research Institute, Martonvásár**

9:00 Welcome and opening the workshop (Zoltán Bedő-Director, HAS-ARI, Peter Weegels-Chair, C&E, Sándor Tömösközi, BUTE)

9:15 *Moustafa Saad*: Opportunities offered by the American Association of Cereal Chemists for International Students

### **MORNING SESSION: Nutritional properties and functional components of cereals and cereal-based foods**

Chair: Peter Weegels - C&E

9:30 Keynote presentation. *Peter Weegels*: Innovative bread improvers: facts and fiction

9:50 *Lina Noubariene*, Åse Hansen, Nils Arneborg: Phytase activity in yeast

10:10 *Outi Mäkinen*: Role of oxidation in the viscosity loss of cereal beta-glucan extracts

10:30 *Tomasz Zakrzewski*, Henryk Zieliński, Mariusz Piskula: Influence of the origin, flour extraction rate and baking conditions on the antioxidant capacity and phenolics content of wheat, spelt and rye breads

10:50 *Allah Rakha*, Per Åman, Roger Andersson: How processing can effect the nutritional values of beta-glucan in cereal products?

11:10-12:30 Lunch and coffee break

## **AFTERNOON SESSION: Technological aspects of cereal-based food production**

Chair: Sándor Tömösközi - BUTE

12:30 *Dorothee Jacobs*, Mario Jekle, Thomas Becker: Influence of production parameters on the availability of bread aroma

12:50 *Anita Hirte*, Rob J. Hamer, Marcel B.J. Meinders, Cristina Primo-Martín: Permeability of crust is key to crispness retention

13:10 *Koen Jansens*, Bert Lagrain, Kristof Brijs, Mario Smet and Jan A. Delcour: Thermo-molded wheat gluten plastics: effect of molding temperature, molding time and gluten moisture content on the gluten network

13:30 *Sandra Mandato*, B. Cuq, T. Ruiz and A. Sadoudi: Development of an original experimental system to describe particle velocities and powder flow gradients during mixing: Application to durum wheat semolina agglomeration

13:50 *Doratheia W Steringa*, C. Primo-Martín: Approaches in controlling crispness retention of breads

14:10 *Havva Filiz Köksel*, Martin G. Scanlon: Predicting the particle size distribution of wheat bran during ball milling using the breakage and selection functions

14:30-15:00 Coffee break

15:00-18:00 Tour to Cerbona Co., Székesfehérvár (profile of the company: cereal-based food production, milling, muesli bars, pasta products)

18:30-21:30 Dinner at Vine Cellar of ARI

**WEDNESDAY, 26 MAY**

**Location: Budapest University of Technology and Economics, Building A**

**MORNING SESSION: Rheological properties, complex characterization of cereal products I.**

Chair: Radomir Lásztitý, Professor emeritus, BUTE

8:30 Keynote presentation. *Kari Tronsmo*, Wolfgang Held, Jan de Vries: Salt reduction in bread-a multi faceted approach

8:50 *Hajo Roozendaal*, Madian Abu-Hardan and Richard A. Frazier: Hydration properties of wheat bran in relation to millstream and particle size

9:10 *Mariann Rakszegi*, Danuta Boros, Csaba Kuti, László Láng, Zoltán Bedő, Peter R. Shewry: Composition and end-use quality of 150 wheat lines selected for the Healthgrain diversity screen

9:30 *Annelies Duyvejonck*, B. Lagrain, C. M. Courtin and J.A. Delcour: Suitability of the Solvent Retention Capacity methodology for European wheat flours

9:50 *Norbert Boros*, Mária Borbély, Zoltán Győri: Evaluation of rheological characteristics of wheat flour dough measured by extensigraph and alveograph, similarities and differences

10:10 *Nikkie Luyten*, B. Lagrain and J.A. Delcour: The effect of salt on the properties of wheat starch dispersions during heating

10:30-11:00 Coffee break

## MORNING SESSION: Rheological properties, complex characterization of cereal products II.

Chair: Livia Simon-Sarkadi - BUTE

- 11:00 *Gábor Balázs*, D. Juhasz, V. Nemeth, Morgounov, A., F. Bekes, S. Tomoskozi: Comprehensive study of special wheat lines applying micro scaled rheological methods and protein analysis
- 11:20 *Éva Kónya*, Zoltán Győri: Prediction of rheological properties of wheat samples by near-infrared spectroscopy
- 11:40 *Annelies Luyts*, Christophe M. Courtin, Jan A. Delcour: Low resolution 1H-nuclear magnetic resonance, a powerful tool for studying molecular dynamics in cake systems
- 12:00 *Mária Hódsági*, Tímea Gelencsér, Szilveszter Gergely, Alina Hevér, Ágnes Jámbor, András Salgó: Some novel basic and applied research of resistant starches
- 12:20-13:30 Lunch

## POSTER SESSION

Chair: Radomir Lásztity and Szilveszter Gergely - BUTE

- 13:30 *Moustafa Saad*, A. Barkouti E. Rondet, T. Ruiz, B. Cuq: Multi-scale description of agglomeration mechanisms for durum wheat semolina
- 13:35 *Jibin He*, Peter Shewry, Paola Tosi, Simon Penson and Chris Hawes: Spatial patterns of wheat grain composition in relation to nutritional quality and processing properties
- 13:40 *Anita Maczó*, Krisztina Takács, András Nagy, Éva Gelencsér, Jenő Szamos: Identification of serpin as a potential allergic marker of wheat contamination
- 13:45 *Zita Kovács*, Klára Kirsch, Csongor Sovány, Livia Simon-Sarkadi, Gábor Kocsy: Role of polyamines in responses to different environmental stresses in wheat
- 13:50 *Mónika Takács*, Tímea Gelencsér, András Salgó: Monitoring of enzyme catalyzed hydrolysis and investigation of heat treatment effects on starches using the RVA method
- 13:55 *Zsuzsanna Tarján*, Norbert Boros, Péter Sipos, Zoltán Győri: The influence of fraction size on the micro-, macroelements distribution of winter wheat flour
- 14:00 *Ildikó Szedljk*, Judit Kosáry, Katalin Szántai Kőhegyi: The study of the activity of enzymes influencing the colour of pasta products made from wheat (*Triticum aestivum* L.) by different technologies

14:05 *László Kocsis*, J. Deákvári and M. Herdovics: Investigation of different layers during corn drying by model dryer

14:10 *István Keppler*, L. Kocsis, L. Fenyvesi, M. Herdovics, I. Farkas: Comparison of the mass-flow results by different models in the pilot mixed flow dryer

14:15 *Rosita Caramanico*, Patrizia Vaccino, Maria Ambrogina Pagani: Agronomical and technological properties of Italian waxy wheat

14:20-15:00 Discussion

15:00-15:30 Coffee break

### **AFTERNOON SESSION: Utilisation of pseudocereals, production of gluten-free products**

Chair: Szilveszter Gergely - BUTE

15:30 *Andreas Houben*, Mario Jekle, Thomas Becker: Rheological changes in pseudocereals

15:50 *Gabriella Bottega*, A. Marti, S. Iametti, M.A. Pagani: Characterization of sorghum flours and their exploitation for gluten-free pasta making

16:10 *Clemens Döring*, Andreas Houben; Thomas Becker: Investigation on the benefit of novel sourdough in wheat bread production

16:30 *Gholam Hossein Haghayegh*: Functional properties of modified amaranth, emmer and maize starches

16:50 *Mehmet Musa Özcan*, Ramazan Acar, Ahmet Ünver, Derya Arslan: Effect of plant parts and harvest period on rutin, quercetin, total phenol contents and antioxidant activity of buckwheat (*Fagopyrum esculentum* Möench) cultivated in Turkey

18:00 Workshop dinner and sightseeing boat trip

**THURSDAY, 27 MAY**

**Location: Budapest University of Technology and Economics, Building A**

**MORNING SESSION: Gluten-free products, analytical and food safety aspects**

Chair: András Salgó, Head of department - BUTE

9:00 *Natalia Grzyb*, Urszula Krupa-Kozak, Małgorzata Wronkowska, Jadwiga Sadowska and Maria Soral-Śmietana: Effect of hydrocolloids on gluten-free bread quality and texture

9:20 *Zsuzsanna Bugyi*, Kitti Török, Livia Hajas, Zsanett Adonyi, Sándor Tömösközi: Quality assurance in gluten analysis-Development of reference material for gluten quantification

9:40 *Krisztina Takács*, Jenő Szamos, Marianne Polgár, Tamás Janáky, Éva Gelencsér: Identification of major cereal allergens related to wheat allergy and celiac disease

10:00 *Alessandra Marti*, Koushik Seetharaman and M. Ambrogina Pagani: Rice pasta characterization: comparison between conventional and extrusion-cooking pasta-making process

10:20 *Begoña Miñarro*, M.Capellas, E.Albanell: Novel technologies for gluten-free breads development

10:40-11:00 Coffee break

## Satellite Symposium: Breeding aspects of cereal quality

Chair: Zoltán Bedő - Director, HAS-ARI

- 11:00 *András Bálint*, F. Szira, A. Börner, K. Neumann, G. Galiba: Mapping of loci affecting grain micronutrient contents in wheat and barley
- 11:20 *Zoltán Bognár*, Mariann Rakszegi, Zhongy Li, Ferenc Békés, László Láng, Zoltán Bedő: Effect of milling on the starch properties of winter wheat genotypes
- 11:40 *Gergely Gulyás*, Mariann Rakszegi, Ildikó Karsai, Klára Mészáros, László Láng and Zoltán Bedő: Analysis of genetic diversity in spelt (*Triticum spelta* L.)
- 12:00 *Mihály Jancsó*, Zoltán Zombori, János Györgyey, Gábor V. Horváth, Ibolya Simon-Kiss, János Pauk: Drought tolerance of rice (*Oryza sativa* L.): different root and shoot development characteristics of genotypes in the early vegetative stage
- 12:20 *Klára Mészáros*, Mariann Rakszegi, Gergely Gulyás, Ildikó Karsai, László Láng, Zoltán Bedő: Barley the re-discovered as food
- 12:40 *Zsuzsanna Tóthné Zsubori*, Z. Hegyi, L. C. Marton: Breeding corn for oil and protein content in Martonvásár
- 13:00 *Nikolett Réka Aranyi*, Márta Molnár-Láng, Borbála Hoffmann: Examination of the drought tolerance of wheat-barely introgression lines (poster presentation)

### 13:15 Closing ceremony

13:45 Lunch



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## The organizing committee

Sándor Tömösközi, Budapest University of Technology and Economics

András Salgó, Budapest University of Technology and Economics, Head of Department of Applied Biotechnology and Food Science

Zoltán Bedő, Director of Agricultural Research Institute of Hungarian Academy of Sciences

Peter Weegels, Sonneveld, Chair of *Cereals&Europe*

Moustafa Saad, UMR-IATE, Board member of *Cereals&Europe*

Abde Arrachid, Board member of *Cereals&Europe*

Gábor Balázs, Budapest University of Technology and Economics

Zsuzsanna Bugyi, Budapest University of Technology and Economics