

4<sup>th</sup> International  
Dietary Fibre Conference 2009  
DF09

1 - 3 July 2009, Vienna, Austria  
Schönbrunn Palace



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**DIETARY FIBRE 2009**  
**Draft Programme**

Status: 31 March 2009

**Wednesday, 1 July 2009**

**I. DIETARY FIBRE ANALYSIS WORKSHOP**

Chairpersons: **Barry McCleary** (*Megazyme, Ireland*),  
**Jon DeVries** (*Medaillon Laboratories/General Mills, USA*)

- 09.00** History of DF Definition and Relationship of AOAC Methodology to the Definition  
**Jon DeVries** (*Medaillon Laboratories, USA*)
- Basic Chemistry and Theory of Codex Definition Dietary Fibre Method  
**Barry McCleary** (*Megazyme, Ireland*)
- Discussion and Coffee/Tea Break
- Video of Dietary Fibre method/Performance/Discussion
- Optimizing HPLC measurements of Non Digestible Oligosaccharides  
**Kazuhiro Okuma** (*Matsutani, Japan*)
- Instrumental approaches to desalting steps of Codex Definition of Dietary Fibre Methods  
**Barry McCleary/Jon DeVries**
- Methodology to match the Codex definition - Discussion and/or additional presentations
- 12.30** End of Workshop

**II. HEALTHGRAIN SYMPOSIUM – CEREAL GRAIN FIBRE AND HEALTH**

Chairpersons: **Kaisa Poutanen** (*VTT and Kuopio University, Finland*)  
**Jan Willem van der Kamp** (*TNO Quality of Life, the Netherlands*)

- 09.00** **INTRODUCTION**
- Cereal grain fibre and HEALTHGRAIN  
**Kaisa Poutanen** (*VTT, Finland*)
- CEREAL GRAIN FIBRE AND HEALTH MAINTENANCE**
- Evaluations of the health effects of whole grains must address their fibre rich fractions  
**Michael Falk** (*Life Sciences Research Office, Inc, USA*)
- Cereal Fibres, anti-oxidant activity and health  
**Vincenzo Fogliano** (*Dept Food Science, Naples University, Italy*)
- CEREAL GRAIN FIBRE LEVELS AND PROPERTIES**
- Improving the content and composition of wheat dietary fibre  
**Peter Shewry** (*Rothamsted Research, UK*)
- Process-induced changes in cereal fibres in relation to their health effects  
**Per Åman** (*Swedish University of Agricultural Sciences, Uppsala, Sweden*)
- Coffee/Tea Break**
- SPECIFIC GRAIN BASED FIBRES FOR HEALTH BENEFITS**
- Aleurone and health  
**Fred Bruins** (*Maastricht University, the Netherlands*)
- Cereal fibres and type-2 diabetes  
**Andreas Pfeiffer** (*Deutsches Institut für Ernährung, Potsdam, Germany*)
- Wheat bran derived arabinoxylan oligosaccharides - a novel prebiotic  
**Jan Delcour** (*Katholieke Universiteit Leuven, Belgium*)
- GENERAL DISCUSSION**
- 12.30** **END OF SYMPOSIUM**

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13.30

## OPENING OF THE 4TH DIETARY FIBRE CONFERENCE

### Opening speeches

40 min

*Keynote lecture:* Dietary fibre, insights and opportunities  
**Michael McBurney** (DSM, American Society for Nutrition, USA)

10 min

Dietary fibre health claims, challenges for industry and academia  
**Toine Hulshof** (Kellogg, the Netherlands)

14.30

### Session PREBIOTICS – NEW TRENDS AND DEVELOPMENTS

Prebiotics and health –overview

**Nathalie Delzenne** (University de Louvain la Neuve, Belgium)

15.00

Oligosaccharides, gut bacteria and health: structure-function relationships  
**Jan Rowland, Robert Rastall** (University of Reading, UK)

15.20

Isolation, Structural characterisation and prebiotic potential of cereal derived arabinoxylo oligosaccharides-  
**Maija Tenkanen** (University of Helsinki, Finland)

15.40

Novel molecular screening tool for biofunctional ingredients – identification of bifidogenic components in human milk  
**Bart Keijser** (TNO, the Netherlands)

16.00

### Coffee/Tea Break - Exhibition and Poster viewing

16.30

Impact of dose level of soluble fibre on prebiotic induced changes in the human gut microbiota  
**Eddie Deaville, Glenn Gibson et al.** (University of Reading, UK)

16.45

Effects of native chicory inulin on constipation in elderly people  
**Heidi Jacobs** (Cosucra, Belgium)

17.00

Enzyme resistant dextrin from potato starch as potential prebiotic  
**Janusz Kapusniak**, (Jan Dlugosz University, Poland)

17.15

Fermentation patterns and short chain fatty acid profiles of wheat dextrin and other functional fibres  
**Joanne Slavin** (University of Minnesota, USA)

17.30

Health benefits of soluble fibres and new European food and beverage opportunities  
**Sandra Einerhand** (Tate & Lyle, France)

17.45

Cosucra company presentation: Profiling to your needs  
**Carmen Malnero Fernandez** (Cosucra, Belgium)

18.00

### EXHIBITION AND POSTER VIEWING

20.00

### WELCOME RECEPTION – City Hall of Vienna, Wappensaal

## Thursday, 2 July 2009

08.30

### Session LEGISLATION, ANALYSIS AND CONSUMER PERCEPTION

08.30

Definition of dietary fibre  
**Joanne Lupton** (Texas A&M University, USA)

08.55

Validating official methodology commensurate with dietary fibre research and definitions  
**Jon DeVries** (Medaillon Laboratories, USA)

09.15

Development of an all-inclusive method for the measurement of dietary fibre  
**Barry McCleary** (Megazyme, Ireland)

09.30

Consumer perceptions of dietary fibre  
**Victoria Betteridge** (Tate & Lyle, UK)

09.50

Dietary fibre in the Australian setting – recommendations, intakes, research innovations and emerging technologies  
**Anthony Bird** (CSIRO, Australia)

### SHORT HIGHLIGHT PRESENTATIONS

10.10

Resistant starch in raw and cooked cereal based foods  
**Marina Carcea** (INRAN, Italy)

10.15

Microwave-induced pressure disintegration of resistant starch in fibre analysis  
**Heinz Themeier** (MRI, Germany)

10.20

Pitfalls in the determination of the total dietary fibre content and the calculation of the energetic value in food products.  
A case study  
**Kommer Brunt** (Eurofins, the Netherlands)

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**10.30 Coffee/Tea Break – EXHIBITION AND POSTER VIEWING**

**11.00 Session RESISTANT STARCH**

11.00 Resistant starch and human health  
**David Topping** (CSIRO, Australia)

11.30 Resistant starch improves insulin sensitivity in rats fed a high fat diet  
**Maria Diaz-Rubio** (INRA, France)

**SHORT HIGHLIGHT PRESENTATIONS**

11.50 Fermentability of resistant starch preparations varies in vitro  
**Maria Stewart** (University of Hawaii)

11.55 Occurrence of a “very slowly digestible” starch fraction in different whole or dehulled cereal foods  
**Christèle Icard-Vernière** (IRD, France)

12.00 Formation of high levels of resistant starch from high amylose corn starches by debranching and heat treatments and determination of functional properties  
**Serpil Ozturk** (Hacettepe University, Turkey), **Perry Ng** (Michigan State U. USA)

**12.20 Lunch - EXHIBITION AND POSTER VIEWING**

**14.00 Session DIETARY FIBRE – HEALTH BENEFITS AND THEIR MECHANISMS**

14.00 Fibre, probiotics and the immune system in different life-stages  
**Ascensión Marcos** (CSIC, Spain)

14.25 A potential mechanism linking hydroxy propyl methyl cellulose dietary supplementation and reduction of metabolic syndrome symptoms  
**Wallace Yokoyama** (USDA ARS, USA)

14.45 Investigations of the bile acid binding mechanisms of lupine dietary fibre  
**Ute Schweiggert** (Fraunhofer, Germany)

15.05 Arabinoxylans and inulin affect the mucosa associated bacterial community  
**Pieter van den Abbeele** (Ghent University, Belgium)

15.25 Wheat bran consumption significantly impacts stool weight in humans  
**Yanni Papanikolaou** (Kellogg Canada Inc.)

**15.50 Coffee/Tea Break – EXHIBITION AND POSTER VIEWING**

**16.20 Session DIETARY FIBRE – PROCESSING AND PRODUCTS**

**SHORT HIGHLIGHT PRESENTATIONS**

16.20 Combination of defatting and dry fractionation technologies to produce oat ingredient with high beta-glucan concentration  
**Juhani Sibakov** (VTT, Finland)

16.30 Production of fermentable wheat and rye bran-derived arabinoxylo oligosaccharides in a dry milling process  
**Valerie van Craeyveld** (KU Leuven, Belgium)

16.35 Isolation and characterization of glucuronoarabinoxylans from wheat bran obtained by classical and ultrasound assisted extractions methods  
**Jürgen Hollmann**, **Meinolf Lindhauer** (MRI, Germany)

**Added fibre to bread – structure function relationships – can we come to general statements?**

16.40 An approach to structure-function relationships of polymeric dietary fibres in foods: significance in breadmaking applications  
**Concha Collar** (CSIC, Spain)

**SHORT HIGHLIGHT PRESENTATIONS:**

**Structure-function relationships of polymeric fibres – focus on bread**

17.10 Structure-function relationships of dietary fibres and their interactions with gluten in a dough matrix.  
**Lizette Oudhuis** (TNO, the Netherlands)

17.15 Impact of texture modification and dietary fibre content on glycemic index and acceptability of French bread  
**Luc Saulnier** (INRA, France)

17.20 Dietary Fibre: functional properties useful for its incorporation in bakery functional foods  
**Dimitra Lebesi**, **Constantina Tzia** (Technical University of Athens, Greece)

17.25 Interaction of insoluble oat fiber, dough conditioners and other dough constituents in optimizing bread formula with high whole grain and fiber content  
**Rajen Mehta** (SunOpta, USA)

17.30 Examining the changes on dietary fibre and beta-glucan in barley flour and barley steamed bread  
**Shin Lu** (CGPR&DI, Taiwan)

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17.35 Panel discussion – What are the underlying principles explaining behaviour of different types of fibre  
18.00 End of Session  
20.00 CONFERENCE DINNER – RATHAUSKELLER, City Hall of Vienna

**Friday, 3 July 2009**

**08.30 Session DIETARY FIBRE AND COPASSENGERS**

08.30 Dietary fibre, copassengers and health

**Julie Miller Jones** (*College of St Catherine, USA*)

09.00 Metabolic profiling of plasma from pigs fed high fibre rye or high fibre wheat diets show increased betaine levels

**Mette Hedemann, Knud Erik Bach Knudsen** (*Aarhus University, Denmark*)

**SHORT HIGHLIGHT PRESENTATIONS**

09.20 Antioxidant properties of cookies supplemented with sugar beet dietary fibre

**Marijana Sakač** (*Institute for Food Technology, Serbia*)

09.25 Activation and inhibition of nuclear factor kappa b by cereal extracts: role of dietary phenolic acids

**Stefan Sahlstrøm** (*University of Life Sciences, Norway*)

**09.35 Session GLYCEMIC RESPONSE**

09.35 Processing affects Beta-glucan solubility and starch digestibility of oat bran foods and the resulting glyceemic response of humans

**Susan Tosh, Peter Wood** (*Guelph Food Research Centre, Canada*)

09.55 Glyceemic control of extruded breakfast cereals: use of dietary fibres

**Charles Brennan** (*University of Manchester, UK*)

**10.15 SHORT HIGHLIGHT PRESENTATIONS**

10.15 The effects of extrusion cooking and dietary fibre on in vitro starch digestibility and technological performance of model foods

**Anton Alldrick** (*Campden BRI, UK*)

10.20 TIM Carbo - reliable in vitro methodology to measure glyceemic response

**Susann Bellmann, Robert Havenaar**, (*TNO, the Netherlands*)

**10.25 Coffee/Tea Break – EXHIBITION AND POSTER VIEWING**

10.55 The significant impact of low viscous fibre on glyceemic response

**Geoffrey Livesey** (*Independent Nutrition Logic Ltd, UK*)

11.15 Dietary non-oil seed pulses taken alone or as part of high-fibre diets improve glyceemic control with significant heterogeneity: a meta-analysis of randomized controlled experimental trials.

**Cyril Kendall, John Sievenpieper, David Jenkins** (*University of Toronto, Canada*)

11.35 Functionality of low glyceemic impact sugars and polyols using DSC, RVA and cookie baking

**Meera Kweon** (*USDA ARS, USA*) *Louise Slade and Harry Levine*

**11.55 Health benefits of fibres-convincing, probable, possible-a birds eye view-panel discussion chaired by ILSI Europe**

**12.25 AWARDS**                      **General Mills Award for Health Innovation**  
**Kraft Foods Award for Cereal Fibre Research**

**12.45 Lunch - EXHIBITION AND POSTER VIEWING**

**13.30 Session DIETARY FIBRE, SATIETY AND THE METABOLIC SYNDROME**

13.30 Fermentable fibres, appetite regulation and body composition

**Gary Frost** (*Imperial College, UK*)

14.00 Alginates, factors influencing their ability to modulate satiety and weight loss

**Mary Ellen Camire** (*University of Maine, USA*)

14.20 Fermentations in the colon unraveled using 13C labeled substrates – Implications for obesity and gut health

**Marjorie Koenen**, (*TNO, the Netherlands*)

14.40 Flax mucilage-enriched meals suppress postprandial appetite and lipemia in young healthy males

**Mette Kristensen** (*University of Copenhagen, Denmark*)

15.00 Effects of a soluble dietary fibre supplementation with nutriose® fb on risk factors of the metabolic syndrome in chinese male adults

**Catherine Lefranc Millot** (*Roquette, France*)

15.15 Oligofructose modulates gut peptides involved in satiety regulation in rats

**Diederick Meyer** (*Sensus, the Netherlands*)

**15.30 Closing Address**