



**Dairy Industry  
Association  
of Australia**



# Functional Dairy Foods 2009

## 24-25 February 2009

*The 2009 IDF/DIAA Dairy Science World Series conference, Melbourne, Australia*

### DAY 1 – TUESDAY, 24 FEBRUARY, 2009

#### Session 1 – 9:00 am

#### Introduction: Overview of functional foods

- 9:10 Prof. Linda Tapsell**, University of Wollongong, Australia  
*Nutrients, foods and diets: challenging functional food development*
- 9:30 Dr Isabel MacNeill**, Dairy Australia  
*Dairy bioactives – a nutritional point of view*
- 9:50 Prof. Alan Kelly**, University College, Cork, Ireland  
*Applications of novel technologies in processing functional dairy foods*

#### Session 2 – 10:40am Functional dairy ingredients and impacts of health – Part 1

- 10:40 KEYNOTE SPEAKER: Prof. Hannu Korhonen**, MTT Agrifood Research Finland  
*Bioactive milk proteins and peptides: from science to functional applications*
- 11:10 Dr Anu Turpeinen**, Valio Ltd R&D, Finland  
*Milk peptides and cardiovascular health – beyond effects on blood pressure*
- 11:25 Dr Peter Clifton**, CSIRO Human Nutrition / Food Science Australia  
*Effect of glycomacropeptides (GMP) on satiety hormones and food intake*
- 11:40 Dr Jennifer Keogh**, CSIRO Human Nutrition / Food Science Australia, Australia  
*Weight loss using meal replacements high in glycomacropeptides: results of a clinical trial*
- 11:55 Prof. John Carver**, The University of Adelaide, Australia  
*The two-faced nature of milk casein proteins: amyloid fibril formation and chaperone-like activity*

#### The Scientific Committee:

Prof. John van Camp (Ghent University, Belgium)  
Dr Alice Cotter (The Dairy Council, UK)  
Prof. Koen Dewettinck (Ghent University, Belgium)  
Prof. J. Bruce German (University of California, US)  
Prof. Hannu Korhonen (MTT Agrifood Research, Finland)  
Dr Barbara Meurer-Grimes (Dairy Innovation Australia)  
Dr Peter Roupas (Food Science Australia)  
Ms Sandra Tuijelaars (International Dairy Federation)



Brochure and on-line registration at: [www.diaa.asn.au](http://www.diaa.asn.au)

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### DAY 1 – TUESDAY, 24 FEBRUARY, 2009

#### Session 3 – 1:40pm Functional dairy ingredients and impacts of health – Part 2

- 1:40 KEYNOTE SPEAKER: Prof. Paul Ross**, Teagasc, Moorepark Biotechnology Centre, Ireland  
*Microbial production of bioactives: from fermented functional foods to probiotic mechanisms*
- 2:10 Dr Meike te Giffel**, NIZO Food Research, The Netherlands  
*Satiety via dairy: the role of dairy components at different levels in the gastro-intestinal tract*
- 2:25 Dr Douwina Bosscher**, DSM Food Specialties, The Netherlands  
*Dairy peptides in effective blood glucose management*
- 2:40 Prof. Ylva Ardo**, Faculty of Life Sciences, University of Copenhagen, Denmark  
*Impact of heat treated Lactobacillus helveticus on bioactive peptides in low-fat semi-hard cheese*
- 2:55 Dr Jan Trige Rasmussen**, Protein Chemistry Lab, University of Aarhus, Denmark  
*Bioactivity of milk fat globule membrane proteins*

#### Session 4 – 3:40 pm Technologies for production of functional dairy products

- 3:40 KEYNOTE SPEAKER: Dr Leif Lundin**, Food Science Australia  
*A microstructural view of functional dairy foods*
- 4:10 Ms Marie-Laure Vignolles**, INRA – Agrocampus, France  
*Protein-lactose matrix affects fat encapsulation during the overall spray-drying process of dairy powders*
- 4:25 Dr Mary Ann Augustin**, Food Science Australia  
*Maillard-based casein-carbohydrate microcapsules for the delivery of fish oil:  
Emulsion stability during in-vitro digestion*
- 4:40 Ms Antonie Post**, Institute for Food Science and Biotechnology, University of Hohenheim, Germany  
*Beta-casein as a bioactive precursor – processing for purification*
- 4:55 Dr Estelle Lifran**, Food Science Australia  
*Lactose derivatives: turning waste into functional foods*





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**DAY 2 – WEDNESDAY, 25 FEBRUARY, 2009**

**Session 5 – 8:55 am**

**Genomics / Nutrigenomics**

**9:00 KEYNOTE SPEAKER: Prof. J. Bruce German**, University of California, United States

*Delivering dairy foods to the diversity of the human condition*

**9:30 Dr Eric Johansen**, Chr. Hansen A/S, Denmark

*Functional genomics of dairy micro-organisms and probiotics in the era of low-cost DNA sequencing*

**9:45 Dr Michael Fenech**, CSIRO Human Nutrition / Food Science Australia

*Prevention of genome damage by dairy foods*

**10:00 Dr Michael Conlon**, CSIRO Human Nutrition / Food Science Australia

*Resistant starch opposes colonic DNA damage induced by dairy and non-dairy dietary protein*

**Session 6 – 10:45 am**

**Metabolic effects / Immunity / Allergy**

**10:45 KEYNOTE SPEAKER: Prof. Gertjan Schaafsma**, HAN University, The Netherlands

*Health benefits of milk beyond traditional nutrition*

**11:15 Dr Louise Bennett**, Food Science Australia

*Protective interactions of dairy peptides with amyloid structures and relevance to Alzheimers Disease*

**11:30 Dr Rene Floris**, NIZO Food Research, The Netherlands

*Novel enzymatic approaches for tailoring functionalities of whey protein hydrolysates*

**11:45 Dr Riina Kekkonen**, Valio Ltd R&D, Finland

*Immunomodulatory effects of probiotics*

**12:00 Dr Ross Crittenden**, MG Nutritionals, Murray Goulburn, Australia

*Functional dairy supplements for elite athletes*

**12:15 Dr Anders Henriksson**, Danisco, Singapore

*Probiotics that alleviate symptoms of Functional Bowel Disorders*



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### DAY 2 – WEDNESDAY, 25 FEBRUARY, 2009

#### Session 7 – 2:00 pm Regulatory issues and substantiation of health benefits

**2:00 KEYNOTE SPEAKER: Dr Judith Bryans**, The Dairy Council, UK

*Nutrient profiling: friend or foe?*

**2:30 Dr Lorenzo Morelli**, Istituto di Microbiologia UCSC, Italy

*Health claims for probiotics: how to substantiate the claim according to the European regulation*

**2:45 Dr Dilip Ghosh**, Australia

*Functional food and health claims: Regulatory perspective of Australia – New Zealand*

**3:00 Ms Veronique Lagrange**, US Dairy Export Council, United States

*Documenting the health benefits of dairy proteins for vulnerable individuals (living with HIV/AIDS) and populations at risk (malnourished children, elderly) from clinical trials to field work*

#### Session 8 – 3:45 pm The innovation lifecycle

**3:45 Dr Tomoyuki Sako**, Yakult Central Institute for Microbiological Research, Japan

*Approach to research on probiotics and probiotic-containing functional dairy products  
– The Yakult perspective*

**4:05 Dr Didier Carcano**, Danisco Culture Division, France

*Probiotics, new formulations and delivery vehicles to develop new dairy and food market segments*

**4:25 Mr Peter Hobman**, MG Nutritionals, Murray Goulburn, Australia

*Commercialisation of the research*

#### Conference wrap-up

**4:45 Dr Geoffrey Smithers**, Food Science Australia

*Future directions for functional dairy foods*



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**POSTER PRESENTATIONS (1:10 pm, 24 February & 1:30 pm 25 February)**

**Dr Tanoj Singh**, Food Science Australia

*Controlled production of biologically active peptides by coagulant and proteolytic enzymes present in cheese*

**Dr Arno Alting**, NIZO Food Research, The Netherlands

*Flavour aspects related to delivery of bio-active peptides via dairy*

**Dr Frederic Gaucheron**, INRA, UMR STLO, France

*Properties of purified casein micelles enriched in calcium*

**Ms Veronique Lagrange**, US Dairy Export Council, United States

*Dairy proteins and the prevention and treatment of Sarcopenia*

**Dr Sandra Iuliano-Burns**, University of Melbourne / Austin Health, Australia

*A dairy-based protein, calcium and vitamin D supplement preserves trabecular bone and reduces falls in aged care residents*

**Prof. Nagendra Shah**, Victoria University, Australia

*Production of bioactive peptides from milk and cheese and bioactive isoflavours in soy milk by probiotic organisms*

**Ms Roxana Paez**, INTA – EEA Rafaela, Argentina

*Microencapsulation of probiotic lactobacilli in milk by spray-drying. Effects of pre-adaptation to heat and survival during storage at different temperatures*

**Dr Wun Keat Ding**, Victoria University, Australia

*Effect of various encapsulating materials on the stability of probiotic bacteria*

**Dr Ross Crittenden**, Food Science Australia

*Measuring the capacity for immunomodulation by dairy proteins*

**Dr Barbara Meurer-Grimes**, Dairy Innovation Australia

*The Dairy Health and Nutrition Consortium – a uniquely Australian response to a health crisis*

**Ms Lata Ramchandran**, Victoria University, Australia

*Angiotensin-I-Converting enzyme inhibitory activity in low-fat yogurt as influenced by protein-based and fibre-based fat replacers*

**Prof. Nagendra Shah**, Victoria University, Australia

*ACE-inhibitory activity of probiotic yogurt and probiotic cheddar cheese*

**Dr Jason Wan**, CSIRO Food Science Australia

*Pulsed electric field for preservation and enhancement of biological activities of milk proteins*

**Ms Qian Sui**, Faculty of Land & Food Resources, University of Melbourne, Australia

*Effect of Pulsed Electric Field (PEF) on the physicochemical and antimicrobial properties of bovine lactoperoxidase*

**Dr Roderick Williams**, Food Science Australia

*Preprocessing of whey streams to deliver functional high-protein ingredients*

**A/Prof. Hilton Deeth**, University of Queensland, Australia

*Evaluating lutein as a functional ingredient in UHT milk*

**Dr Adriana Maria Descalzo**, INTA, Argentina

*Antioxidant status and odour profile in milk from silage and alfalfa-fed cows*

**Ms Gabriela Grigioni**, INTA, Argentina

*Reflectance spectrum pattern of raw milk from silage and alfalfa-fed cows*

**Dr Lydia Ong**, Department of Chemical & Biomolecular

Engineering, Melbourne University, Australia  
*Application of confocal laser scanning microscopy and cryo-scanning electron microscope in cheese microstructure study*

**Ms Lizhe Wang**, Moorepark Food Research Centre,

Teagasc, Ireland  
*Effect of nano-fibrils on rheological and microstructural properties in a yoghurt model*

**Ms Daniela Oboroceanu**, Moorepark Food Research Centre,

Teagasc, Ireland  
*Formation of beta-lactoglobulin fibrillar aggregation with enzymatic cross linking*



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**Mr Ian Ciron**, Moorepark Food Research Centre,  
Teagasc, Ireland

*Microstructure and particle size differences of yoghurts from microfluidised and homogenised milks*

**Dr Sahar Soodbakhsh**, Shiraz Veterinary University, Iran

*Evaluation of different types and concentration of calcium fortification on sensory and physical characteristics of ice-cream and its bioavailability in humans*

**Mr Miguel Taverna**, INTA – EEA, Rafaela, Argentina

*Differential milk components from silage or alfalfa-fed cows*

**Prof. Samad Khan**, Bangladesh Agricultural University

*Study on functional dairy foods in Bangladesh*

**Prof. Koen De Wettinck**, Ghent University, Belgium

*Fermentation of milk-based mixtures enriched with milk fat globule membranes*

**Prof. Koen De Wettinck**, Ghent University, Belgium

*Effect of washing during isolation of milk fat globule membranes from milk on the recovery of milk fat globule membrane proteins*

**Mr Sergey Khitrik**, Omsk State Agricultural University, Russia

*High pressure treatment in functional dairy food production*

**Dr Brad Woonton**, Food Science Australia

*Changing the texture of functional dairy products using high pressure*

**Prof. S.I. Artuhova and Andrey Maksheyev**, Omsk State

Agricultural University, Russia  
*Modern approaches towards production of dairy products (desserts) for functional nutrition*

**Prof. Laurence Melton**, University of Auckland, New Zealand

*A range of new dairy glycoproteins prepared by the Maillard reaction*

**Ms Regina Schuster-Wolff Buhning**, University of Hohenheim,  
Germany

*Processing of functional milk products by means of enzymatic transformation of lactose into prebiotic lactulose*

**Ms Christine Oliver**, Food Science Australia

*In vitro digestion behaviour and oil release properties of microcapsules prepared from milk protein-carbohydrate conjugates.*

**Mr Amir Nik**, University of Guelph, Canada

*Delivery of lipophilic bioactive compounds in emulsions stabilised with WPI and their release using an in vitro digestion model*

**Prof. Mingruo Guo**, University of Vermont, United States

*Probiotic survivability, sensory property and storage stability of yogurt beverage*

**Dr Ying Hu**, Department of Gastroenterology, Flinders  
University, Australia

*Suppression of colon cancer by selenium enriched milk proteins*

**Dr Jagat R. Kanwar**, Deakin University, Australia

*The effect of selenium saturated bovine lactoferrin (Se-bLf) on gut permeability*

**Dr Osaana Donkor**, Victoria University, Australia

*Assessment on immunomodulating potential of probiotic bacteria to prevent allergies*

**Prof. Tsembebtsoigt Batsukh**, Mongolian University Science  
and Technology, Mongolia

*Functional dairy foods in Nomadic tradition*

**Mr Mohammad Dolatkahnejad**, PakDairy Company, Iran

*The examination of replacing NaCl by KCl in Iranian white cheese in order to decrease sodium intake*

**Dr Markus Kreuss**, TU-München, Germany

*Development of a preparative ion exchange process for the separation of individual fractions of caseino-macropeptide using membrane adsorption chromatography*

**Dr Markus Kreuss**, TU-München, Germany

*Techno-functional properties of glycosylated and non-glycosylated fractions of caseino-macropeptide*

**Ms Rangika Weerakkody**, Food Science Australia, Australia

*Enhanced survival of LGG using a sodium caseinate based synbiotic emulsion delivery system*

