

Oral Programme

Tuesday 8 October 2019	
17:00-19:00	Registration Lobby
19:00-20:00	Welcome Drinks Reception Bar Dug Out
Wednesday 9 October 2019	
08:30-09:00	Refreshment Break Foyer 1+2 & Athene A
Room	Athene BC <i>Topic: Molecular aspects of milk proteins</i>
09:00-9:10	Conference Welcome: René Floris <i>NIZO, The Netherlands</i>
09:10-09:40	[KN01] Using omics to unravel natural and process-induced post translational modifications in milk proteins and examples of impacts on functionality features in the dairy matrix <i>Dr. Lotte Larsen, Aarhus University, Denmark</i>
09:40-10:00	[O01] Amyloid fibril formation of α1- and β-casein from various species implies that fibril formation is a generic property of intrinsically disordered casein proteins <i>E. Bahraminejad^{*1}, D. Paliwal¹, M. Sunde², C. Holt³, D. Thorn¹, J. Carver¹, ¹Australian National University, Australia, ²University of Sydney, Australia, ³University of Glasgow, UK</i>
10:00-10:20	[O02] Analysis of the composition of milk-derived “whey protein” ingredients using quantitative proteome analysis (QPA) <i>D. Dittrich^{*1}, A. Mauser¹, M. Pischetsrieder¹, L. Cornacchia², C. van der Ven², ¹Friedrich-Alexander-University Erlangen-Nuremberg, Germany, ²Danone Nutricia Research Utrecht, The Netherlands</i>
10:20-11:00	Young Scientists Programme
10:20-10:25	[YSP01] Qualitative and quantitative analysis of bovine milk proteins using advanced mass spectrometry tools <i>I. Gazi^{*1,2}, S. Tamara^{1,2}, M. van Gool³, J. Bastiaans³, A.J.R. Heck^{1,2}, ¹Biomolecular Mass Spectrometry and Proteomics, University of Utrecht, The Netherlands, ²Netherlands Proteomics Center, The Netherlands, ³FrieslandCampina, The Netherlands</i>
10:27-10:32	[YSP02] Towards an improved stability of spray-dried emulsions: impact of ingredients on interfacial properties of β-lactoglobulin at the oil/water interface <i>T. Heiden-Hecht*, M. Brückner-Gühmann, S. Drusch, Technische Universität Berlin, Germany</i>
10:34-10:39	[YSP03] Quantification of sugar-independent process induced cross-links in dairy proteins <i>S.D. Nielsen^{*1}, T.T. Le¹, V. Rauh², N.A. Poulsen¹, L.B. Larsen¹, ¹Aarhus University, Denmark, ²Arla Foods Innovation Centre, Denmark</i>
10:41-10:46	[YSP04] PH stability of single casein microparticles using a microfluidic particle trap <i>J. Schulte*, M. Stöckermann, R. Gebhardt, RWTH-Aachen, Germany</i>
10:48-10:53	[YSP05] Impact of demineralization on the internal structure of the casein micelle and subsequent consequences on its dispersion properties after the rehydration process <i>M. Nogueira^{*1,2}, S. Ben Harp³, R. Karoui³, A. Derensy⁴, G. Delaplace^{1,2}, P. Peixoto^{1,2}, ¹University of Lille, France, ²French National Institute of Agronomical Research (INRA), France, ³University of Artois, France, ⁴Ingredia Dairy Experts, France</i>

10:55-11:00	[YSP06] Environmental scanning electron microscopy as a novel tool to characterise in real-time the hydration of milk protein concentrates L. Gallagher* ¹ , V. Cenini ¹ , E. Smith ³ , D. Sweeney ² , M. Auty ² , G. McKerr ¹ , N. McCarthy ² , B. O'Hagan ¹ , ¹ Ulster University, UK, ² Teagasc, Ireland, ³ University of Nottingham, UK
11:00-11:30	Refreshment Break Foyer 1+2 & Athene A
Room	Athene BC Topic: Structure and function of milk proteins
11:30-12:00	[KN02] Structure-function relationships for protein in cheese Jörg Hinrichs, University of Hohenheim, Germany
12:00-12:20	[O03] Evaluation of production of cheddar cheese from micellar casein concentrate B. Li* ¹ , J.T. Tobin ² , A.L. Kelly ¹ , P.L.H. McSweeney ¹ , ¹ University College Cork, Ireland, ² Teagasc, Ireland
12:20-12:40	[O04] Nanostructure evolution in the early production stage of cheese Y. Nasuda ¹ , K. Hara ¹ , M. Ohnuma* ¹ , Y. Tochihara ² , S. Shibata ² , I. Kaneda ² , ¹ Hokkaido University, Japan, ² Rakuno Gakuen University, Japan
12:40-14:00	Lunch and Poster Session 1 Foyer 1+2 & Athene A
Room	Athene BC Topic Structure and function of milk proteins continued
14:00-14:20	[O05] Investigation of the reconstitution, structure and formation of dairy systems and gels: Use of advanced microscopy and Ultrasound Spectroscopy Z.J. Glover* ^{1,2} , A.H. Bisgaard ¹ , U. Andersen ³ , M.J. Francis ² , M.J. Holmes ² , M.J. Povey ² , J.R. Brewer ¹ , A.C. Simonsen ¹ , ¹ University of Southern Denmark, Denmark, ² University of Leeds, UK, ³ Arla Foods amba, Denmark
14:20-14:40	[O06]
14:40-15:00	[O07] How does heat exposure of the feed affect the dissolution rate of spray-dried milk serum protein/lactose powders? I-M. Andersson* ¹ , M. Alexander ² , A. Millqvist-Fureby ³ , M. Paulsson ¹ , M. Glantz ¹ , B. Bergenståhl ¹ , ¹ Lund University, Sweden, ² Arla Foods Ingredients, Denmark, ³ RISE, Sweden
15:00-15:20	[O08] Natural variation in casein micelle size and its effect on UHT storage stability M. Akkerman ¹ , N.A. Poulsen* ¹ , V.M. Rauh ² , J. Sørensen ² , L.B. Larsen ¹ , ¹ Aarhus University, Denmark, ² Arla Foods Innovation Centre, Denmark
15:20 -15:50	Refreshment Break Foyer 1+2 & Athene A
Room	Athene BC Topic: Milk proteins interactions and aggregation
15:50-16:20	[KN03] Microbe-Matrix interaction: How microbial surface properties can be exploited to alter starter functionality during dairy fermentation Herwig Bachmann, NIZO and Vrije Universiteit, The Netherlands
16:20-16:40	[O09] Utilization of a whey by-product and functionally enhanced whey protein concentrate for microencapsulation C. Hinnenkamp*, G. Reineccius, B.P. Ismail, University of Minnesota, USA
16:40-17:00	[O10] The composition of various phospholipid containing dairy fraction/powders is indicative for the origin of the comprising membrane material

	K. Blans ¹ , B. Petrat-Melin ² , X. Geng ³ , L.B. Larsen ² , M.S. Ostefeld ⁴ , L. Wiking ² , J.T. Rasmussen ^{*1} , ¹ Aarhus University, Denmark, ² Aarhus University, Denmark, ³ University of Copenhagen, Denmark, ⁴ Arla Foods Ingredients Group, Denmark
18:30-22:00	Conference dinner – Please register for this special dinner and enjoy this networking opportunity on this exclusive historic location with a breathtaking view on the river Rhine. Ticket holders only.
Thursday 10 October 2019	
08:30-09:00	Refreshment Break Foyer 1+2 & Athene A
Room	Athene BC Topic: Processing of milk proteins
09:00-09:30	[KN04] Interplay between cold gelation of whey protein aggregates and thermal gelation of casein micelles Taco Nicola, Le Mans Université, France
09:30-09:50	[O11] Single particle tracking to investigate the aggregation of para-casein-micelles S. Thill*, T. Schmidt, D. Wöll, R. Gebhardt, RWTH Aachen University, Germany
09:50-10:10	[O12] Generation of whey protein aggregates by a combination of UV-B light exposure and low temperature treatment K. Engholm-Keller ¹ , Z. Zhao ¹ , M.M. Poojary ¹ , S.B. Nielsen ² , M.N. Lund ^{*1} , ¹ University of Copenhagen, Denmark, ² Arla Foods Ingredients Group P/S, Denmark
10:10-10:30	[O13] How does heat exposure of the feed affect the dissolution rate of spray-dried milk serum protein/lactose powders? I-M. Andersson ^{*1} , M. Alexander ² , A. Millqvist-Fureby ³ , M. Paulsson ¹ , M. Glantz ¹ , B. Bergenståhl ¹ , ¹ Lund University, Sweden, ² Arla Foods Ingredients, Denmark, ³ RISE, Sweden
10:30-11:00	Refreshment Break Foyer 1+2 & Athene A
11:00-11:20	[O14] The effect of cysteine on the denaturation of the whey proteins in milk and whey protein concentrate solutions N.H.A. Nguyen ¹ , C. Streicher ¹ , S.G. Anema ^{*1,2} , ¹ Fonterra Research and Development Centre, New Zealand, ² Riddet Institute, New Zealand
11:20-11:40	[O15] Disulphide bonds are unlikely to be involved in the heat-induced interaction between β-lactoglobulin and milk fat globule membrane protein S.F. Hansen ^{*1} , J.T. Rasmussen ² , L.B. Larsen ¹ , L. Wiking ¹ , ¹ Dept. of Food Science, Aarhus University, Denmark, ² Dept. of Molecular Biol. and Genetics, Aarhus University, Denmark
11:40-12:00	[O16] Functionalization of whey proteins by extrusion processing: Influence of thermal and mechanical stresses on the reaction behaviour and functional properties M. Quevedo*, H.P. Karbstein, M.A. Emin, Karlsruhe Institute of Technology, Germany
12:00-12:15	Young Scientist Award Ceremony
12:15-13:45	Lunch and Poster Session 1 Foyer 1+2 & Athene A
Room	Athene BC Topic: Processing of milk proteins continued
13:45-14:15	[KN05] Protein stability during processing and storage Todor Vsiljevic, Victoria University, Australia
14:15-14:35	[O17] Functionality of cheese powders: effect of cheese maturation degree on stabilization of oil-in-water (O/W) emulsions D. Felix da Silva*, K. Vlachvei, X. Geng, A. Hougaard, L. Ahrné, R. Ipsen, University of Copenhagen, Denmark

14:35-14:55	[O18] Characterisation, modelling and control of glycation induced lysine loss in dairy processing. K. van Koerten* ¹ , M. Verschueren ¹ , P. de Jong ^{2,1} , J. Brouwer ² , J. Heijenga ² , ¹ NIZO food research, The Netherlands, ² Van Hall Larenstein University, The Netherlands
14:55-15:15	[O19] Solubility Enhancement of Milk Protein Isolate by Sodium Caseinate Addition: Differences Between Wet- and Dry-blending Approaches F. Bot*, S.V. Crowley, J.A. O'Mahony, University College Cork, Ireland
15:15-15:45	Refreshment Break Foyer 1+2 & Athene A
Room	Athene BC Topic: Health aspects of milk proteins
15:45-16:15	[KN06] Postprandial plasma amino acid concentrations after consumption of dairy products Astrid Horstman, Nestlé Research, Switzerland
16:15-16:35	[O20] Lactosylation of caseins and whey proteins during processing and storage of milk protein concentrate powders T. Huppertz* ¹ , I. Gazi ² , D. Otter ³ , ¹ FrieslandCampina, The Netherlands, ² NIZO, The Netherlands, ³ University of Wisconsin-Madison, USA
16:35-16:55	[O21] Cross-functional approaches to gastric coagulation and digestion of milk proteins T. Huppertz ^{1,2} , ¹ FrieslandCampina, The Netherlands, ² Wageningen University, The Netherlands
16:55	Closure - Closing remarks René Floris, NIZO, The Netherlands
18:00-21:00	Barbeque Grand Café
Friday 11 October 2019	
	NIZO visit and tour
08:30	Tour 1 - Coach to depart from lobby at Papendal Hotel
09:45	Tour 2 - Coach to depart from lobby at Papendal Hotel
11:30	Tour 1 - Coach departs from NIZO to Ede-Wageningen Train Station
12:45	Tour 2 - Coach departs from NIZO to Ede-Wageningen Train Station