

EFFoST2019 Conference – Oral Programme

Tuesday, 12 November 2019

07:30-18:20	Registration Room: Exchange Hall and Shipping Hall			
Room	Rotterdam Hall			
09:00-10:00	<p>Welcome & Opening Session Welcome address by Vincenzo Fogliano, <i>Wageningen University & Research, the Netherlands (Conference chair)</i> & Olga Martín Belloso, <i>Universidad de Lleida, Spain (EFFoST President)</i> Welcome to Rotterdam by Petra de Groene, <i>director Economy & Sustainability, City of Rotterdam</i></p> <p>[PL01] Conference Opening Lecture ‘The role of food science and technology in future challenges’ by Louise Fresco, CEO of Wageningen University & Research, the Netherlands</p>			
10:00-10:30	Coffee Room: Exchange Hall and Shipping Hall			
Rooms	Diamond Room	Mees Auditorium	van Oldenbarnevelt Room	Rotterdam Hall
10:30-12:40	<p>Session 1: Food Digestion, Microbiota: understanding by connecting in vitro and in vivo studies Chair: Anja Janssen</p>	<p>Session 2: Food for performance Chair: Arie Nieuwenhuizen</p>	<p>Session 3: Food perception & clean labelling Chair: Arnout Fischer</p>	<p>Session 4: Quantification of food systems Chair: Erik van der Linden</p>
10:30-11:00	<p>[KN01] A multifaceted perspective on bioactive peptides in health- promoting food design C.C. Udenigwe <i>University of Ottawa, Canada</i></p>	<p>[KN02] Understanding digestion kinetics for improved functionality A. Mackie <i>University of Leeds, UK</i></p>	<p>[KN03] The clean label movement: what it means for the food and beverage industry M. de Beukelaar <i>Innova Market Insights, the Netherlands</i></p>	<p>[KN04] Quantification of challenges for fulfilling food and biobased demands for 2050 J. Broeze <i>Wageningen University & Research, the Netherlands</i></p>
11:00-11:20	<p>[O01.1] Enteroids as a model for nutritional and food studies Y.B. Yin*, X. Wu, Y.L. Yin <i>Institute of Subtropical Agriculture, China</i></p>	<p>[O02.1] The matrix or the particle? Physical variations in heterogeneous foods influence oral processing, bolus properties and sensory perception M.G. Aguayo-Mendoza*¹, G. Chatonidi¹, E. van der Linden¹, B. Piqueras-Fiszman¹, M. Stieger¹ ¹<i>Ti Food and Nutrition, the Netherlands,</i> ²<i>Wageningen University, the Netherlands</i></p>	<p>[O03.1] Consumers’ perceptions and familiarity towards traditional foods throughout time: a cross-cultural study in 18 countries L. Frez-Muñoz*, B. Steenbekkers, V. Fogliano <i>Wageningen University & Research, the Netherlands</i></p>	<p>[O04.1] Quantification of efficiency and environmental impact of insect-based modular food waste treatment technologies S. Smetana*, S. Ites, S. Toepfl, V. Heinz <i>German Institute of Food Technologies (DIL e.V.), Germany</i></p>

11:20-11:40	<p>[O01.2] Interactions between polyphenols and gut microbiota: Effects on celiac disease peptides biotransformation L.J. Bessa, R. Dias, P. Eaton, N. Mateus, V. de Freitas, R. Perez-Gregorio* <i>LAQV-REQUIMTE University of Porto, Portugal</i></p>	<p>[O02.2] Lipid oxidation in emulsions fortified with iron- loaded alginate beads A. Cengiz*^{1,2}, K. Schroën², C. Berton-Carabin² ¹<i>Ondokuz Mayıs University, Turkey,</i> ²<i>Wageningen University & Research, the Netherlands</i></p>	<p>[O03.2] Cereal bran as clean label preservative M. Henrion*, O. Novotny <i>Nestlé R&D Orbe, Switzerland</i></p>	<p>[O04.2] Toroidal cans as energy saving tools in the thermal processing of vegetable and potato food products B. Van Droogenbroeck*¹, D. De Paepe¹, S. Willems¹, K. Van Endert², B. Lambrechts², E. Coskun³, S.S. Sahin³, O. Altin³, F. Erdogdu^{3,1}<i>Institute for Agricultural, Fisheries and Food Research, Belgium,</i> ²<i>Greenyard Prepared, Belgium,</i> ³<i>Ankara University, Turkey</i></p>
11:40-12:00	<p>[O01.3] Influence of in- vitro simulated oral, gastric and duodenal digestion on bioaccessibility and bioactivity of phenolic compounds in raw and boiled <i>Bidens pilosa</i> (Blackjack). E. Kayitesi¹, S.M. Moyo*¹, J.C. Serem², M.J. Bester² ¹<i>University of Johannesburg, South Africa,</i> ²<i>University of Pretoria, South Africa</i></p>	<p>[O02.3] Will a DiDGI® optimization allow DIAAS (Digestible Indispensable Amino Acid Score) determination of dietary protein sources? Y. Reynaud*^{1,2}, A. Manach³, T. Cattenoz³, M. Lopez¹, A. Riaublanc⁴, I. Souchon³, D. Picque³, J. Jardin², V. Briard- Bion², D. Dupont² et al ¹<i>IMPROVE SAS, France,</i> ²<i>STLO, INRA, AGROCAMPUS OUEST, France,</i> ³<i>Université Paris Saclay, France,</i> ⁴<i>BIA, INRA, France,</i> ⁵<i>Université Clermont Auvergne, France</i></p>	<p>[O03.3] Sweeter with less sugar: the case of apples and juices from FEM apple collection E. Aprea*, M. Lentini, D. Ciceri, L. Menghi, E. Betta, J. Zambanini, I. Endrizzi, P. Magnago, C. Moser, F. Gasperi <i>Research and Innovation Centre, Fondazione Edmund Mach, Italy</i></p>	<p>[O04.3] Heating rate effect on the formation of pyrazines in the process of cocoa roasting M. Rojas*^{1,3}, F. Chejne¹, H. Ciro¹, H.J. Heeres², J. Montoya¹ ¹<i>Universidad Nacional de Colombia, Colombia,</i> ²<i>University of Groningen, the Netherlands,</i> ³<i>Fundación CeIBA, Colombia</i></p>
12:00-12:20	<p>[O01.4] Transformation of Food Proteins into Bioactive Peptides: Recent Progresses Jianping Wu <i>University of Alberta, Canada</i></p>	<p>[O02.4] Bioaccessibility of carotenoids from pro Vitamin A biofortified cassava affected by processing techniques O. Lawal*, A. Linnemann <i>Wageningen University & Research, the Netherlands</i></p>	<p>[O03.4] Fermentation for production of clean label ingredients J. Hugenholtz*, M. Julsing, J. Blankestijn <i>Wageningen Food & Biobased Research, the Netherlands</i></p>	<p>[O04.4] Ohmic heating of solid foods - strategies for improving heating uniformity M. Gratz*, B. Znejma, F. Simon, H. Jäger <i>University of Natural Resources and Life Sciences (BOKU), Austria</i></p>
12:20-12:40	<p>[O01.5] Heat-induced changes in structure of spray-dried plant protein isolates and its implications on in vitro gastric digestion A. Rivera del Rio*, M.A. Opazo Navarrete, R.M. Boom, A.E.M. Janssen <i>Wageningen University & Research, the Netherlands</i></p>	<p>[O02.5] Role of the food additive Carrageenan in modulating proteomic profiles generated from chocolate milk in the gut lumen of young children and adults S. David*, M. Magram, A. Shpigelman, U. Lesmes <i>Technion, Israel</i></p>	<p>[O03.5] Oxidative stability of vegetable purees enriched with omega-3 (n-3 LC-PUFA) rich microalgae L. Gheysen^{1,2}, R. Demets^{1,2}, J. Devaere³, T. Bernaerts², A. Van Loey², L. De Cooman³, I. Foubert*^{1,2} ¹<i>KU Leuven Kulak, Research Unit Food & Lipids, Belgium,</i> ²<i>KU Leuven, Belgium,</i> ³<i>KU Leuven Technology Campus Ghent, Belgium</i></p>	<p>[O04.5] The Food Sustainability Index: a tool to appraise the sustainability of food systems. An illustration for Europe M. Pedrotti*^{1,2}, K. Dembska¹, M. Antonelli¹ ¹<i>BCFN, Italy,</i> ²<i>Wageningen University & Research, the Netherlands</i></p>

12:40-13:45 Lunch Room:Exchange Hall and Shipping Hall				
Rooms	Diamond Room	Mees Auditorium	van Oldenbarnevelt Room	Rotterdam Hall
13:45-15:35	Session 5: Food for healthy aging Chair: Monica Mars	Session 6: Traceability and authenticity Chair: Saskia van Ruth	Session 7: New challenges for food science and technology Chair: Ariette Matser	Session 8: New challenges for food science and technology: Side streams Chair: Ben Langelaan
13:45-14:15	[KN05] Endocannabinoid system and aging: is there a room for healthy food design? P. Vitaglione, <i>University of Naples "Federico II", Italy</i>	[KN06] Recent developments for assuring the authenticity of our food P. Brereton, <i>Queen's University Belfast, UK</i>	[KN07] Technology innovations for food security W. Chen, <i>Nanyang Technological University, Singapore</i>	[KN08] Better Use of Food by Gentle Processing Remko Boom, <i>Wageningen University & Research, the Netherlands</i>
14:15-14:35	[O05.1] The effect of particle size and high-power ultrasound treatment on the in vitro hypoglycemic properties of citrus dietary fiber P.V. Nguyen*, A.K. Baier, C. Rauh <i>Technische Universität Berlin, Germany</i>	[O06.1] Exploring the forensic application of a novel, rapid, economic and easy-to-use handheld NIR spectrometer for chemical identification, active ingredient quantification and counterfeit detection Y. Weesepeel* ⁵ , T. Venderink ⁵ , P. Keizers ¹ , F. Bakker ¹ , M. Boshuis ¹ , M. Heerschop ² , A. van Esch ³ , F. Wallace ³ , A. Hulsbergen- van den Berg ³ , A. van Asten ^{3,4} ¹ <i>National Institute for Public Health and Environment, the Netherlands,</i> ² <i>Customs Laboratories, the Netherlands,</i> ³ <i>Netherlands Forensic Institute, the Netherlands,</i> ⁴ <i>University of Amsterdam, the Netherlands,</i> ⁵ <i>Wageningen University & Research – Wageningen Food Safety Research, the Netherlands</i>	[O07.1] Development of a novel time-temperature integrator based on the maillard reaction for visual monitoring of melon maturity during cultivation K. Sakai, R. Okaniwa, S. Koseki* <i>Hokkaido University, Japan</i>	[O08.1] Potential of innovative processing technologies for the revalorisation of rest raw materials from the chicken industry P. Paulsen Thoresen* ² , R. García Álvarez ¹ , M. Risa Vaka ¹ , T. Rustad ² , I. Sone ¹ , E. Noriega Fernández ¹ ¹ <i>Nofima, Norway,</i> ² <i>Norwegian University of Science and Technology (NTNU), Norway</i>
14:35-14:55	[O05.2] Protein - carbohydrate interactions on model bread formulations C.E.A. Heddes, E.A.P. Raaijmakers, J.T.M.M. Henket, H.C.M. Bode, H.W. Liese, L. Tonnejck-Srpova, G.A.H. de Jong, P. Voudouris*, S. Renzetti <i>Wageningen Food Biobased Research, Wageningen University & Research, the Netherlands</i>	[O06.2] Point of need molecular assay for the identification of animal species in meat and meat product J. Kissenkoetter*, S. Boehlken- Fascher, A. Abd El Wahed <i>Georg-August University Goettingen, Germany</i>	[O07.2] Bioprocessing of common pulses changes seed microstructure improving dipeptidyl peptidase-IV and α-glucosidase inhibitory activities E. Di Stefano* ^{1,2} , A. Tsopmo ³ , T. Oliviero ¹ , V. Fogliano ¹ , C. Udenigwe ² ¹ <i>Wageningen University, the Netherlands,</i> ² <i>University of Ottawa, Canada,</i> ³ <i>Carleton University, Canada</i>	[O08.2] Mild processing of mealworms as sustainable food system by fermentation: opportunities and limitations A. Borremans* ¹ , R. Smets ¹ , M. Van Der Borgh ¹ , S. Bußler ² , A. Fröhling ² , H.M. Rawel ³ , O. Schlüter ² , L. Van Campenhout ¹ ¹ <i>KU Leuven, Belgium,</i> ² <i>Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB), Germany,</i> ³ <i>University of Potsdam, Germany</i>

14:55-15:15	<p>[O05.3] Innovative milk and whey protein hydrolysates A. Gruppi*¹, M. Dermiki², R.J. FitzGerald², G. Spigno^{1,1}<i>Università Cattolica del Sacro Cuore, Italy,</i> ²<i>University of Limerick, Ireland</i></p>	<p>[O06.3] New sensing technology for the continuous in-line monitoring of contaminants in industrial food processing J. Yan, M.W.J. Prins* <i>Eindhoven University of Technology, the Netherlands</i></p>	<p>[O07.3] Technological functionality of unrefined ingredients from Cannabis sativa L. meal undergoing thermal treatments L. Piazza, M. Esposito*, G. Aiello, E. Masseroni <i>Università degli Studi di Milano, Italy</i></p>	<p>[O08.3] Legumes, fungi and coffee agro-industrial side streams: a possible source of proteins and bioactive molecules B. Prandi*^{1,2}, F. Milani¹, M. Bondi³, L. Navarini⁴, J. Engerisser⁵, A. Tassoni⁶, P.F.X. Corvini⁷, S. Sforza¹, T. Tedeschi¹ ¹<i>University of Parma, Italy,</i> ²<i>Telematic University San Raffaele Roma, Italy,</i> ³<i>Conserves France, France,</i> ⁴<i>Illycaffè S.p.A., Italy,</i> ⁵<i>Pleurette, France,</i> ⁶<i>University of Bologna, Italy,</i> ⁷<i>Fachhochschule Nordwestschweiz, Switzerland</i></p>
15:15-15:35	<p>[O05.4] Physicochemical characteristics of grated fresh carrot in polypropylene film containing nano bentonite during storage N. Zamindar*, Z. Ghorbani, L. Khazdooz Isfahan (Khorasgan) Branch Islamic Azad University, Iran</p>	<p>[O06.4] A multicriteria evaluation of blockchain based citrus supply chain traceability system A. Scuderi*, G. Timpanaro, G. La Via, V.T. Foti <i>University of Catania, Italy</i></p>	<p>[O07.4] Mustard based antimicrobial packaging: Using particle size and fat content to control the release of Allyl Isothiocyanate N.A. Bahmid*^{1,2}, M. Dekker¹, V. Fogliano¹, J. Heising¹ ¹<i>Wageningen University & Research, the Netherlands,</i> ²<i>Universitas Sulawesi Barat, Indonesia</i></p>	<p>[O08.4] Soy press cake: from vegetable waste to functional ingredient of the meat analogue, through lactic acid bacteria fermentation S. Razavizadeh, A. Salaseviciene, G. Alencikiene*, L. Vaiciulyte-Funk <i>Kaunas University of Technology, Food Institute, Lithuania</i></p>
15:35-16:30	Coffee and Poster Session 1 Room: Exchange Hall and Shipping Hall			
Rooms	Diamond Room	Mees Auditorium	van Oldenbarnevelt Room	Rotterdam Hall
16:30-18:00	<p>Session 9: New technology and food digestibility Chair: Markus Stieger</p>	<p>Session 10: Personalised food & nutrition Chair: Ruud van der Sman</p>	<p>Session 11: Regulatory, food safety and security Chair: Marcel Zwietering</p>	<p>Session 12: Mild processing: high pressure Chair: Masja Nierop Groot</p>
16:30-17:00	<p>[KN09] How macromolecules are released from the food matrix; the case of vegetable processing, digestibility and functionality K. Howell*, F. Dunshea, K. Ng, H. Suleria, C. Gu <i>University of Melbourne, Australia</i></p>	<p>[KN10] Quantitative approaches in food structure and nutrition design: towards personalization and digitalization S. Renzetti*, R. van der Sman <i>WUR, the Netherlands</i></p>	<p>[KN11] Computer vision: A useful tool to monitor food quality and safety online V. Gökmen <i>Hacettepe University, Turkey</i></p>	<p>[KN12] The influence of high-pressure processing at ambient and elevated temperatures on the quality and safety of selected foods R. Sevenich*¹, C. Rauh¹, B. Belkova², J. Hajslova² ¹<i>Technische Universität Berlin, Germany,</i> ²<i>Institute of Chemical Technology, Czech Republic</i></p>

17:00-17:20	<p>[O09.1] Nanocapsules of high-amylose corn starch (HACS) for delivery of capsaicin: Fabrication, characteristics and gastrointestinal bio-accessibility S. Isaschar Ovdar*, U. Lesmes <i>Technion - Israel Institute of Technology, Israel</i></p>	<p>[O10.1] Quisper: bridging the gap between consumers and scientifically validated personalised nutrition advice D. Segovia Lizano¹, R. Berry¹, S. Astley², J. Goossens³, K. Gedrich⁴, P. Finglas*^{1,2} ¹Quadram Institute Bioscience, UK, ²EuroFIR AISBL, Belgium, ³shiftN, Belgium, ⁴Technical University of Munich, Germany</p>	<p>[O11.1] Extending the Kano model of satisfaction for multiple products comparisons: an application to consumer decision-making related to food biotechnology A. Pakseresht*, C.J. Lagerkvist Swedish University of Agricultural Sciences, dep. of Economics, Sweden</p>	<p>[O12.1] The effect of high pressure processing on polyphenoloxidase activity, nutrients, and phenolics in Irish potato cultivars K. Tsirikra*, D.K. Rai <i>Teagasc Food Research Centre Ashtown, Ireland</i></p>
17:20-17:40	<p>[O09.2] Modelling in-vitro starch digestibility as a function of both food structure and degree of starch gelatinisation α: case of plantain A. Briffaz², A. Giraldo Toro², O. Gibert², J. Ricci², y. Wenhao², P. Bohuon*² ¹Pontificia Universidad Javeriana, Colombia, ²CIRAD, QualiSud research unit, France</p>	<p>[O10.2] Ingredient characteristics for liquid and semi-solid snacks manufactured at the point of consumption A. Calton*, E. Nordlund, K. Poutanen, N. Sozer <i>VTT Technical research Centre of Finland, Finland</i></p>	<p>[O11.2] Multiscale modelling of fluid flow in 3D printed microfluidics porous platforms for diagnostic testing of food quality A. Piovesan*, R. Nicasy, R. Dochy, C. Achille, H. Van Cauteren, R. Ameloot, P. Verboven, B. Nicolai, <i>KU Leuven, Belgium</i></p>	<p>[O12.2] Extending shelf life of desalted cod by high pressure processing T.M. Rode*, B.J. Rotabakk, <i>Nofima AS, Norway</i></p>
17:40-18:00	<p>[O09.4] Betacyanin encapsulation for preventing their degradation during the digestion process N. Ben Hadj Youssef*, A. Nesterenko, I. Pezron, A. Le Goff, A.V. Salsac, A. Falcimaigne-Cordin, C. Rossi <i>Université de Technologie de Compiègne, France</i></p>	<p>[O10.3] The impossible Breakfast: Innovative smart home cooking devices for a healthy, convenient, sustainable and customized meal C. Talens*, E. Puértolas, Y. Ríos <i>AZTI, Spain</i></p>	<p>[O11.3] Non-destructive internal quality inspection of fruit using X-ray imaging and artificial intelligence T. Van De Looverbosch*, P. Verboven, B. Nicolai <i>KU Leuven, Belgium</i></p>	<p>[O12.3] Use of High Hydrostatic Pressure (HHP) for the development of a new seafood product S. Tappi*, A.C. de Aguiar Saldanha Pinheiro, G. Braschi, F. Soglia, F. Patrignani, M. Petracci, U. Tylewicz, M. Dalla Rosa, P. Rocculi <i>University of Bologna, Italy</i></p>
18:15-19:45	<p>Welcome Reception Room: Exchange Hall and Shipping Hall Pub Quiz Mees Auditorium (18:30-19:00)</p>			

Wednesday, 13 November 2019					
07:30-18:15	Registration Room: Exchange Hall and Shipping Hall				
Rooms	Rotterdam Hall				
08:30-10:10	Plenary Session 1: Challenges in Science for Agri-Food Session Chair: Erik van der Linden				
08:30-08:55	[PL1.1] Global challenges and the critical needs of food science and technology (FS&T) A-M. Hermansson* ¹ , P. Lillford ¹ , ¹ Chalmers University of Technology, Sweden, ² School of Chemical Engineering at the University of Birmingham, UK				
08:55-09:20	[PL1.2] Spreading information and developing trust in social networks to accelerate diffusion of innovations V. Buskens, Utrecht University, the Netherlands				
09:20-09:45	[PL1.3] Food Phytochemicals. A journey from food quality and safety to bioactivity and human health F.A. Tomás-Barberán, CEBAS-CSIC, Spain				
09:45-10:10	[PL1.4] Three tools for sustainable food production S. Kjelstrup, Norwegian University of Science and Technology, Norway				
10:10	End Plenary Session				
10:10-10:30	Coffee Room: Exchange Hall and Shipping Hall				
Rooms	Diamond Room	Mees Auditorium	van Oldenbarnevelt Room	Rotterdam Hall	Leeuwen Room
10:30-12:20	Session 13: Food Digestion, Microbiota: understanding by connecting in vitro and in vivo studies Chair: Chibuike Udenigwe	Session 14: Food perception & clean labelling Chair: Myrthe de Beukelaar	Session 15: System changes Chair: Hannah van Zanten	Session 16: Mild processing: drying and ultrasound Chair: Alexander Mathys	Project session: OLEUM
10:30-11:00	[KN13] Towards mechanistic understanding of gastric digestion of structured proteins A.E.M. Janssen, Wageningen University & Research, Food Process Engineering, the Netherlands	[KN14] Consumers and clean labels H. van Trijp, Wageningen University & Research, the Netherlands	[KN15] Moving towards circularity in food systems: barriers and enabling conditions Erik Matthijs KU Leuven, Belgium	[KN16] Mild conductive drying of foods J. Qiu, R.M. Boom, M.A.I. Schutyser*, Wageningen University & Research, the Netherlands	10:30 - 10:40 OLEUM: advancements and objectives of the OLEUM Network Prof. Tullia Gallina Tochi, University of Bologna 10:40 - 11:00 Strategy of the full validation process of the OLEUM analytical methods Prof. Paul Brereton, Queen's University Belfast

<p>11:00-11:20</p>	<p>[O13.1] Designing functional foods with controllable lipid digestion based on oleogelation mechanism A. Ashkar, S. Laufer, J. Rosen-Kligvasser, U. Lesmes, M. Davidovich-Pinhas* <i>Technion - Israel Institute for Technology, Israel</i></p>	<p>[O14.1] Combining foods with condiments: How bread and potato influence <i>in-vivo</i> aroma release and aroma perception of mayonnaises A.C. van Eck*^{1,2}, M. Pedrotti^{2,3}, F. Biasioli³, V. Fogliano^{1,2}, E. Scholten^{1,2}, M.A. Stieger^{1,2} ¹TiFN, the Netherlands, ²Wageningen University & Research, the Netherlands, ³Fondazione Edmund Mach, Italy</p>	<p>[O15.1] A model for transformational change towards sustainable food systems: bridging technological and socio- technological food innovations S. Berner*, H. Derler, S. Pabst, U. Seebacher, <i>FH JOANNEUM University of Applied Sciences, Austria</i></p>	<p>[O16.1] Tailoring crystalline structure using high-intensity ultrasound to reduce oil migration in low and high saturated fats T.L.T. Silva*¹, M. Marsh¹, V. Gibon², S. Martini¹ <i>Utah State University, USA</i>, ²Desmet Ballestra R&D Center, Belgium</p>	<p>11:00 - 11:20 Quality and authenticity of the olive oils in EU Ariane Vander Stappen, <i>European Commission - DG AGRI</i></p>
<p>11:20-11:40</p>	<p>[O13.2] Monitoring in vitro gastric digestion of whey protein gel by nuclear magnetic resonance and magnetic resonance imaging R. Deng*¹, P. Smeets^{1,2}, H. Van As¹, F. Vergeldt¹, K. de Graaf¹, M. Mars¹, A. Janssen¹ ¹Wageningen University & Research, the Netherlands, ²University Medical Center Utrecht, the Netherlands</p>	<p>[O14.2] Disentangling the relative contributions of viscosity and friction properties to creaminess perception of liquid foods A.E. Blok*, D.P. Bolhuis, M.A. Stieger <i>Wageningen University & Research, the Netherlands</i></p>	<p>[O15.2] Meta-NPD solutions that reduce food waste and increase food security in the digitalised global food system W. Martindale*¹, M. Swainson¹, T.A.E. Hollands^{1,2} <i>University of Lincoln, UK</i>, ²Raynor Foods Ltd, UK</p>	<p>[O16.2] Assisted ultrasound to control the germination and outgrowth of Alicyclobacillus acidoterrestris at population and single spore level M. Kakagianni¹, C. Chatzitzika², K. Koutsoumanis¹, V. Valdramidis*² ¹Aristotle University of Thessaloniki, Greece, ²University of Malta, Malta</p>	<p>11:20 - 11:40 Safety of the olive oils in EU Anna Mlynarczyk, <i>EU FFN Team</i></p>
<p>11:40-12:00</p>	<p>[O13.3] A nutriketic model linking broccoli processing conditions to isothiocyanate bioavailability M. Dekker*, T. Oliviero <i>Wageningen University & Research, the Netherlands</i></p>	<p>[O14.3] Food polyphenols interaction with bitter taste receptors and with salivary proteins S. Soares*¹, E. Brandão¹, I. García-Estévez^{1,2}, P. Großmann³, N. Mateus¹, M. Behrens³, W. Meyerhof^{3,5}, V. de Freitas¹ ¹Universidade do Porto, Portugal, ²Universidade de Salamanca, Spain, ³German Institute of Human Nutrition, Germany, ⁴University of Munich, Germany, ⁵Saarland University, Germany</p>	<p>[O15.3] Food systems, dietary diversity, prevalence of hunger and coping strategies of households from rural communities in Limpopo province, South Africa X.G. Mbhenyane*¹, S.H.M. Makuse², L.F. Mushaphi³, B.A. Tambe¹ ¹Stellenbosch University, South Africa, ²University of Limpopo, South Africa, ³University of Venda, South Africa</p>	<p>[O16.3] Microwave power modulation and vacuum for drying foods under controlled mild temperature R. Monteiro, A. Gomide, J. Link, J. Moraes, B. Carciofi, J. Laurindo* <i>Federal University of Santa Catarina, Brazil</i></p>	<p>11:40 - 12:00 Olive oil quality and authenticity in a global framework. The loop with the ISO Committee on fats and oils Dr. Paul Miller, <i>Paul Miller and Associates</i></p>

12:00-12:20	[O13.4] How carrageenan messes with our guts? implications of commercial carrageenans on the microbiota of healthy males H. Tarazi Riess*, U. Lesmes, S. Yaron <i>Technion, Israel</i>	[O14.4] Fortification of wheat bread with flours from processed legume seeds and impact on product quality attributes K. Kotsiou*, A. Lazaridou, C.G. Biliaderis <i>Aristotle University of Thessaloniki, Greece</i>	[O15.4] Is product quality the main reason of food product failure? A multi-disciplinary simulation modelling project in a healthy fruit snack company A. Horvat* ¹ , H.A. Bartelet ² , D.F. Andersen ³ , B. Behdani ¹ , P.A. Luning ¹ ¹ <i>Wageningen University & Research, the Netherlands,</i> ² <i>DynaMundo, USA,</i> ³ <i>University at Albany, SUNY, USA</i>	[O16.4] Predicting solute inclusions during film freeze concentration J.E. Vuist*, M.A.I. Schutyser, R.M. Boom <i>Wageningen University & Research, the Netherlands</i>	12:00 - 12:20 AOAC International and OLEUM: interactions towards the validation of targeted and untargeted methods for the quality and authenticity of olive oils Dr. Palmer A. Orlandi Jr. <i>AOAC International</i>
					12:20 - 12:40 Discussion "What global network is needed for olive oil? The future of the OLEUM Network" Panel with all speakers, coordinated by prof. Tullia Gallina Toschi and Prof. Paul Brereton
12:20-13:20	Lunch Room: Exchange Hall and Shipping Hall				
Room	Rotterdam Hall				
13:20-15:00	Plenary session 2: Round table discussion 'Challenges in communication in Agri-Food' Moderated by: Dick Veerman (PL2.1) Statements on processing classification will be posed by Prof. M. Gibney (PL2.2) (Emeritus Professor of Food & Health University College Dublin, Ireland) and Dr. A. Christodoulo (PL2.3)(CEO SIGA). Vincenzo Fogliano (Professor and Chair of the Food Quality and Design Group, Wageningen University) and Jaap Seidell (PL2.3) (Professor at Faculty of Health Sciences, Vrije Universiteit Amsterdam), followed by a discussion with the audience.				
15:00-16:00	Coffee and Poster Session 2 Room: Exchange Hall and Shipping Hall	European Research Council Meeting Chair: Andras Badacsonyi			Leeuwen Room
Rooms	Diamond Room	Mees Auditorium	van Oldenbarnevelt Room	Rotterdam Hall	15:15-17:30 Project Session: Engaging consumers for a better food value chain
16:00-17:50	Session 17: Bioactive compounds and processing Chair: Stefano Renzetti	Session 18: Food for healthy aging Chair: Paola Vitaglione	Session 19: Personalised food & nutrition Chair: Maarten Schutyser	Session 20: New challenges for food science and technology: protein transition Chair: Alan Mackie	
16:00-16:30	[KN17] Concept of tailoring fiber-based prebiotics for personalized gut health B.R. Hamaker <i>Whistler Center for Carbohydrate Research, USA</i>	[KN18] Food: the blind spot of nutritionists? M. Mars <i>Wageningen University & Research, the Netherlands</i>	[KN19] Advancements in 3D food printing equipment K. van Bommel*, L. Brouwers, M. Hoppenbrouwers, A. Rijfers, M. de Schipper <i>TNO, the Netherlands</i>	[KN20] Gastric digestion of plant-protein based gels R. van der Sman <i>Wageningen University & Research, the Netherlands</i>	15:15-15:35 Introduction C. Abundancia, Senior Manager - Social Media and Communication

16:30-16:50	<p>[O17.1] Study on acrylamide formation and antioxidant activity in coffee during roasting M.A. Schouten*¹, S. Tappi¹, M. Cortese², G. Caprioli², S. Angeloni², S. Vittori², S. Romani¹ ¹University of Bologna, Italy, ²University of Camerino, Italy</p>	<p>[O18.1] Ingestion of tea polyphenols with bread reduces starch digestibility and polyphenols bioaccessibility L. Kan*, T. Oliviero, R. Verkerk, V. Fogliano, E. Capuano Wageningen University & Research, the Netherlands</p>	<p>[O19.1] Fractionation and characterization of glycated soy protein isolate linked to surface activity J. Feng*, B.A. Mogol, K. Schroën, V. Fogliano, C.C. Berton-Carabin Wageningen University & Research, the Netherlands</p>	<p>[O20.1] Breaking peas-full proteins - Enzymatic hydrolysis for production of valuable and allergen-reduced food ingredients V. Garcia-Arteaga*^{1,2}, I.S. Muranyi², U. Schwiggert-Weisz², P. Eisner² ¹Technical University of Munich, Germany, ²Fraunhofer Institute for Process Engineering and Packaging, IVV, Germany</p>	<p>15:35-16:00 EIT Food's Trust Tracker® - measuring and monitoring European consumers' trust in the food value chain A. Macready², S. Hieke¹, L. Vranken⁵, M. Klimczuk-Kochańska³, S. Szumial³, M. Reipurth*¹, K.G. Grunert⁴ ¹European Food Information Council,</p>
16:50-17:10	<p>[O17.2] Functionality of cinnamon nanoparticles in cocoa-based systems D.R.A. Muhammad^{1,3}, D. Van de Walle¹, C. Delbaere*^{1,2}, K. Dewettinck^{1,2} ¹Ghent University, Belgium, ²Cacaolab bvba, Belgium, ³Universitas Sebelas Maret, Indonesia</p>	<p>[O18.2] All-aqueous emulsions: from encapsulation reservoirs to chemical micro-reactors A. Madadlou*¹, J. Floury¹, D. Dupont¹ ¹STLO, UMR 1253, INRA, France, ²Wageningen University & Research, the Netherlands</p>	<p>[O19.2] Flow behavior analysis for 3D printing of starch-based systems: morphological imaging and multiple stage extrusion characterization through a rheometry imitation approach A.R. Fahmy*, T. Becker, M. Jekle Technical University of Munich, Germany</p>	<p>[O20.2] Analysis of rheological properties of starch/protein biopolymers and their effect on expansion in food extrusion A. Martin*¹, R. Osen¹, A. Emin², H.P. Karbstein² ¹Fraunhofer Institute for Process Engineering and Packaging, Germany, ²Karlsruhe Institute for Technology, Germany</p>	<p>16:00-16:25 SMARTCHAIN - Towards innovation-driven and smart solutions in short food supply chains B. Chang*, M. Reipurth, C. Massri European Food Information Council, Belgium</p>
17:10-17:30	<p>[O17.3] A comparative study on enzymatic hydrolysis of potato protein powder; efficiency and functionality A. Jafarpour*¹, C-H. Jacobson¹, S. Gregersen², E.B. Hansen¹ ¹Technical University of Denmark, Denmark, ²Aalborg University, Denmark</p>	<p>[O18.3] Impact of gastrointestinal digestion on olive pomace functional ingredients: Bioactives bioaccessibility and modulation of gut microbiota T.B. Ribeiro*^{1,2}, D. Campos¹, S. Nunes¹, J. Nunes², A.A. Vicente³, M. Pintado¹ ¹Universidade Católica Portuguesa, Portugal, ²BLC3 Association – Technology and Innovation Campus, Portugal, ³Universidade do Minho, Portugal</p>	<p>[O19.3] Optimization of the thermal and rheological properties of salmon skin gelatin as a food matrix for 3D printing N. Carvajal Mena*¹, G. Tabilo Munizaga¹, M. Pérez Wom¹, R. Lemus Mondaca² ¹Universidad del BíoBío, Chile, ²Universidad de Chile, Chile</p>	<p>[O20.3] The influence of thermomechanical treatment on proteins during High Moisture Extrusion Cooking (HMEC): A new chromatographic approach to analyse structural changes E. Högg*, S. Boguslawski, C. Dauwe, C. Rauh Technical University Berlin, Germany</p>	<p>16:25-16:50 Strength2Food - How sustainable are short food supply chains? A qualitative and quantitative assessment across Europe G. Vittersø*¹, E. Majewski², A. Malak-Rawlikowska², H. Torjusen¹, B. Tocco³ ¹Oslo Metropolitan University, Norway, ²Warsa w University of Life Sciences, Poland, ³Newcastle University Business School, UK</p>

17:30-17:50	<p>[O17.4] Processing conditions and transglutaminase sources to “drive” the wheat gluten dough quality E.B. Ceresino*¹, R. Kuktaite¹, M.S. Hedenqvist², H.H. Sato³, E. Johansson¹ ¹Swedish University of Agricultural Sciences, Sweden, ²KTH Royal Institute of Technology, Sweden, ³University of Campinas, Brazil</p>	<p>[O18.4] Healthy functional and texturized cured meat products for older people I. Uribe, M. Baylos* <i>Centro Tecnológico Alimentario Ctic Cita, Spain</i></p>	<p>[O19.4] Extrusion-based 3D printing of food pastes: correlating rheological properties with printing behaviour S. Zhu*, M.A. Stieger, A.J. van der Goot, M.A.I. Schutyser <i>Wageningen University & Research, the Netherlands</i></p>	<p>[O20.4] Oxidation in plant protein-based ingredients: should we be concerned? P. Duque-Estrada, K. Kyriakopoulou*, W. de Groot, A-J. van der Goot, C. Berton-Carabin <i>Wageningen University & Research, the Netherlands</i></p>	16:50-17:30 Panel Discussion
18:45-22:00	<p>Conference Dinner <i>Location: Wereldmuseum, Rotterdam, Netherlands</i></p>				
<p>Thursday, 14 November 2019</p>					
08:00-13:30	<p>Registration Room: Exchange Hall and Shipping Hall</p>				
Rooms	Diamond Room	Mees Auditorium	van Oldenbarnevelt Room	Rotterdam Hall	Leeuwen Room
08:30-10:20	<p>Session 21: New technology and food digestibility Chair: Kate Howell</p>	<p>Session 22: Regulatory, food safety and security Chair: Ben Langelaan</p>	<p>Session 23: New challenges for food science and technology Chair: Remko Boom</p>	<p>Session 24: Mild processing Chair: William Chen</p>	
08:30-09:00	<p>[KN21] Food matrix paradigm explained: the case of nutrients bioavailability from plant tissues E. Capuano <i>Wageningen University & Research, the Netherlands</i></p>	<p>[KN22] Zero Risk does not Exist M. Zwietering <i>Wageningen University & Research, the Netherlands</i></p>	<p>[KN23] Circular food systems based on emerging up- and downstream concepts to target more sustainable food value chains A. Mathys <i>Institute of Food, Nutrition and Health, Sustainable Food Processing Laboratory, Switzerland</i></p>	<p>[KN24] Impact of mild processing on food spoilage fungi M.N. Groot*, H. Hayrapetyan, H. van Bokhorst-van de Veen, R. Timmermans <i>Wageningen Food & Biobased Research (WFBR), the Netherlands</i></p>	

09:00-09:20	<p>[O21.1] Understanding the effect of processed- and mastication-induced common bean characteristics to engineer its digestive starch functionality A. Pallares Pallares, M. Hendrickx, T. Grauwet* <i>KU Leuven, Belgium</i></p>	<p>[O22.1] Tackling obesity by creating a knowledge-base on food reformulation for industrial application R. Harastani*, L. James, E. Woolley <i>Loughborough University, UK</i></p>	<p>[O23.1] Reducing food waste by quality controlled logistics using intelligent packaging J.K. Heising*, F. Claassen, M. Dekker <i>Wageningen University & Research, the Netherlands</i></p>	<p>[O24.1] Pulsed electric field pre-treatment in the processing chain of dried bacterial food ingredients E.M.J. Vaessen*, H.M.W. den Besten, M.A.I. Schutyser <i>Wageningen University & Research, the Netherlands</i></p>	<p>9.00-10.20 Discussion session on Global Challenges and the Critical Needs of Food Science & Technology Chair: Peter Lillford</p>
09:20-09:40	<p>[O21.2] Rhamnolipids-based nanostructured lipid carriers for encapsulation of liposoluble vitamins M. Azevedo*^{1,2}, M. Cerqueira¹, B. Silva¹, J. Teixeira², L. Pastrana¹ ¹<i>INL - International Iberian Nanotechnology Laboratory, Portugal</i>, ²<i>CEB - Centre of Biological Engineering, University of Minho, Portugal</i></p>	<p>[O22.2] Genetic Determinants Associated With Biofilm Formation Of <i>Listeria Monocytogenes</i> From Food And Food Processing Environment P. Di Ciccio*, F. Chiesa, S. Rubiola, T. Civera <i>University of Turin, Italy</i></p>	<p>[O23.2] Macroalgae for food packaging applications R. Bosse*¹, L.C. Hofmann², F. Reimold¹, B.H. Buck², J. Henjes², I. Enders³, W.D. Hoffmann³ ¹<i>University of Applied Sciences Bremerhaven, Germany</i>, ²<i>Alfred-Wegener- Institute Helmholtz Centre for Polar and Marine Research, Germany</i>, ³<i>NORDSEE GmbH, Germany</i></p>	<p>[O24.2] Plasma activated water for postharvest decontamination of fresh produce M.R. Vaka¹, I. Sone¹, R. García Álvarez¹, J.L. Walsh², L. Prabhu¹, M. Sivertsvik¹, E. Noriega Fernández*¹ ¹<i>Nofima, Norway</i>, ²<i>University of Liverpool, UK</i></p>	
09:40-10:00	<p>[O21.3] Engineer digestion of rice with hydrocolloids by exploring the functionality of hydrocolloids S. Muttakin*^{2,3}, A. Lamond¹, O. Gouseti¹, P. Fryer², S. Bakalis¹ ¹<i>University of Nottingham, UK</i>, ²<i>University of Birmingham, UK</i>, ³<i>Indonesian Agency for Agricultural Research and Development, Indonesia</i></p>	<p>[O22.3] Antimicrobial peptide cocktail activity in minced turkey meat Z. Hayouka <i>The Hebrew University, Israel</i></p>	<p>[O23.3] Influence of frequency and location when defoaming fruit juices with high power ultrasound during filling J. Thuennesen*, B. Gatternig, A. Delegado <i>Friedrich-Alexander University Erlangen/Nuremberg, Germany</i></p>	<p>[O24.3] Electric field effects on bacterial endospores during sterilization by electrotechnologies F. Schottroff*^{1,2}, T. Pyatkovskyy², K. Reineke³, P. Setlow⁴, S. Sastry², H. Jaeger¹ ¹<i>University of Natural Resources and Life Sciences (BOKU), Vienna, Austria</i>, ²<i>The Ohio State University, USA</i>, ³<i>GNT Europa GmbH, Germany</i>, ⁴<i>University of Connecticut, USA</i></p>	
10:00-10:20	<p>[O21.4] Polyphenol bioaccessibility of tart cherry puree as affected by micronization R. Singh*, N. Lukhmana, F. Kong, <i>University of Georgia, USA</i></p>	<p>[O22.4] Antibacterial effects of plant extracts with hurdle technology against <i>Vibrio cholerae</i> T. Kayira*¹, C. Xedzro¹, H. Nakano² ¹<i>Hiroshima University, Japan</i>, ²<i>University of Malawi, Malawi</i></p>	<p>[O23.4] Adaptive ANFIS-based controlling of foam production in beverage bottling with optical filling and foam level detection T. Beck*, B. Gatternig, A. Delgado Lehrstuhl für Strömungsmechanik, <i>Friedrich-Alexander Universität Erlangen, Germany</i></p>	<p>[O24.4] Moderate electric fields in fruit juice processing: Influence on mass transfer processes and product quality N. Märten*, A.K. Baier, C. Rauh <i>Technische Universität Berlin, Germany</i></p>	

10:20-10:50	Break <i>Room: Exchange Hall and Shipping Hall</i>
<i>Room</i>	Rotterdam Hall
10:50-12:10	Plenary Session 3 – Challenges in Agri-Food Entrepreneurship <i>Session Chair: Ben Langelaan</i>
10:50-11:20	[PL3.1] Going Dutch - huge food production in a tiny country <i>Katinka Abbenbroek, Dutch Alliance for Sustainability in Food, the Netherlands</i>
11:20-11:50	[PL3.2] A force for good: Purpose-led food system transformation through ecosystem innovation <i>Manfred Aben, Unilever</i>
11:50-12:10	[PL3.3] The art of crossing chasms, the story of #FoodTech_IL <i>E. Shimoni, Strauss Group, Israel</i>
12:10-13:00	Plenary Session 4 - Awards & Closure
12:10-12:45	Awards EFFoST Student of the Year , Ralf Jakobi, <i>Cargill</i> GNT Awards , Markus Volkert, <i>GNT</i> Lifetime achievement and Science to Society , Prof. Olga Martin-Belloso, <i>EFFoST President</i>
12:45-12:55	Announcing next conference - Uri Lesmes , <i>Technion, Israel</i>
12:55-13:00	Closure - Vincenzo Fogliano , <i>Wageningen University & Research, the Netherlands</i>
13:00	End of conference