

19th ICC Conference 2019



University of Natural Resources and Life Sciences
Vienna, Austria | 24 – 25 April 2019



University of Natural Resources
and Life Sciences, Vienna
Department of Food Science and
Technology

Tuesday, 23 April 2019

13:00 – 18:00 PRE-CONFERENCE MEETINGS - (by separate invitation only)

13:00 – 15:30 ICC TECHNICAL COMMITTEE MEETING

ICC HQ

Organised by:

ICC Technical Committee Meeting
Organised by: Amine Jbeily, ICC

16:00 – 18:00 ICC MEETINGS

ICC HQ

ICC Executive Meeting
Organised by: Michaela Pichler, ICC

19th ICC Conference “SCIENCE MEETS TECHNOLOGY”
University of Natural Resources and Life Science, Muthgasse 18, 1190 Vienna, Austria

PROGRAMME

(Subject to modifications – status 2019-03-14)

Wednesday, 24 April 2019

09:00 – 10:00 REGISTRATION FOR THE CONFERENCE

10:00 – 10:30 WELCOME AND OPENING SESSION

10:00-10:15 **Welcome words from the Vice Dean of the University of Natural Resources and Life Sciences** Christian OBINGER
BOKU, AT

10:15-10:30 **Welcome words from the ICC President** Charles BRENNAN
ICC, NZ

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10:30 – 12:30 Session 1 – PLENARY KEYNOTES

Auditorium XX	10:30-11:10	IMPACT OF CLIMATE CHANGE ON CEREAL SCIENCE AND TECHNOLOGY	Alfred MAR BOKU, AT
	11:10-11:50	GRAINS FOR THE FUTURE: HOW WHOLEGRAIN SCIENCE AND TECHNOLOGY CAN BE HARNESSSED FOR THE HEALTH OF OUR NATIONS	Charles BRENNAN Lincoln University, NZ
	11:50-12:30	FORMULATING WITH HYDROGEN-BOND INTERACTIONS: A TOOL TO DESIGN BAKERY PRODUCTS WITH IMPROVED NUTRITIONAL COMPOSITION	Stefano RENZETTI WUR, NL

12:30 – 14:00 LUNCH BREAK with exhibition and poster viewing

14:00 – 15:30 Parallel Session 2a – Processing and Cereal Products

Auditorium XX	Chair:	Alfred MAR – BOKU, AT John TAYLOR - University of Pretoria, ZA	
	14:00-14:20	INFLUENCE OF PROCESSING ON CEREAL HEALTH POTENTIAL: HOLISTIC VERSUS REDUCTIONIST APPROACHES	Anthony FARDET INRA, FR
	14:20-14:35	EFFECT OF DIETARY FIBRE MOISTURIZING ON THE STRUCTURE OF GLUTEN PROTEINS IN MODEL DOUGH	Agnieszka NAWROCKA Institute of Agrophysics Polish Academy of Sciences, PL
	14:35-14:50	A STEP CLOSER TO GLUTEN-FREE BREAD MADE WITH NON-WHEAT PROLAMIN PROTEINS THAT REPLACE GLUTEN FUNCTIONALITY	John TAYLOR University of Pretoria, ZA
	14:50-15:05	RELATIVE IMPORTANCE OF STARCH GELATINIZATION AND PROTEIN NETWORK FORMATION DURING POUND CAKE MAKING	Lomme DELEU KU Leuven, BE
	15:05-15:20	CORRELATION OF STRUCTURE AND FUNCTIONALITY OF VITAL GLUTEN	Marina SCHOPF Leibniz-Institute for Food Systems Biology at the Technical University of Munich, DE
	15:20-15:30	CEREAL BETA-GLUCAN AS THE POTENTIAL WALL MATERIAL FOR MICROENCAPSULATION OF HYDROPHILIC AND HYDROPHOBIC SUBSTANCES	Marcin KUREK Warsaw University of Life Sciences, PL

14:00 – 15:30 Parallel Session 2b – Designing Future Wheat with Improved Quality as well as Pest and Disease Resistance (AHDB)

Auditorium XXI	Chair:	Dhan BHANDARI - AHDB, UK Peter SHEWRY - Rothamsted Research, UK	
	14:00-14:20	DESIGNING FUTURE WHEATS WITH IMPROVED QUALITY AND PEST/DISEASE RESISTANCE	Dhan BHANDARI AHDB, UK
	14:20-14:40	A BREEDERS TOOLKIT FOR THE DELIVERY OF ANCIENT ALLELES TO MODERN WHEAT	Simon GRIFFITHS John Innes Centre, UK
	14:40-15:00	PRODUCTIVITY TRAITS AND FIELD PHENOTYPING	Malcolm HAWKESFORD Rothamsted Research, UK
	15:00-15:20	DESIGNING FUTURE WHEAT FOR IMPROVED HEALTH BENEFITS	Peter SHEWRY, Rothamsted Research, UK
	15:20-15:30	Discussion	

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15:30 – 16:00 COFFEE BREAK with exhibition and poster viewing

16:00 – 17:45 Parallel Session 3a – Cereal Nutrition I

Auditorium XX	Chair:	Maria PAPAGEORGIOU - ATEITH-Dept. of Food Technology, GR Charles BRENNAN - Lincoln University, NZ	
	16:00-16:15	SHAPING THE FUTURE OF NUTRITION: THE CASE OF PERSONALISED NUTRITION	Michael GUSKO GoodMills, DE
	16:15-16:30	ENRICHING NOODLES WITH SHIITAKE MUSHROOM (LENTINUS EDODES): RELATIONSHIPS BETWEEN ANTIOXIDANT PROPERTIES, GLYCEMIC LOAD AND IN VITRO DIGESTION	Liwen WANG Lincoln University, NZ
	16:30-16:45	THE FORTIFICATION OF STAPLE CEREALS TO ADDRESS MICRONUTRIENT MALNUTRITION, A GLOBAL SUCCESS STORY	Quentin JOHNSON Food Fortification Initiative, CA
	16:45-17:00	MEASUREMENT OF AVAILABLE CARBOHYDRATES INCLUDING ACCURATE MEASUREMENT OF DIGESTIBLE STARCH AND SUCROSE	Ciara McLoughlin Megazyme, IE
	17:00-17:15	WHOLE-GRAIN WHEAT CONTRIBUTES TO LIVER HEALTH AND RESILIENCE: RESULTS OF THE GRAANDIOOS INTERVENTION STUDY IN OVERWEIGHT SUBJECTS	Jan Willem VAN DER KAMP TNO/WUR, NL
	17:15-17:30	THE EFFECT OF WHEAT (TRITICUM AESTIVUM L.) BRAN ON STARCH GELATINIZATION	Yamina DE BONDT KU Leuven, BE
	17:30-17:45	ENZYMES FOR HEALTH AND WELLNESS IN CEREAL-BASED BAKERY APPLICATIONS	Joke PUTSEYS DSM, NL

16:00 – 17:30 Parallel Session 3b – Forthcoming Challenges for the Transformation of Grains (INRA)

Auditorium XXI	Chair:	Luc SAULNIER - INRA, FR	
	16:00-16:25	HOW CHANGES IN CLIMATE AND AGRICULTURAL PRACTICES INFLUENCE WHEAT PRODUCTION	Jacques LE-GOUIS INRA, FR
	16:25-16:50	EXPLOITING VARIATION IN GRAIN STRUCTURE AND COMPOSITION TO IMPROVE WHEAT UTILISATION	Peter SHEWRY Rothamsted Research, UK
	16:50-17:10	ENVIRONMENTAL CONDITIONS AFFECT WHEAT GRAIN TEXTURE: CONSEQUENCES ON GRAIN FRACTIONATION AND FLOUR PROPERTIES	Valérie LULLIEN-PELLERIN INRA, FR
	17:10-17:30	MINOR COMPONENTS AND WHEAT QUALITY: PERSPECTIVES ON CLIMATE CHANGES AND SUSTAINABILITY	Luc SAULNIER INRA, FR

17:30 – 18:15 EXHIBITION & POSTER VIEWING

18:15 – 18:30 Bus transfer to ICC19 NETWORKING DINNER

18:30 – 21:00 ICC19 NETWORKING DINNER

Thursday, 25 April 2019

08:30 – 10:00 Parallel Session 4a – New Methods and Instruments

Auditorium XX	Chair:	Amine JBEILY - IRI, LB Rachel HSU - China Grain Products R&D Institute, TW	
	08:30-08:45	AN ELECTRONIC NOSE WITH MOS SENSORS FOR TESTING THE SUITABILITY FOR CONSUMPTION WHEAT BREAD DURING 96 HOURS AFTER BAKING	Robert RUSINEK Polish Academy of Sciences, PL
	08:45-09:00	DEVELOPMENT OF A NOVEL PHOSPHOLIPASE TO REDUCE POTENTIAL RISK OF OFF-FLAVOR IN RICH BAKING RECIPIES	Frank RITTIG Novozymes Switzerland AG, CH
	09:00-09:15	SMALL SCALE ASSESSMENT OF THE HIGH TEMPERATURE PROCESSING PROPERTIES OF STARCHES AND HYDROCOLLOIDS IN THE RVA 4800	Martin HALLIN Perten, SE
	09:15-09:30	AUTOMATION OF ENDO-HYDROLASE MEASUREMENT IN GRAIN AND MALT SAMPLES USING DEFINED COLORIMETRIC SUBSTRATES	Barry McCLEARY Megazyme, IE
	09:30-09:45	MOLECULAR BREEDING OF WAXY WHEAT AND ITS APPLICATION IN CHINESE LIQUOR PRODUCTION	Xiaoli FAN Chinese Academy of Sciences, CN
	09:45-10:00	PROFILING ANALYSIS OF ISOMALTO-OLIGOSACCHARIDES USING LC-MS/MS	Chih-chieh LIN National Taiwan University, TW

08:30 – 10:00 Parallel Session 4b – Quantitative Food Science Approaches Towards Nutrition Design (WUR)

Auditorium XXI	Chair:	Stefano RENZETTI - WUR, NL Bruce HAMAKER - Purdue University, US	
	08:30-09:00	MATERIAL SCIENCE APPROACHES TO FOOD STRUCTURE DESIGN	Guy DELLA VALLE INRA, FR
	09:00-09:20	DESIGNER FOODS: STARCH MOLECULAR FINE STRUCTURAL FEATURES CONTROLLING DIGESTIBILITY AND PALATABILITY	Robert GILBERT University Queensland, AU
	09:20-09:40	FIBRE MOLECULAR STRUCTURE AND SPECIFICITY OF GUT MICROBIOTA RESPONSE	Bruce HAMAKER Purdue University, (IN) US
09:40-10:00	HOW DO ORAL PROCESSING BEHAVIOR AND SENSORY PERCEPTION CHANGE WHEN TOPPING ARE ADDED TO BREAD?	Arianne VAN ECK WUR, NL	

10:00 – 10:30 COFFEE BREAK with exhibition and poster viewing

10:30 – 12:00 Parallel Session 5a – Ancient and Novel Grains & Legumes

Auditorium XX	Chair:	John TAYLOR – University of Pretoria, ZA Regine SCHÖNLECHNER – BOKU, AT	
	10.30-10.50	THE BREAD MAKING PROCESS OF ANCIENT WHEAT: A SEMI-STRUCTURED INTERVIEW TO BAKERS	Ottavia PARENTI University of Florence, IT
	10:50-11:10	OPTIMISING AGRONOMIC MANAGEMENT OF QUINOA FOR IMPROVING NUTRITIONAL QUALITY	Israel DOMINGOS Newcastle University, UK
11:10-11:30	GETTING INTERMEDIATE WHEATGRASS (THINOPYRUM INTERMEDIUM) READY TO CONQUER THE MARKET PLACE: OPTIMIZING PROCESSING TO FACILITATE HANDLING AND PROLONG STORAGE STABILITY	Catrin TYL University of Minnesota, US	

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11:30-11:45	PHYTOCHEMICAL DISTRIBUTION IN PEARLED FRACTIONS OF X TRITORDEUM AND OTHER SMALL CEREALS	Debora GIORDANO DISAFA - Università degli studi di Torino, IT
11:45-12:00	NUTRACEUTICALS IN GUMMY CANDIES FORM PREPARED FROM LACTO-FERMENTED LUPINE PROTEIN CONCENTRATES, AS HIGH-QUALITY PROTEIN SOURCE, INCORPORATED WITH CITRUS PARADISE L. ESSENTIAL OIL AND XYLITOL	Elena BARTKIENE Lithuanian University of Health Sciences, LT

10:30 – 12:00 Parallel Session 5b – Analytic Processes Implementing Environmental Influences, Increasing Quality Demands, and Nutritional Physiological Trends (Brabender)

Auditorium XXI	Chair:	Mario JEKLE - TU Munich, DE	
	10:30-11:00	VITAL WHEAT GLUTEN: QUALITY DETERMINATION USING THE NEW METHOD “RAPID GLUTEN CHECK” OF THE GLUTOPEAK TESTER	Estelle KLAS CSM, DE
	11:00-11:30	INSIGHTS ON WHEAT QUALITY EVALUATION ALONG THE VALUE CHAIN	Alessandra MARTI University of Milan, IT
	11:30-12:00	GLUTEN-FREE PRODUCT DEVELOPMENT: FARINOGRAPH AS A USEFUL TOOL TO DETERMINE WATER ABSORPTION	Aylin SAHIN University College Cork, IE

12:00 – 13:30 LUNCH BREAK with exhibition and poster viewing

13:30 – 15:00 Parallel Session 6a – Cereal Nutrition II

Auditorium XX	Chair:	Charles BRENNAN - Lincoln University, NZ Jan Willem VAN DER KAMP – TNO/WUR, NL	
	13:30-13:45	WHEATSCAN-UNRAVELLING THE CAUSES FOR WHEAT SENSITIVITIES MS	Darina PRONIN Leibniz Institute for Food Systems Biology at the Technical University Munich, DE
	13:45-14:00	DETERMINATION OF AMYLASE-TRYPSIN INHIBITORS IN WHEAT	Lisa CALL BOKU - University of Natural Resources and Life Sciences, AT
	14:00-14:15	A YEAST-BASED STRATEGY TO REDUCE FODMAP LEVELS IN WHOLE MEAL PRODUCTS	Nore STRUYF Laboratory of Food Chemistry and Biochemistry, KU Leuven, BE
	14:15-14:30	ON TRACES OF YEAST – EXPLORING THE STRUCTURE-FUNCTIONALITY OF YEAST METABOLITES BY FUNDAMENTAL EXTENSIONAL AND SHEAR RHEOLOGY	Thekla ALPERS Technical University of Munich, DE
	14:30-14:45	ENZYME-AIDED PRODUCTION OF FUNCTIONAL SYRUPS FROM SIDE-STREAMS FOR BAKERY APPLICATIONS	Emilia NORDLUND VTT, FI
	14:45-15:00	EFFECT OF EGG PROTEIN AND SOY PROTEIN FORTIFICATION ON PHYSICO-CHEMICAL CHARACTERISTICS OF BANANA PASTA	Adetiya RACHMAN Lincoln University, NZ

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13:30 – 15:00 Parallel Session 6b – Gluten Analysis – From the Past to the Future (R-Biopharm)

Auditorium XXI	Chair:	Stefan SCHMIDT – R-Biopharm, DE	
	13:30-14:00	CROSSED GRAIN SYMBOL – INTERNATIONAL LOGO FOR GLUTEN-FREE FOOD SAFETY	Hertha DEUTSCH Austrian Coeliac Society, AT
	14:00-14:20	THE NEW RIDASCREEN® TOTAL GLUTEN ASSAY	Stefan SCHMIDT R-Biopharm, DE
	14:20-14:40	INTERNATIONAL COLLABORATIVE STUDY ON GLUTEN DETECTION USING THE NEW TOTAL GLUTEN ELISA	Katharina SCHERF Technical University Munich, DE
	14:40-15:00	DEVELOPMENT OF A GLUTEN REFERENCE MATERIAL	Sándor TÖMÖSKÖZI BUTE, HU

15:00 – 15:30 COFFEE BREAK with exhibition and poster viewing

15:30 – 17:00 Parallel Session 7a – Food Quality, Safety & Sustainability

Auditorium XX	Chair:	Martha CUNIBERTI – INTA, AR Dhan BHANDARI - AHDB, UK	
	15:30-15:45	VARIETY SELECTION AND CROP MANAGEMENT FOR LOW ACRYLAMIDE WHEAT AND RYE, AND THE APPLICATION OF GENOME EDITING AND MUTAGENESIS TO PRODUCE GENOTYPES WITH VERY LOW ACRYLAMIDE-FORMING POTENTIAL	Nigel HALFORD Rothamsted Research, UK
	15:45-16:00	AUTHENTICATION OF TAIWAN QUINOA (CHENOPODIUM FORMOSANUM, DJULIS) BY PHYTOCHEMICAL FINGERPRINT USING HIGH-RESOLUTION MASS SPECTROMETRY	Hong-jhang CHEN National Taiwan University, TW
	16:00-16:15	THE ASSEMBLY OF GLUTENIN POLYMERS DURING GRAIN MATURATION IN FIELD CONDITIONS	Shiori KOGA Nofima As, NO
	16:15-16:30	EFFECTS OF HYDROCOLLOIDS ON THE QUALITY CHARACTERISTICS OF EXTRUDED RED JASMINE RICE NOODLE	Supaluck KRAITHONG Mae Fah Luang University, TH
	16:30-16:45	AN APPROACH TO REDUCING FOOD LOSS: HOW BY-PRODUCTS OF THE MILLING INDUSTRIES CAN BE SUCCESSFULLY INTEGRATED IN THE FOOD CHAIN	Denise MUELLER Zurich University of Applied Sciences, CH
	16:45-17:00	CLEAN LABEL INGREDIENTS FROM LEGUME BY-PRODUCTS	Luca SERVENTI Lincoln University, NZ

15:30 – 17:00 Parallel Session 7b – Innovations and Applications for Cereal Laboratories (Chopin Technologies)

Auditorium XXI	Chair:	Arnaud DUBAT - CHOPIN Technologies, FR Cristina Molina ROSELL - IATA, ES	
	15:30-16:00	ROLE OF RHEOLOGY AS QUALITY PREDICTOR IN GLUTEN FREE BASED FOODS	Cristina Molina ROSELL IATA, ES
	16:00-16:20	CONSIDERATION ABOUT WHEAT MILLING, FROM A CONSORTIUM TO THE FIRST TEST ON A NEW LABORATORY TOOL	Christine BAR L'HELGOUAC'H ARVALIS, FR
	16:20-16:40	METHOD VALIDATION REQUIREMENTS: PAST AND PROSPECTS	Amine JBEILY IRI, LB
	16:40-17:00	EXAMPLE OF THE APPLICATION OF DOUGH MIXING AND HEATING BEHAVIOR IN CEREAL RESEARCH	Sándor TÖMÖSKÖZI BUTE, HU

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17:00 – 17:30 Closing Ceremony (in Auditorium XX)

17:30 END OF THE 19TH ICC Conference 2019

Friday, 26 April 2019

9:00 – 17:00 ICC- Austria Annual Symposium 2019 – in German language only, separate registration necessary

Auditorium
XX

“Biogetreide im Zeichen des Klimawandels”

Organised by: ICC-Austria

Venue: BOKU, 1190 Wien, Muthgasse 18, Hörsaal XX

Registration and further details: <http://www.icc-austria.or.at/>

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