

## Program



III *International Conference on*

# FOOD CHEMISTRY AND TECHNOLOGY

.....  
November 2-4, 2017

### Venue

The DoubleTree by Hilton Baltimore-BWI Airport  
890 Elkridge Landing Road  
Linthicum, MD 21090  
United States

Day - 1

Day - 2

Day - 3

# FCT-2017 @ Chesapeake Room

Day-1 | November 02, 2017

08:15-08:45 Registrations @ Ball Room Foyer

08:45-09:00 Inauguration FCT-2017 by  
**Mun Yhung Jung**, Editor-in-Chief (JFCN) & Conference Chair

## Keynote Session

09:00-09:30 **Scientifically sound evaluation of potential risks of food allergy and celiac disease of GMOs and novel foods**

**Richard E. Goodman**, University of Nebraska-Lincoln, USA

09:30-10:00 **Retention of carotenoids after household cooking of beta-cryptoxanthin biofortified maize flour and eggs**

**Sherry A. Tanumihardjo**, University of Wisconsin-Madison, USA

10:00-10:30 **Isoflavones in modern soy-food: how to take the best part of them**

**Catherine Bennetau-Pelissero**, University of Bordeaux, France

**10:30-10:45 Coffee Break-I**

@ Annapolis Room

10:45-11:15 **Direct derivatization combined with GC-MS/MS for the analysis of 2- & 4-methylimidazole in cola and beer**

**Mun Yhung Jung**, Woosuk University, South Korea

11:15-11:45 **Microbial proactive processing of food during digestion supports health functions and balanced microbiome**

**E. Elias Hakalehto**, Finnoflag Oy, Finland

11:45-12:15 **A case study of whole kernel contamination of grain: How its occurrence in gluten-free labelled oats complicates gluten assessment affecting marketplace compliance**

**Ronald Fritz**, PepsiCo, Inc., USA

**12:15-13:15 Lunch**

@ Eden's Landing Restaurant

## Scientific Sessions - I

◆ Chemical analysis of food: Techniques and applications ◆ Bioactive constituents, micronutrients, food additives and ingredients ◆ Food safety, security and control ◆ Role of probiotics & prebiotics

**Session Chairs** - **Hans Marvin**, RIKILT Wageningen University & Research, The Netherlands  
**Zvi Hayouka**, The Hebrew University of Jerusalem, Israel

13:15-13:35 **Determination of inorganic arsenic in rice by hydride generation, cryogenic trapping, and atomic fluorescence spectrometry**

**Guoying Chen**, United States Department of Agriculture (USDA), USA

13:35-13:55 **FlavonQ--An automated data processing tool for profiling flavonoids**

**Pei Chen**, United States Department of Agriculture (USDA), USA

- 13:55-14:15 **Development of predictive models for food safety**  
Hans Marvin, RIKILT Wageningen University & Research, The Netherlands
- 14:15-14:35 **Innovative modeling approaches for the quality and microbial safety of leafy greens**  
Abani Pradhan, University of Maryland, USA
- 14:35-14:55 **Exometabolomics of tomato fruit and identification of fatty acids that impair *Salmonella* growth**  
Shirley Micallef, University of Maryland, USA
- 14:55-15:15 **Effect of cold plasma treatment on cuticle and microbial load in kale (*Brassica oleracea var. sabellica*)**  
Jasreen Sekhon, Drexel University, USA
- 15:15-15:35 **Grazing on mediterranean shrubland and *Salvia lavandulifolia* Vahl. byproducts: A good combination for improving lamb welfare and meat quality**  
Maria J. Jordan, IMIDA (Murcia Institute of Agri-Food Research and Development), Spain
- 15:35-15:55 **Coffee Break-II** @ Annapolis Room
- 15:55-16:15 **Designing novel technologies to improve food safety and shelf life**  
Zvi Hayouka, The Hebrew University of Jerusalem, Israel
- 16:15-16:35 **Hardened beans - One man's trash, another man's treasure**  
Katia Flavia Fernandes, Federal University of Goias, Brazil
- 16:35-16:55 **Spectrophotometric determination of molybdenum containing composition in aqueous solutions of glucose using a pyrazine-2,3-dicarboxylic acid**  
Berta Spasova, Institute for Micro Process Engineering, Germany
- 16:55-17:15 **Acrylamide mitigation in Chilean bread "hallulla" by using asparaginase treatments: Effect on its sensorial attributes**  
Franco Pedreschi Plasencia, Pontifical Catholic University of Chile, Chile
- 17:15-17:35 **Detection of antibiotic residues in animal-derived food based on immunoassays**  
Xiaoying Zhang, Northwest Agriculture and Forestry University, China
- 17:35-17:55 **Detection of coffee adulteration using the monosaccharides profile by capillary electrophoresis-tandem mass spectrometry**  
Daniela Daniel, IQ-USP/Agilent Technologies, Inc., Brazil
- 17:55-18:15 **Analytical chemistry, formation, reduction, toxicology, internal exposure and chemoprevention of acrylamide**  
Yu Zhang, Zhejiang University, China
- 18:15-18:35 **Bacteriocinogenic LAB. Critical points in application as tools for food safety**  
Svetoslav Todorov, Federal University of Viçosa, Brazil

Scientific Sessions - II

- ◆ Food oxidants and antioxidants
- ◆ Dairy science and technology
- ◆ Food: Structure, flavor and quality
- ◆ Authenticity and integrity of food
- ◆ Nutrition & functional foods
- ◆ Nutraceuticals & dietary supplements

Session - **Mun Yhung Jung**, *Woosuk University, South Korea*

Chairs **Carlos Humberto Corassin**, *University of Sao Paulo, Brazil*

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09:00-09:20 **Detecting the lactose content of skim milk powder using dielectric spectroscopy**  
**Zachary Campbell (Martin Buehler)**, METER Group, Inc., USA

09:20-09:40 **Antioxidant and in vitro apoptosis of human hepatocellular carcinoma cell lines (HepG2) of Ethiopian monofloral honeys**  
**Samuel Melaku Abegaz**, Columbus State University, USA

09:40-10:00 **The use of microbiological methods to reduce aflatoxin M1 in milk**  
**Carlos Humberto Corassin**, University of Sao Paulo, Brazil

10:00-10:20 **Chilean honey: Botanical origin related to their antioxidant and antibacterial activities**  
**Raquel Bridi**, Pontifical Catholic University of Chile, Chile

10:20-10:40 **Manuka honey: The hunt for unique chemical markers to determine authenticity**  
**Kerry M. Loomes**, University of Auckland, New Zealand

**10:40-10:55** *Coffee Break-I* @ *Annapolis Room*

10:55-11:15 **Flours produced from buriti (*Mauritia flexuosa* L.f.) processing residues: Evaluation of dietary fiber and antioxidant capacity**  
**Adriana S. Franca**, Federal University of Minas Gerais, Brazil

11:15-11:35 **Herbal discovery platform supporting the chemical analysis and natural analogue discovery of food ingredients**  
**Timea Polgar**, Envision Biotechnology, USA

11:35-11:55 **Controlling ice recrystallization with ice-binding proteins**  
**Ido Braslavsky**, The Hebrew University of Jerusalem, Israel

11:55-12:15 **Visual microarray for multiplexed antibiotic residue detection**  
**Danke Xu**, Nanjing University, China

12:15-12:35 **Functional proprieties and adsorption isotherms of commercial carrots fibers incorporated in foods industries**  
**Ferradji Ali**, High National School of Agronomy Algiers, Algeria

12:35-12:55 **Enhancing the carotenoid content of Spaghetti squash ten-fold and more**  
**Harry S. Paris**, Agricultural Research Organization, Israel

**12:55-13:50** *Lunch* @ *Eden's Landing Restaurant*

- 13:50-14:10 **Phenolics, antioxidant capacity and bioaccessibility of chicory varieties (*Cichorium spp.*) grown in Turkey**  
Ozan Gurbuz, Uludag University, Turkey
- 14:10-14:30 **Spirulina platensis as food supplement and its health benefits**  
Metin Guldaz, Uludag University, Turkey
- 14:30-14:50 **Antioxidant properties of baby foods containing fruit in Turkey**  
Yasemin Sahan, Uludag University, Turkey
- 14:50-15:10 **In-vitro digestion of the bioactive compounds of fermented vegetable juice**  
Nurcan Degirmencioglu, Bandirma Onyedi Eylul University, Turkey
- 15:10-15:30 **Long-term dietary intake of kale extract attenuates cognitive impairment in senescence-accelerated mouse prone 8**  
Shigeru Katayama, Shinshu University, Japan
- 15:30-15:50 **Solubility assessment of canarium schweinfurthii (parsley) oil in supercritical carbon dioxide**  
Jibrin Mohammed Danlami, Kaduna Polytechnic, Nigeria
- 15:50-16:10 **Purified lycopene extract from tomatoes for use as a natural antioxidant**  
Jayanti Tokas, CCS Hararyana Agricultural University, India
- 16:10-16:25 *Coffee Break-II* @ Annapolis Room

#### Young Researchers Forum

Session - Mun Yhung Jung, Woosuk University, South Korea  
Chair

- 16:25-16:35 **Correlation of volatile compound concentrations with microbial counts in whole pasteurized milk under various storage conditions**  
Mohamed Ziyaina, Washington State University, USA
- 16:35-16:45 **Microbial community analysis of green coffee beans across growing regions and qualities**  
Rachel Capouya, The Ohio State University, USA
- 16:45-16:55 **Lipophilic green tea polyphenol (P-EGCG, and EGCG-S) as potential food preservatives**  
Danxia Shi, Montclair State University, USA
- 16:55-17:05 **Epigallocatechin gallate (EGCG) as a food additive for chocolate and its effect on *Streptococcus mutans***  
Chia-Liang Huang, Montclair State University, USA
- 17:05-17:15 **A grey forecasting model of rainfall in Vietnam**  
Nhu-Y-Nguyen Ho, National Kaohsiung University of Applied Sciences, Taiwan

- 17:15-17:25 **Effects of sun treatment on the quantities of vitamin D and minerals in oyster mushroom (*Pleurotus ostreatus*) cultivated in Ethiopia**  
Tibebeselassie Seyoum Keflie, University of Hohenheim, Germany
- 17:25-17:35 **Functional properties of crackers supplemented with turmeric (*Curcuma longa* L) and mahaleb (*Prunus mahaleb* L) powders**  
Elif Yildiz, Uludag University, Turkey
- 17:35-17:45 **Automation and control of a high pressure processing (HPP) machine for the non-thermal production of food emulsions**  
Estefania Brito Bazan, National Autonomous University of Mexico (UNAM), Mexico
- 17:45-17:55 **Short-length DNA marker for the determination of Malayan box turtle (*Cuora amboinensis*) materials in food chain and traditional Chinese medicines**  
Asing, University of Malaya, Malaysia

17:55-18:50 Poster Presentations

@ Annapolis Room

## Day-3 | November 04, 2017

### Scientific Sessions - III

- ◆ Food processing & packaging technologies
- ◆ Food rheology and shelf life
- ◆ Food nanotechnology & its applications
- ◆ Agriculture biotechnology
- ◆ New trends in food science & technology
- ◆ Food marketing and economy: Global issues and challenges
- ◆ Food management and applications in food industry

**Session - Sebastiano Porretta, SSICA, *Experimental Station for the Food Preserving Industry, Italy***  
**Chair**

- 09:00-09:20 **Alternative for antibiotic uses in farm animal production to mitigate the antibiotic resistance and make sustainable farming**  
Debabrata Biswas, University of Maryland, USA
- 09:20-09:40 **Early phases in consumer-driven food product development**  
Sebastiano Porretta, SSICA, Experimental Station for the Food Preserving Industry, Italy
- 09:40-10:00 **Subcritical water - An alternative green media for biomass processing: Influence of process conditions on hydro thermal reactions of biomass constituents**  
Mojca Skerget, University of Maribor, Slovenia
- 10:00-10:20 **Big data analytics in food technology**  
Zelimir Kurtanjek, University of Zagreb, Croatia

10:20-10:40 *Coffee Break*

@ Annapolis Room

- 10:40-11:00 **Rural management; Wild edible mushrooms as a healthy alternative to meat**  
Ismail Bulent Gurbuz, Uludag University, Turkey
- 11:00-11:20 **Biodegradable films produced of polysaccharides extracted from spent coffee grounds**  
Leandro S. Oliveira, Federal University of Minas Gerais, Brazil
- 11:20-11:40 **Nano shield formed around the wheat with the modified zein protein complex to protect against pathogenic infection**  
P.S. Vijaya Kumar, Institute of Nanoscience and Technology, India
- 11:40-12:00 **TBD**  
Elham Lashkari, Rutgers University, USA
- 12:00-12:20 **Nanofood for 2050: concepts and challenges**  
Farid Mena, Fluorotronics, Inc., USA
- 12:20-12:40 **Potential of microwave irradiation on the postharvest control of cowpea weevil and proximate composition of cowpea Seeds**  
Echereobia Christopher Ogbuji, University of Technology Owerri, Nigeria
- 12:40-13:00 **Effect of food matrix composition on perception of flavour from strawberry flavored gels**  
Patricia Gyaa Owusu Darko, Kumasi Technical University, Ghana
- 13:00-13:20 **Efficacy of salicylic acid on shelf life enhancement of tomato (*Solanum lycopersicum* L.) fruit**  
Jayanti Tokas, CCS Harayana Agricultural University, India
- 13:20-13:40 **Study of physical and mechanical properties on films of chitosan-sodium alginate with carnauba wax**  
Jose Fernando Solanilla Duque, University of Cauca, Colombia

*13:40 - Lunch & Departures*

*@Eden's Landing Restaurant*

**Poster** -Mun Yhung Jung, *Woosuk University, South Korea*

**Judges** Richard E. Goodman, *University of Nebraska-Lincoln, USA*

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- P-01 Molecular lipidomics analysis in button mushroom by high performance liquid chromatography time-of-flight mass spectrometry**  
Mun Yhung Jung, Woosuk University, South Korea
- P-02 Simultaneous analysis and cross-validation of artificial sweeteners in food using HPLC**  
Jang Hyuk Ahn, Fore Front Test, South Korea
- P-03 Maillard reaction in “Dulce de Leche”**  
Paulo Henrique Fonseca da Silva, Federal University of Juiz de Fora, Brazil
- P-04 Microwave-assisted extraction as an alternative green technology for extraction of chlorogenic acid from *Cynara scolymus* leaves**  
Ibrahim Saleh, National Research Centre (NRC), Egypt
- P-05 Kinetics of color degradation during storage of hard candies with addition of coloring of mastuerzo flower (*Tropaeolum majus* L.)**  
Miguel Angel Quispe Solano, National University of the Center of Peru, Peru
- P-06 Evaluation of the viability of *Lactobacilli* encapsulated in maltodextrin as a probiotic in Aguaymanto juice**  
Clara Raquel Espinoza Silva, National University of the Center of Peru, Peru
- P-07 Cocoa shell analysis in cocoa powder by Near Infra-Red**  
Aurelien Cotard, Nestle Research Orbe, NESTEC Ltd., Switzerland
- P-08 The antioxidant potential of cacao beans across different geographies**  
Nicole Ciuppa, Montclair State University, USA
- P-09 Lipogenesis inhibition of soy sauce in a novel obesity model *Rhodosporidium toruloides***  
Stephanie Chun, Cornell University, Sangchon Food Co., USA
- P-10 Isolation of ursolic acid from apple peels and the effect of heat treatment on ursolic acid in applesauce formulation**  
Vishal Manjunatha, Drexel University, USA
- P-11 The effect of heat treatment on the total and individual polyphenol compounds in apple flesh and peels**  
Nymisha S. Ravindranath, Drexel University, USA
- P-12 Long-term dietary intake of kale cultivar with high content of glucoraphanin suppresses skin aging in senescence-accelerated mouse prone 1**  
Saki Ichikawa, Shinshu University, Japan
- P-13 Enzymatic synthesis of novel rutinoides using rutinase and its functional properties**  
Kanako Matsumoto, Shinshu University, Japan



- P-14 Protective effects of *amazake* peptides against H<sub>2</sub>O<sub>2</sub>-induced oxidative stress in SK-N-SH cells**  
Henry M. Corpuz, Shinshu University, Japan
- P-15 Effect of freeze-drying on encapsulated maqui extract**  
Kong Shun Ah-Hen, Austral University of Chile, Chile
- P-16 Development of Titanium dioxide nanotubes by combination of electrospinning and atomic layer deposition**  
Cristian Javier Patino Vidal, University of Santiago de Chile, Chile
- P-17 Development and characterization of low-density polyethylene nanocomposites**  
Cristina Alejandra Munoz Shuguli, University of Santiago de Chile, Chile
- P-18 Preservation of walnut oil using walnuts' polyphenols as antioxidants**  
Antonella Luciana Grosso, National University of Cordoba, Argentina
- P-19 Obtaining and characterization of acetylated rice starch films and Nopal (*Opuntia ficus-Indica*) mucilage**  
Nancy Paola Grajeda Nieto, Autonomous University of Chihuahua, Mexico
- P-20 Stabilization of extracts of aloe vera gel (*Aloe barbadensis Miller*) by ultraviolet radiation**  
Maylem Zileny Rodriguez, Autonomous University of Chihuahua, Mexico
- P-21 Chemical composition and antioxidant activity of propolis ethanolic extract from Mexican Southeastern**  
Roger Gaspar Cauch Kumul, Technological Institute of Merida (TIM), Mexico
- P-22 Biosynthesis of pigment in red and orange carrots during development stages**  
Amritpal Kaur, Guru Nanak Dev University, India
- P-23 Physicochemical, functional and antioxidant properties of flour from different Indian oat (*Avena sativa*) cultivars**  
Sukriti Singh, Guru Nanak Dev University, India
- P-24 Effect of transglutaminase treatment on physical and oxidative stability of emulsions with faba bean proteins**  
Chang Liu, University of Helsinki, Finland
- P-25 Properties of kimchi prepared with *Lactobacillus sakei* HY-11 having GABA producing capacity**  
Tea Ha Kim, Woosuk University, South Korea
- P-26 Effects of heat treatments on the conversion of gingerols to shogaols in ginger**  
Min Kyoung Lee, Woosuk University, South Korea
- P-27 Development of HS-SPME-GC-MS method for the profiling of volatile compounds in mushrooms**  
Da Eun Lee, Woosuk University, South Korea

- P-28 TBD**  
Gyeongho Lee, Woosuk University, South Korea
- P-29 TBD**  
Miseon Jeong, Woosuk University, South Korea
- P-30 TBD**  
Leedaeun, Woosuk University, South Korea
- P-31 TBD**  
Ji Su Pack, Woosuk University, South Korea
- P-32 The role of milk protein and vegetable protein in nutritional supplement powders during microencapsulation processing**  
Xiang Li (Jason), Abbott Nutrition, Singapore
- P-33 Denaturation of soybean milk proteins by radio frequency and conventional heating**  
Meriem Mouaddine, University of Tsukuba, Japan
- P-34 Level of Ochratoxin A in flours for consumption in Prishtina region**  
Jeton Spahiui, Food and Veterinary agency of Kosovo, Yugoslavia
- P-35 Effect of drying methods on the physicochemical properties and fatty acid composition of Moringa seeds oil**  
Omosuli Segun Vincent, Rufus Giwa Polytechnic, Nigeria

WE WISH TO MEET YOU AGAIN AT  
FCT-2018  
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